XII International Conference on Nanostructured Materials (NANO 2014)

NANO 2014

July 13–18

2014

www.nano2014.org

Program

Lomonosov Moscow State University

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NANO 2014 Preface

We are delighted to meet a brilliant thousand of new faces of the best scientists over the World in summer Moscow at the XII International Conference on Nanostructured Materials (NANO 2014) on July 13 – 18, 2014. For the first time held in Russia, the NANO 2014 Congress is hosted by Lomonosov Moscow State University and has accepted above 1250 presentations from Australia, Austria, Belarus, Belgium, Brazil, Canada, China, Egypt, Estonia, Finland, France, Germany, Hong Kong, India, Iran, Israel, Italy, Japan, Mexico, Poland, Portugal, Russia, Singapore, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, Ukraine, United Kingdom and United State of America. NANO 2014 stays one of the largest top-rated international events bringing together a community of scientists and engineers interested in recent developments on nanostructured materials in various renowned areas. This unique scientific meeting promoted by the International Committee on Nanostructured Materials continues the prestigious series of biannual conferences held since 1992 in Cancun - Mexico (1992), Stuttgart - Germany (1994), Kona - Hawaii, USA (1996), Stockholm - Sweden (1998), Sendai - Japan (2000), Orlando - USA (2002), Wiesbaden - Germany (2004), Bangalore - India (2006), Rio de Janeiro - Brazil (2008), Rome - Italy (2010), Rhodes - Greece (2012).

We are happy to provide a forum for outstanding scientists in chemistry, physics, mechanics, computer simulation, biomedical applications, new approaches on nanostructured materials preparation including smart nanoparticles, thin films, heterostructures, superlattices, soft matter materials, the development of templating, patterning, self-assembling, nanofabrication techniques in laboratory and industrial scales, and advanced characterization techniques. As usual, the Congress will discuss the state–of–the–art research, recent achievements, global trends, and it will favor exchange of novel ideas, concepts, techniques and exciting prospects in nanoscience, nanotechnology and related rapidly developing fields. We hope that our guests will enjoy opening and closing ceremonies, 10 plenaries, more that 100 keynote and invited talks from distinguished scientists, about 80 oral and 200 poster contributions per each day of the Congress, exhibition, young scientist contest and, of course, the welcome party, banquet and cultural program. In 2014, the third annual ACS NANO Lectureship Award accompanies the Congress and thus we will honor the contributions of three top-level scientists who have made major achievements in the field of nanoscience and nanotechnology from around the world.

We are more than happy to provide a friendly welcome to all our participants and help them to communicate fruitfully, discuss comprehensively their research and work together – and this will be the best contribution to peace and international cooperation that we can make as scientists.

Chairman of NANO 2014 — Professor **Alexei R. Khokhlov**

Co - chairman of NANO 2014 — Professor **Ruslan Z. Valiev**

Chairman of ICNM — Dr. **Elisabetta Agostinelli**

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NANO 2014 Committees

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Professor **Vladimir M. Novotortsev**, Kurnakov Institute of General and Inorganic Chemistry of the Russian Academy of Sciences (Russia)
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Professor **Dmitry Yu. Pushcharovsky**, Lomonosov Moscow State University (Russia)
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(International Committee on Nanostructured Materials)

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Professor **Jeff Th.M. De Hosson**, Zernike Institute of Advanced Materials and Materials Innovation (Netherlands) – ***past chairman***

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Professor **Michel Trudeau**, Hydro-Québec Research Institute (Canada)
Professor **Deliang Zhang**, Shanghai Jiao Tong University (China)
Professor **Ruslan Z. Valiev**, Ufa State Aviation Technical University (Russia)

NANO 2014 Committees

Program Committee

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Professor **Evgeny V. Antipov**, Lomonosov Moscow State University (Russia)
Professor **Sergei M. Barinov**, Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences (Russia)
Professor **Sergey M. Deyev**, Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences (Russia)
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Professor **Robert V. Goldstein**, Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences (Russia)
Professor **Eugene A. Goodilin**, Lomonosov Moscow State University (Russia)
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Professor **Christian W. Lehmann**, Max-Planck-Institut für Kohlenforschung (Germany)
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Professor **Carl V. Thompson**, Massachusetts Institute of Technology (USA)
Professor **Harry L. Tuller**, Massachusetts Institute of Technology (USA)
Professor **Victor M. Ustinov**, Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia)

NANO 2014 Secretariat

Dr. **Anna A. Semenova**, Lomonosov Moscow State University (Russia)
Dr. **Leonid V. Gusev**, Lomonosov Moscow State University (Russia)

NANO 2014
Program Overview

Time \ Date	July 13 (Sunday)	July 14 (Monday)	July 15 (Tuesday)	July 16 (Wednesday)	July 17 (Thursday)	July 18 (Friday)
9:00 AM		Registration	Registration	Registration	Registration	Registration
10:00 AM		Exhibition; Opening ceremony	Exhibition; Plenary lecture	Exhibition; Plenary lecture	Exhibition; Plenary lecture	Exhibition; Sessions 01 – 11 (parallel)
11:00 AM		Plenary lecture; Coffee break	Coffee break	Coffee break	Coffee break	
12:00 PM		Poster session	Poster session	Poster session	Poster session	Lunch
1:00 PM		Lunch	Lunch	Lunch	Lunch	
2:00 PM	Registration	Sessions 01 – 11 (parallel)	Sessions 01 – 11 (parallel)	Sessions 01 – 11 (parallel); ACS Nano Lecture-ship Award	Sessions 01 – 11 (parallel)	Plenary lecture
3:00 PM						
4:00 PM			Coffee break	Coffee break	Coffee break	Closing ceremony
5:00 PM		Welcome reception	Sessions 01 – 11 (parallel)	Sessions 01 – 11 (parallel)	Sessions 01 – 11 (parallel)	
6:00 PM					Conference banquet	
7:00 PM	Moscow river boat trip					
8:00 PM						
9:00 PM						

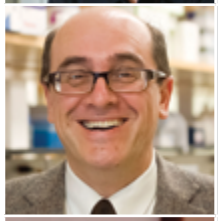
NANO 2014
Plenary Lectures

Plenary lecture
«Nanostructured Semiconductors for Opto- and Nanoelectronics»
Location: Lomonosov Building Conference Hall
Date: Thursday, July 17, 10:00 AM – 10:45 AM

Professor **Alexander L. Aseev**
Rzhanov Institute of Semiconductor Physics of Siberian Branch of Russian Academy of Sciences (Russia)

Plenary lecture
«Light Energy Harvesting and Charge Carrier Collection in Mesoscopic Solar Energy Conversion Systems»
Location: Lomonosov Building Conference Hall
Date: Monday, July 14, 10:45 AM – 11:30 AM

Professor **Michael Graetzel**
Ecole Polytechnique de Lausanne (Switzerland)



Plenary lecture
«Polymeric Micelles for Drug Delivery»
Location: Lomonosov Building Conference Hall
Date: Friday, July 18, 2:45 PM – 3:30 PM

Professor **Alexander V. Kabanov**
Lomonosov Moscow State University (Russia)
University of North Carolina at Chapel Hill (USA)

Plenary lecture
«Carbon in Nano and Outer Space»
Location: Lomonosov Building Conference Hall
Date: Wednesday, July 16, 10:00 AM – 10:45 AM

Professor **Harold Kroto**
Florida State University (USA)
Nobel Prize in Chemistry (1996)

Plenary lecture
«Spherical Nucleic Acid (SNA) Nanostructures as Intracellular Probes and Gene Regulation Agents»
Location: Lomonosov Building Conference Hall
Date: Tuesday, July 15, 10:45 AM – 11:30 AM

Professor **Chad A. Mirkin**
Northwestern University (USA)

Plenary lecture
«Building with Artificial Atoms: Programming the Assembly of Multi-Functional Nanocrystal Thin Films through Precise Control of Particle Size and Shape»
Location: Lomonosov Building Conference Hall
Date: Friday, July 18, 2:00 PM – 2:45 PM

Professor **Christopher B. Murray**
University of Pennsylvania (USA)

Plenary lecture
«Probing Structure, Properties and Dynamics of Nanostructures Through Scanning Transmission Electron Microscopy and First-Principles Theory»
Location: Lomonosov Building Conference Hall
Date: Tuesday, July 15, 09:15 AM – 10:00 AM

Professor **Stephen J. Pennycook**
University of Tennessee (USA)

Plenary lecture
«Positive And Negative Aspects Of The Nano-Approach Within The Field Of Li-Based Batteries»
Location: Lomonosov Building Conference Hall
Date: Wednesday, July 16, 10:45 AM – 11:30 AM

Professor **Jean-Marie Tarascon**
College de France (France)

Plenary lecture
«Carbon Nanomaterials Synthesis and Applications»
Location: Lomonosov Building Conference Hall
Date: Tuesday, July 15, 10:00 AM – 10:45 AM

Professor **James M. Tour**
Rice University (USA)

Plenary lecture
«Imaging Nanomaterials in Three Dimensions»
Location: Lomonosov Building Conference Hall
Date: Thursday, July 18, 10:45 AM – 11:30 AM

Professor **Gustaaf Van Tendeloo**
University of Antwerp (Belgium)

2014 ACS Nano Lectureship Awards

In 2014, the third annual ACS NANO Lectureship Awards will honor the contributions of three winners who have made major impacts on the field of nanoscience and nanotechnology from around the world. The 2014 ACS NANO Lectureship event will be presented at the on Wednesday, 16 July starting from 3 p.m. in the Lomonosov Building Conference Hall.

ACS Nano Lectureship Selection Committee:

- Professor **Paul S. Weiss**, University of California, Los Angeles (USA)
- Professor **Yury Gogotsi**, Drexel University (USA)
- Professor **Alexei R. Khokhlov**, Lomonosov Moscow State University (Russia)
- Professor **Molly M. Stevens**, Imperial College (UK)
- Professor **Andrew T. S. Wee**, National University of Singapore (Singapore)

Professor Paul S. Weiss will lead the ceremony and the lectures will be delivered by Professor Chad Mirkin (The Americas region awardee), Professor Klaus Müllen (Europe/Middle East/Africa), Professor Amanda Barnard (Asia/Pacific region) and also their quests selected from an extraordinarily competitive pool of nominees.

ACS Nano awardee lecture «In Silico Veritas: Toward Computational Models of Realistic Nanosystems»
Location: Lomonosov Building Conference Hall
Date: Wednesday, July 16, 3:10 PM – 3:55 PM

Professor **Amanda S. Barnard**
Commonwealth Scientific and Industrial Research Organization (Australia)

ACS Nano awardee lecture «Nucleic Acid-Modified Nanostructures as Programmable Atom Equivalents: Forging a New «Table of Elements»
Location: Lomonosov Building Conference Hall
Date: Wednesday, July 16, 4:20 PM – 5:05 PM

Professor **Chad A. Mirkin**
Northwestern University (USA)

ACS Nano awardee lecture «Graphene Nanoribbons: The Next-Generation Semiconductors?»
Location: Lomonosov Building Conference Hall
Date: Wednesday, July 16, 5:40 PM – 6:25 PM

Professor **Klaus Müllen**
Max Planck Institute for Polymer Research (Germany)

ACS Nano guest lecture «Future Directions for First-Principles Calculations in Nanoscience»
Location: Lomonosov Building Conference Hall
Date: Wednesday, July 16, 3:55 PM – 4:20 PM

Dr. **Manolo C. Per**
Commonwealth Scientific and Industrial Research Organisation (Australia)

ACS Nano guest lecture «Nanoscale Controlled Dynamic (Non-) Covalent Chemistry in 2D»
Location: Lomonosov Building Conference Hall
Date: Wednesday, July 16, 5:15 PM – 5:40 PM

Dr. **Paolo Samori**
University of Strasbourg (France)

Sessions Overview

Main Building of Lomonosov Moscow State University as seen from Botanic Garden

The primary scope of NANO 2014 covers many exciting topics closely related to nanostructured materials. In particular, NANO 2014 is related to various hot topics such as:

- carbon nanomaterials, graphene, nanotubes, nanodiamonds,
- nanostructured semiconductors,
- nanomagnetism,
- plasmonic nanostructures,
- nanoelectronics, optoelectronics, molecular electronics,
- various construction nanomaterials,
- nanomaterials in catalysis,
- nanomaterials for energy,
- nanostructured materials for medicine and sustainable development.

All the subjects are split into two major groups – Preparation and Characterization of Nanostructured Materials (sections 01 – 06) and Practical Applications of Nanostructured Materials (section 07 – 11). NANO 2014 allows to discuss advanced approaches on nanostructured materials preparation including smart nanoparticles, thin films, heterostructures, superlattices, soft matter materials, the development of templating, patterning, self – assembling, nanofabrication techniques in laboratory and industrial scales. All the NANO 2014 sections disclose their unique features and this makes it more comfortable for our participants with diverse scientific interests to reach new conclusions and ideas.

Section 01

Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

Section Scope
This section includes all kind of carbon nanomaterials, formation mechanisms of inorganic nanoparticles, surface chemistry and stabilization, new physical and chemical preparation routes, shaping and self-assembly of nanoparticles of a different nature.

Section Topics
- Carbon nanomaterials: graphene, nanotubes, nanodiamond
- Non-carbon systems mimicking graphene; exfoliated 2D materials
- Non-carbon inorganic nanotubes
- Zero – to two dimensional inorganic nanoparticle design: growth mechanisms, shaping and new preparation techniques
- Engineering of multifunctional and Janus particles
- Nanopowders for industry
- Plasmonic nanoparticles and structures
- Preparation, structure, properties of SPION and other magnetic nanoparticles
- Quantum dots
- Self-assembled nanostructures with advanced functional properties
- Conjugated nanoparticles
- Nanoparticles and ecology
- Nanoparticles and nuclear energy
- Advanced characterization techniques
- Smart colloidal systems

Section Chairmen
- Professor **Eugene A. Goodilin,** Lomonosov Moscow State University (Russia) – co-chairman
- Professor **Yury Gogotsi**, Drexel University (USA) – co-chairman

Section Coordinator
- Dr. **Ekaterina A. Pomerantseva**, Drexel University (USA)

Section Program Board
- Professor **Yulia G. Gorbunova**, Frumkin Institute of Physical Chemistry and Electrochemistry of the Russian Academy of Sciences (Russia)
- Professor **Vladimir K. Ivanov**, Kurnakov Institute of General and Inorganic Chemistry of the Russian Academy of Sciences (Russia)
- Professor **Stepan N. Kalmykov**, Lomonosov Moscow State University (Russia)
- Professor **Vladimir A. Korshun**, Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences (Russia)

Keynote speakers
- Professor **Yury Gogotsi**, Drexel University (USA)
- Professor **Paul S. Weiss**, University of California, Los Angeles (USA)

Invited speakers
- Professor **Eugene A. Goodilin**, Lomonosov Moscow State University (Russia)
- Professor **Jianhua Hao**, The Hong Kong Polytechnic University (Hong Kong)
- Professor **Mark C. Hersam**, Northwestern University (USA)
- Professor **Ernesto Joselevich**, Weizmann Institute of Science (Israel)
- Professor **Valeria Nicolosi**, Trinity College Dublin (Ireland) – *the talk will be delivered by Dr.* ***Beatriz Mendoza Sanchez***, Trinity College Dublin (Ireland)
- Professor **Olga Shenderova**, International Technology Center (USA)
- Professor **Alexander Sinitskii**, University of Nebraska - Lincoln (USA)
- Professor **Carl V. Thompson**, Massachusetts Institute of Technology (USA)
- Professor **Eugene Zubarev**, Rice University (USA)

Section 02

Thin Films and Heterostructures, 2D and 3D Nanofabrication

Section Scope
Thin film preparation and patterning, lithography approaches and nanofabrication, thin film functional nanomaterials and synthetic approaches for production of valuable materials.

Section Topics
- Atomic layer deposition (ALD)
- Metalorganic chemical vapor deposition (MOCVD)
- Langmuir–Blodgett films
- Physical deposition techniques
- Nanostructured functional thin films and coatings
- Heterostructures with advanced functional properties
- Complex structures and supercells
- Photonic crystals and structures
- Nanolithography
- Nanofabrication
- 3D structures
- Templated self-assembly
- Epitaxial Graphene and Graphene – based structures
- Carbon nanotube – based planar structures
- Nanostructured semiconductors
- Templating and new patterning techniques
- Advanced characterization techniques

Section Chairmen
- Professor **Evgeny A. Levashov**, National University of Science and Technology «MISIS» (Russia) – co-chairman
- Professor **Carl V. Thompson**, Massachusetts Institute of Technology (USA) – co-chairman

Section Coordinator
- Dr. **Marina Bychkova**, National University of Science and Technology «MISIS» (Russia)

Section Program Board
- Professor **Rostislav Andrievskii**, Institute of New Chemical Problems of the Russian Academy of Science (Russia)
- Professor **Albano Cavaleiro**, Coimbra University (Portugal)
- Dr. **Philipp Kiryukhantsev-Korneev**, National University of Science and Technology «MISIS» (Russia)
- Professor **Paul Mayrhofer**, University of Wien (Austria)
- Professor **Jindrich Musil**, University of West Bohemia (Czech Republic)
- Professor **Oleg Sobol'**, Khar'kov Technical University (Ukraine)
- Dr. **Aleksey Yerokhin**, University of Sheffield (United Kingdom)

Keynote speakers
- Professor **Francesco Stellacci**, École Polytechnique Fédérale de Lausanne (EPFL) (Switzerland)

Invited speakers
- Professor **Rostislav Andrievskii**, Institute of New Chemical Problems of the Russian Academy of Science (Russia)
- Professor **Karl K. Berggren**, Massachusetts Institute of Technology (USA)
- Professor **Albano Cavaleiro**, Coimbra University (Portugal)
- Professor **Dmitri Golberg**, National Institute for Materials Science (NIMS) (Japan)
- Professor **Cheol Seong Hwang**, Seoul National University (South Korea)
- Professor **Jozef Keckes**, Montanuniversitaet Leoben (Austria)
- Professor **Evgeny A. Levashov**, National University of Science and Technology «MISIS» (Russia)
- Professor **Paul H. Mayrhofer**, Vienna University of Technology (Austria)
- Professor **Jindrich Musil**, University of West Bohemia (Czech Republic)
- Professor **Alexander Rogachev**, Institute of Structural Macrokinetics and Materials Science of the Russian Academy of Science (ISMAN) (Russia)
- Professor **Dmitry V. Shtansky**, National University of Science and Technology «MISIS» (Russia)
- Professor **Stan Veprek**, Technical University Munich (Germany)
- Dr. **Aleksey Yerokhin**, University of Sheffield (United Kingdom)

Section 03

Nanoceramics

Section Scope
Structural and functional ceramics and composites of improved properties and enhanced performance resulting from nanoscale structure organization.

Section Topics
- Structural nanoceramics for severe environments
- Bioceramics and bionanocomposites
- Glass-ceramics
- Nanoceramics for magnetic and electronic devices
- Optical and active laser ceramics
- Ceramics for energy storage and conversion
- Filters and membranes
- Thin ceramic films
- Carbon-base nanomaterials
- Smart ceramic materials
- Hard alloys and nanoceramic tools
- Advanced characterization techniques

Section Chairmen
- Professor **Sergey M. Barinov**, Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences (Russia) – co-chairman
- Professor **Harry L. Tuller**, Massachusetts Institute of Technology (USA) – co-chairman

Section Coordinator
- Professor **Vladimir S. Komlev**, Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences (Russia)

Section Program Board
- Professor **Jan Dusza**, Institute of Materials Research of the Slovak Academy of Sciences (Slovakia)
- Dr. **Giuseppina Padeletti**, Institute of Nanomaterials Research of the Italian National Research Council (Italy)
- Professor **Tatiana Prikhna**, Institute of Superhard Materials, National Academy of Science of Ukraine (Ukraine)
- Professor **Natalia S. Sergeeva**, Hertzen Moscow Oncology Research Institute (Russia)

Keynote speakers
- Professor **Evgeny V. Antipov**, Lomonosov Moscow State University (Russia)
- Professor **Harry L. Tuller**, Massachusetts Institute of Technology (USA)

Invited speakers
- Dr. **Uliana V. Ancharova** , Institute of Solid State Chemistry and Mechanochemistry of the Siberian Branch of the of Russian Academy of Sciences (Russia)
- Professor **Yet-Ming Chiang**, Massachusetts Institute of Technology (USA)
- Professor **Jan Dusza**, Institute of Materials Research, Slovak Academy of Sciences (Slovakia)
- Professor **Paul Heitjans**, Leibniz University Hannover (Germany)
- Professor **Christian Hellmich**, Vienna University of Technology (Austria)
- Professor **Vladimir S. Komlev**, Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences (Russia)
- Professor **Alexander Mukasyan**, University of Notre Dame (USA)
- Professor **Tatiana A. Prikhna**, Bakul Institute for Superhard Materials, National Academy of Sciences of Ukraine (Ukraine)
- Dr. **Julietta Rau**, Institute of Structure of Matter, Italian National Research Council (Italy)
- Professor **Brian W. Sheldon**, Brown University (USA)
- Professor **Rainer Waser**, RWTH Aachen University of Technology (Germany) *– the talk will be delivered by Dr.* ***Vikas Rana****, Forschungszentrum Juelich (Germany)*

Section 04

Bulk Metallic Nanomaterials

Section Scope
Production and special properties of bulk metallic nanomaterials.

Section Topics
- Processing techniques
- Grain refinement and advanced structural characterization
- Superior mechanical and physical properties of bulk nanomaterials
- Interfaces and grain boundaries in bulk nanomaterials
- Modeling approaches to strength and plasticity of bulk nanomaterials
- Innovation potential and applications
- Advanced characterization techniques

Section Chairmen
- Professor **Ruslan Z. Valiev**, Ufa State Aviation Technical University, Saint Petersburg State University (Russia) – co-chairman
- Professor **Yuri Estrin,** Monash University (Australia) – co-chairman

Section Coordinator
- **Zarema Safargalina**, Ufa State Aviation Technical University (Russia)

Section Program Board
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- Professor **Hyoung Seop Kim**, Pohang University of Science and Technology (South Korea)
- Dr. **Ilchat Sabirov**, IMDEA Materials Institute (Spain)
- Professor **Boris Straumal**, Institute of Solid State Physics of the Russian Academy of Sciences (Russia)
- Professor **Laszlo Toth**, Université Paul Verlaine de Metz (France)

Keynote speakers
- Professor **Alexei Vinogradov**, Togliatti State University (Russia)
- Professor **Zenji Horita**, Kyushu University (Japan)

Invited speakers
- Professor **Mikhail Iv. Alimov** , Institute of Structural Macrokinetics and Materials Science of the Russian Academy of Sciences (Russia)
- Professor **Walter J. Botta**, Federal University of São Carlos (Brazil)
- Professor **Sergei Dobatkin**, Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences (Russia)
- Professor **Alex M. Glezer**, Bardin Central Research Institute for Ferrous Metallurgy (Russia)
- Professor **Dmitri V. Louzguine**, Tohoku University (Japan)
- Professor **Lei Lu**, Institute of Metal Research, Chinese Academy of Sciences (China)
- Dr. **Ilchat Sabirov**, IMDEA Materials Institute (Spain)
- Professor **Boris Straumal**, Institute of Solid State Physics of the Russian Academy of Sciences (Russia)
- Professor **Viktor Varyukhin**, Donetsk Institute for Physics and Engineering named after A.A. Galkin, National Academy of Sciences of Ukraine (Ukraine)
- Professor **Michael Zehetbauer**, Physics of Nanostructured Materials, University of Vienna (Austria)
- Professor **Deliang Zhang**, Shanghai Jiao Tong University (China)

Section 05

Nanocomposites and Hybrid Nanomaterials

Section Scope
Preparation and functional properties of different nanocomposites and hybrid materials with advanced optical, magnetic, electrical, electrochemical and other properties.

Section Topics
- Functional nanocomposites
- Membrane materials and technologies
- Polymer-based nanocomposites
- Metal – ceramic nanocomposites
- Opal-based structures
- Synchrotron techniques for nanocomposites investigations
- Nanocell materials
- Carbon-based nanocomposites
- Advanced characterization techniques

Section Chairmen
- Professor **Alexey V. Lukashin**, Lomonosov Moscow State University (Russia) – co-chairman
- Professor **Reshef Tenne**, Weizmann Institute (Israel) – co-chairman

Section Coordinator
- Dr. **Olga V. Boytsova**, Lomonosov Moscow State University (Russia)

Section Program Board
- Dr. **Andrei A. Eliseev**, Lomonosov Moscow State University (Russia)
- Professor **Sergei V. Kalinin**, Oak Ridge National Lab (USA)
- Professor **Alexey A. Vertegel**, Clemson University (USA)

Keynote speakers
- Professor **Reshef Tenne**, Weizmann Institute (Israel) – *the talk will be delivered by Dr.* ***Rita Rosentsveig****, Weizmann Institute (Israel)*

Invited speakers
- Dr. **Davide Calestani,** IMEM-CNR (Italy)
- Dr. **Andrei A. Eliseev**, Lomonosov Moscow State University (Russia)
- Dr. **Giovanni Golemme**, University of Calabria (Italy)
- Professor **Alexander Grüneis**, University of Cologne (Germany)
- Dr. **Curtis Marcott**, University of Delaware (USA)
- Dr. **Elisabetta Mazzotta**, University of Salento (Italy)
- Professor **Yury A. Shchipunov** , Pusan National University (South Korea) and Institute of Chemistry, Far East Department of the Russian Academy of Sciences (Russia)
- Dr. **Jeremy Sloan**, The University of Warwick (UK)
- Dr. **Alexey A. Vertegel**, Clemson University (USA)

Section 06

Polymer, Organic and Other Soft Matter Materials

Section Scope
Soft matter nanomaterials, their preparation and behavior.

Section Topics
- Functional precision molecules and their nanostructures
- Nanostructured materials in organic electronic devices
- Polymer nanostructures in photonics
- Stimuli responsive polymers and nanostructures
- Bioactive and biohybridpolymers and colloids
- Self-assembly of nanostructures
- Supramolecular chemistry and nanomaterials
- Advanced characterization techniques

Section Chairmen
- Professor **Martin Möller**, RWTH Aachen University (Germany) – co-chairman
- Professor **Sergei A. Ponomarenko**, Enikolopov Institute of Synthetic Polymeric Materials of the Russian Academy of Sciences (Russia) – co-chairman

Section Coordinator
- Professor **Irina V. Perminova**, Lomonosov Moscow State University (Russia)

Section Program Board
- Dr. **Abderrahim Yassar**, Ecole Polytechnique (France)
- Dr. **Xiaomin Zhu**, RWTH Aachen University (Germany)

Keynote speakers
- Professor **Krzysztof Matyjaszewski**, Carnegi Mellon University (USA)
- Professor **Antonio Facchetti**, Northwestern University (USA)
- Professor **Klaus Müllen**, Max-Plank Institute of Polymer Chemistry (Germany)

Invited speakers
- Dr. **Alexey Bobrovsky**, Lomonosov Moscow State University (Russia)
- Professor **Vladimir Dyakonov**, Julius Maximilian University of Wuerzburg (Germany)
- Professor **Nicolas Giuseppone**, University of Strasbourg (France)
- Professor **Marcus Halik**, Friedrich-Alexander-University Erlangen-Nürnberg (Germany)
- Dr. **Leonid Ionov,** Leibniz-Institut für Polymerforschung Dresden (Germany)
- Professor **Dimitri Ivanov**, Institut de Sciences des Matériaux, Mulhouse (France)
- Professor **Kalle Levon**, NYU Polytechnic School of Engineering (USA)
- Professor **Martin Möller**, RWTH Aachen University (Germany)
- Professor **Irina V. Perminova**, Lomonosov Moscow State University (Russia)
- Professor **Vitaly Podzorov**, Rutgers University (USA)
- Professor **Sergei A. Ponomarenko**, Enikolopov Institute of Synthetic Polymeric Materials of the Russian Academy of Sciences (Russia)
- Professor **Sergei Sheiko**, The University of North Carolina at Chapel Hill (USA)
- Professor **Raisa Tal'rose**, Institute of Petrochemical Synthesis of the Russian Academy of Sciences (Russia) – *the talk will be delivered by Dr.* ***Alexander A. Ezhov****, Topchiev Institute of Petrochemical Synthesis of the Russian Academy of Sciences (Russia)*
- Dr. **Abderrachim Yassar**, Ecole Politechnique, University Paris-Saclay (France)
- Dr. **Xiaomin Zhu**, RWTH Aachen University (Germany)

Section 07

Nanomaterials for Energy

Section Scope
Electrochemical energy conversion and storage, alternative energy

Section Topics
- Nanomaterials for electrochemical energy storage
- Nanostructured materials for fuel cells
- Nanomaterials for effective hydrogen generation and storage
- Thermoelectric nanomaterials
- Nanomaterials for photovoltaics and solar cells
- Advanced characterization techniques

Section Chairmen
- Professor **Evgeny V. Antipov**, Lomonosov Moscow State University (Russia) – co-chairman
- Professor **Kenneth R. Poeppelmeier**, Northwestern University (USA) – co-chairman

Section Coordinator
- Dr. **Daniil Itkis**, Lomonosov Moscow State University (Russia)

Section Program Board
- Dr. **Sergei Istomin**, Lomonosov Moscow State University (Russia)
- Dr. **Nellie Khasanova**, Lomonosov Moscow State University (Russia)
- Dr. **Dmitry Paraschuk**, Lomonosov Moscow State University (Russia)
- Professor **Andrei Shevelkov**, Lomonosov Moscow State University (Russia)

Keynote speakers
- Professor **Yang Shao-Horn**, Massachusetts Institute of Technology (USA)

Invited speakers
- Professor **Zhumabay Bakenov**, Nazarbayev University (Kazakhstan)
- Dr. **Catherine Bougerol**, Institut Neel CNRS (France)
- Dr. **Tim G. Fawcett**, International Centre for Diffraction Data (USA)
- Dr. **Oleg Lebedev**, CRISMAT, CNRS-ENSICAEN, Université de Caen (France)
- Professor **Ru-Shi Liu**, National Taiwan Univeristy (Taiwan)
- Professor **Elena R. Savinova**, University of Strasbourg (France)
- Professor **Carl V. Thompson**, Massachusetts Institute of Technology (USA)

Section 08

Biological and Biomedical Nanomaterials

Section Scope
Nanomaterials in biology and medicine.

Section Topics
- Bioinspired hybrid materials and nanocomposites for remediation
- Nanomedicine
- Nuclei medicine
- Conjugated nanostructures for biology and medicine
- Biocompatible nanoparticles and nanotoxicity
- Biosensorics
- Multifunctional nanomaterials for biomedical applications
- Liposomes and target delivery of drugs
- Nanomaterials for biomedical visualization
- Medical diagnostics
- Carbon nanomaterials in biology and medicine
- Magnetic nanoparticles in medicine
- Advanced characterization techniques

Section Chairmen
- Professor **Alexander V. Kabanov**, Lomonosov Moscow State University (Russia) and Carolina Institute for Nanomedicine (USA) – co-chairman
- Professor **Sergey M. Deyev**, Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences (Russia) – co-chairman

Section Program Board
- Professor **Tatiana K. Bronich**, University of Nebraska Medical Center (USA)
- Professor **Andrei V. Zvyagin**, Macquarie University (Australia)

Keynote speakers
- Professor **Daniel G. Anderson**, Massachusetts Institute of Technology (USA)
- Professor **Sergey M. Deyev**, Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences (Russia)

Invited speakers
- Professor **Tatiana K. Bronich**, University of Nebraska Medical Center (USA)
- Professor **Abraham J. Domb**, The Hebrew University of Jerusalem (Israel)
- Professor **Rainer Jordan**, Technical University of Dresden (Germany)
- Professor **Nikolai G. Khlebtsov**, Institute of Biochemistry and Physiology of Plants and Microorganisms of the Russian Academy of Sciences, Saratov State University (Russia)
- **Guillaume Thomas**, Universite de Bourgogne (France)
- Dr. **Pavel A. Troshin**, Institute for Problems of Chemical Physics of the Russian Academy of Sciences (Russia)
- Dr. **Paola Valentini**, Istituto Italiano di Tecnologia - CBN (Italy)
- Professor **Andrei V. Zvyagin**, Macquarie University (Australia)

Section 09

Nanomaterials: Mechanics and Applications in Mechanical Engineering

Section Scope
Nanomaterials for mechanical engineering with advanced operational properties

Section Topics
- Mechanical models of nanomaterials
- Modeling of relationships between structure and mechanical properties of nano- and microscale units
- Mechanical behavior of natural and artificial materials with hierarchical structure
- Mechanics of functional-gradient coatings
- Structural nanomaterials
- Mechanical testing of micro- and nanoscale samples (devices)
- Nanotribology
- Mechanochemistry
- Carbon-based advanced structural materials
- Advanced characterization techniques for mechanical engineering applications

Section Chairmen
- Professor **Robert V. Goldstein**, Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences (Russia) – co-chairman
- Professor **Horacio D. Espinosa**, North-Western University (USA) – co-chairman

Section Coordinator
- Dr. **Alexander V. Chentsov**, Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences (Russia)

Section Program Board
- Professor **Nikita F. Morozov**, Saint Petersburg State University (Russia)
- Professor **Alexei E. Romanov**, Institute of Physics, University of Tartu (Estonia) and Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia)

Keynote speakers
- Professor **Jeffrey Th. M. De Hosson**, University of Groningen (The Netherlands)

Invited speakers
- Professor **Alberto Carpinteri**, Politecnico di Torino (Italy)
- Professor **Tobin Filleter**, University of Toronto (Canada)
- Professor **Sergey A. Kukushkin**, Institute of Problems of Mechanical Engineering Russian Academy of Sciences IPME RAS (Russia)
- Professor **Nikita F. Morozov**, Saint Petersburg State University (Russia)
- Professor **Emmanuel Gdoutos**, Democritus University of Thrace (Greece)
- Professor **Irina G. Goryacheva**, Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences (Russia)
- Professor **Robert V. Goldstein**, Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences (Russia)
- Professor **Alexander Golubok**, ITMO University, Institute for Analytical Instrumentation of the Russian Academy of Sciences (Russia)
- Professor **Reinhard Pippan**, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences (Austria)
- Professor **Alexei E. Romanov**, Institute of Physics, University of Tartu (Estonia) and Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia)

Section 10

Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

Section Scope
Nanomaterials for organic, molecular and nanoelectronics.

Section Topics
- Nanoheterostructures for optoelectronics (quantum wells, quantum wires, and quantum dots)
- Advanced light emitters
- Nanomaterials for solar energy conversion
- Silicon based nanostructures for nanophotonics
- Synthesis of nanoheterostructures for photonics and electronics
- Nanostructures for THz and short pulse generation and detection
- Carbon nanomaterials in nanoelectronics
- Magnetic nanostructures and Spintronics
- Advanced characterization techniques

Section Chairmen
- Professor **Victor M. Ustinov**, Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia) – co-chairman
- Professor **Edik U. Rafailov**, Aston University (UK) – co-chairman

Section Coordinator
- Professor **Grigorii S. Sokolovskii**, Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia)

Section Program Board
- Professor **Vladimir G. Dubrovskii**, Saint Petersburg Academic University - Nanotechnology Research and Education Centre of the Russian Academy of Sciences (the Academic University) (Russia)
- Professor **Grigorii S. Sokolovskii**, Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia)

Keynote speakers
- Professor **Richard De La Rue**, Glasgow University (UK)

Invited speakers
- Professor **Viacheslav M. Andreev**, Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia)
- Dr. **Stefan Breuer**, Darmstadt University of Technology (Germany)
- Dr. **Alessandro Casaburi**, University of Glasgow (UK)
- Dr. **Arkadi Chipouline**, Institute of Applied Physics, Friedrich-Schiller-University of Jena (Germany)
- Professor **Tomasz Czyszanowski**, Lodz University of Technology (Poland)
- Dr. **Pavel Dorozhkin**, NT-MDT Co. (Russia)
- Professor **Vladimir G. Dubrovskii**, Saint Petersburg Academic University - Nanotechnology Research and Education Centre of the Russian Academy of Sciences (the Academic University) (Russia)
- Professor **Anatoly V. Dvurechenskii**, Rzhanov Institute of Semiconductor Physics, Siberian Branch of the Russian Academy of Science (Russia)
- Dr. **Maria Farsari**, FORTH Institute of Electronic Structure and Laser (Greece)
- Professor **Andrei V. Kabashin**, CNRS - Aix-Marseille University (France)
- Professor **Sergey A. Kukushkin**, Institute of Problems of Mechanical Engineering Russian Academy of Sciences IPME RAS (Russia)
- Professor **Irina N. Yassievich**, Ioffe Physico-Technical Institute of the Russian Academy of Sciences (Russia)

Section 11

Nanomaterials and Catalysis

Section Scope
New processes in catalysis utilizing nanomaterials.

Section Topics
- Nanoparticle catalysis for organic synthesis and industry
- Fundamentals and mechanism of nanocatalysis
- Nanoparticle characterization
- New nanomaterials for catalysis
- Interconversion of heterogeneous and homogeneous catalytic systems
- Leaching and stability of nanoparticles
- Nanoparticles for sustainable catalysis
- Advanced characterization techniques

Section Chairmen
- Professor **Valentin P. Ananikov**, Zelinsky Institute of Organic Chemistry of the Russian Academy of Sciences (Russia) – co-chairman
- Professor **Christian W. Lehmann**, Max-Planck-Institut für Kohlenforschung (Germany) – co-chairman

Section Program Board
- Professor **Andrey A. Rempel**, Institute of Solid State Chemistry of the Ural Branch of the Russian Academy of Sciences (Russia).

Keynote speakers
- Professor **Valentin P. Ananikov**, Zelinsky Institute of Organic Chemistry of the Russian Academy of Sciences (Russia)
- Professor **Christian W. Lehmann**, Max-Planck-Institut für Kohlenforschung (Germany)

Invited speakers
- Dr. **Pieter Glatzel**, European Synchrotron Radiation Facility (ESRF) (France)
- Professor **Christel Laberty-Robert**, Laboratoire de Chimie de la Matière Condensée de Paris (France)
- Professor **Edward A. Karakhanov**, Lomonosov Moscow State University (Russia)
- Dr. **Peter Miedziak**, Cardiff University (UK)
- Professor **Andrey A. Rempel**, Institute of Solid State Chemistry of the Ural Branch of the Russian Academy of Sciences (Russia)
- Professor **Anna Trzeciak**, University of Wroclaw (Poland)

NANO 2014 Schedule
July 13 (Sunday)

2:00 PM – 7:00 PM	Registration
7:00 PM – 10:00 PM	Social event – Moscow River Boat Trip

The conference site –
Lomonosov Building of Moscow University, Lomonosovsky Avenue 27, Building 1

July 14 (Monday)

9:00 AM – 7:00 PM	Registration
10:00 AM – 6:00 PM	Exhibition
10:00 AM – 11:30 AM	Opening ceremony. Plenary session Location: Lomonosov Building Conference Hall
10:00 AM – 10:45 AM	Opening ceremony
10:45 AM – 11:30 AM	***Plenary lecture*** **Light Energy Harvesting and Charge Carrier Collection in Mesoscopic Solar Energy Conversion Systems** [1] Michael Graetzel [1] Laboratory of Photonics and Interfaces, Institute of Chemical Science and Engineering Faculty of Basic Science, Ecole Polytechnique Federale de Lausanne, Switzerland
11:30 AM – 12:00 PM	Coffee break
12:00 PM – 2:00 PM	Poster session
1:00 PM – 3:00 PM	Lunch
3:00 PM – 5:00 PM	Oral sessions 01 – 11 (parallel)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

3:00 PM – 5:20 PM Location: B3	**Oral session** **Diversity of Nanostructures and Their Characterization** Chairman: Professor Yury G. Gogotsi
3:00 PM – 3:35 PM	*Keynote lecture* **MXenes: A New Family of Two-Dimensional Materials** [1] Yury G. Gogotsi [1] Department of Materials Science and Engineering, and A. J. Drexel Nanomaterials Institute, Drexel University, Philadelphia, Pennsylvania 19104, USA
3:35 PM – 4:05 PM	*Invited lecture* **Functional Carbon Nanomaterial Heterostructures** [1] Mark C. Hersam [1] Northwestern University, 2220 Campus Drive, Evanston, IL 60208-3108, USA
4:05 PM – 4:35 PM	*Invited lecture* **Synthesis, Optical Spectra and Luminescence of Metal-Ion Doped Inorganic Nanoparticles and Graphene-Based Hybrid Structures** [1,2] Jianhua Hao [1] Department of Applied Physics, The Hong Kong Polytechnic University, Hong Kong, China [2] The Hong Kong Polytechnic University Shenzhen Research Institute, Shenzhen 518057, China
4:35 PM – 4:50 PM	**Ultra-Fast Nucleation and Growth of CdS Quantum Dots Observed by Ultra-Fast SAXS/WAXS** [1] Andreas Schiener, [1] Andreas Magerl [1] University of Erlangen-Nuernberg, Staudtstr. 3; 91058 Erlangen; Germany
4:50 PM – 5:05 PM	**Highly Transparent and Conductive Single-Walled Carbon Nanotube Films for Electronic Applications** [1] Albert G. Nasibulin [1] Skolkovo Institute of Science and Technology, 100 Novaya st., Skolkovo, Moscow Region, 143025 Russia [2] Department of Applied Physics, Aalto University School of Science, PO Box 15100, 00076 Aalto, Espoo, Finland
5:05 PM – 5:20 PM	**Strategies in the Design of Colloidal Low and High Porosity Silica-Based Nanoarchitectures** [1] Carla Cannas, [1] Andrea Ardu, [2] Davide Peddis, [1] Anna Musinu [1] University of Cagliari, S.S. 554 bivio per Sestu, Monserrato, 09042 (CA), Italy [2] Istituto di Struttura della Materia, CNR, Via Salaria, Km. 29,300 - 00016 Monterotondo RM Laz, Italy

July 14 (Monday)

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

3:00 PM – 5:15 PM Location: C1	**Oral session** Chairman: Professor Evgeny Levashov
3:00 PM – 3:35 PM	*Keynote lecture* **Ligand Coated Nanoparticles for Novel Biomedical Applications** [1] Francesco Stellacci [1] Institute of Materials, EPFL, Lausanne, Switzerland
3:25 PM – 4:05 PM	*Invited lecture* **Nobel Metal Containing Nanocomposite thin Coatings Deposited by Sputtering-Based Techniques** [1] Albano Cavaleiro [1] University of Coimbra, RuaDEp Eng Mecanica, Luis Reis Santos, 3030-788 Coimbra, Portugal
4:05 PM – 4:35 PM	*Invited lecture* **Nanostructured Multi-Component Thin Films** [1] Paul H. Mayrhofer [1] Vienna University of Technology, Vienna, Austria
4:35 PM – 4:55 PM	**Nanostructured Surfaces for Biological Applications** [1] Jolanda Spadavecchia, [1] Ramesh Perumal, [1] Claire-Marie Pra-dier [1] Laboratoire de Réactivité de Surface, UMR CNRS 7197, Univer-sité Pierre et Marie Curie – Paris VI, Site d'Ivry–Le Raphaël, 94200 Ivry-sur-Seine, France
4:55 PM – 5:15 PM	**Confinement Effects on the Swelling Behavior of Nanostructured Block Copolymer Films** [1] Larisa A. Tsarkova, [1] Anja Stenbock, [1] Alexander Boeker [1] DWI - Leibniz-Institute fur Interactive Materialien, Forckenbeckstrasse 50, Germany

Section 03 – Nanoceramics

3:00 PM – 5:05 PM Location: F2	**Oral session** Chairman: Professor Harry L. Tuller
3:00 PM – 3:35 PM	*Keynote lecture* **Oxide Superlattices and Nanostructures: Roles in Solid State Ionics** [1] Harry L. Tuller [1] Massachusetts Institute of Technology, Dept. of Materials Science and Engineering, 77 Mass. Ave. Cambridge, MA 02139 USA
3:35 PM – 4:05 PM	*Invited lecture* **Electrochemically Induced Stresses in Ceramics for Energy Applications** [1] Brian W. Sheldon [1] Brown University, School of Engineering, USA
4:05 PM – 4:25 PM	**Transport Properties of Nanostructured Ferrous Membrane Materials with Perovskite-Like Structure** [1] Victor L. Kozhevnikov [1] Institute of Solid State Chemistry, Ural Branch of RAS, Pervomaiskaya str. 91, Yekaterinburg, Russia
4:25 PM – 4:45 PM	**Preparation of Monodisperse Microparticles from Metal Oxides for the Fabrication of Thermally Stable Photonic Crystals** [1] Elisabeth W. Leib, [2] Ulla Vainio, [1] Horst Weller, [1] Tobias Vossmeyer [1] University of Hamburg, Grindelallee 117, 20146 Hamburg, Germany [2] Helmholtz-Zentrum Geesthacht, Max-Planck-Straße 1,21502 Geesthacht, Germany
4:45 PM – 5:05 PM	**Synthesis of Ultrahard Fullerite with a Catalytic 3D Polymerization Reaction of C_{60}** [1] Mikhail Popov, [1] Vladimir Mordkovich, [1] Sergey Perfilov, [1] Alexey Kirichenko, [1] Boris Kulnitskiy, [1] Igor Perezhogin, [1] Danila Ovsyannikov, [1] Vladimir Blank [1] Technological Inst. for Superhard and Novel Carbon Materials, 142190, Centralnaya 7a, Troitsk, Moscow, Russian Federation [2] Moscow Institute of Physics and Technology State University, 141700, Institutskiy per. 9, Dolgoprudny, Moscow Region, Russian Federation

Section 04 – Bulk Metallic Nanomaterials

3:00 PM – 5:05 PM Location: E1	**Oral session** Chairman: Professor Ruslan Z. Valiev
3:00 PM – 3:35 PM	*Keynote lecture* **Mechanical Properties and Fatigue of Ultrafine Grained Metals: History, Challenges and Perspectives** [1] Alexei Vinogradov [1] Togliatti State Univeristy, Belorusskaya 14, Togliatti 445667, Russia
3:35 PM – 4:05 PM	*Invited lecture* **Generation of Materials with Multi-Scale Structure by Methods of Plastic Deformation** [1] Viktor Varyukhin, [1] Yan Beygelzimer, [1] Viktor Beloshenko [1] Donetsk Institute for Physics and Engineering named after A.A. Galkin NAS of Ukraine, R.Luxemburg str. 72, Donetsk, 83114, Ukraine
4:05 PM – 4:25 PM	**A New Paradigm of Severe Plastic Deformation: Fabrication of Hybrid Nanomaterials** [1,2] Yuri Estrin, [1] Rimma Lapovok [1] Centre for Advanced Hybrid Materials, Department of Materials Engineering, Monash University, 3800 Clayton, Victoria, Australia [2] Laboratory of Hybrid Nanostructured Materials, NITU MISiS, Leninsky prospect 4, 119049 Moscow, Russia
4:25 PM – 4:45 PM	**Fabrication of Stainless Steel Micro- and Nano-Powder Mixture by RF Plasma Treatment** [1] Dong-Yeol Yang, [1] Yong-Jin Kim, [1] Tae-Soo Lim, [1] Sangsun Yang [1] Powder Technology Department, Korea Institute of Materials Science (KIMS), Korea
4:45 PM – 5:05 PM	**Nanostructure Formation and Phase Separation of the Composite CuFe by SPD** [1] Alexander V. Lukyanov, [2] Dmitry V. Gunderov, [2] Anna A. Churakova, [3] Alexander Yu. Filatov, [3] Eduard E. Levin, [3] Evgeny V. Antipov, [1] Ruslan Z. Valiev [1] Ufa State Aviation Technical University, 450000, Ufa, K. Marx st. 12, Russia [2] Institute of molecule and crystal physics RAS, 450075, Ufa, Prospekt Oktyabrya 151, Russia [3] Lomonosov Moscow State University, Faculty of Chemistry, 119991, Moscow 1, GSP-1, 1-3 Leninskiye Gory, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

3:00 PM – 5:05 PM Location: B4	**Oral session** Chairmen: Professor Alexey V. Lukashin, Professor Jeremy Sloan
3:00 PM – 3:35 PM	*Keynote lecture* **Inorganic Nanotubes and Fullerene-Like Nanoparticles at the Crossroad Between Solid State Chemistry and Nanotechnology** [1] Rita Rosentsveig, [1] Reshef Tenne [1] Weizmann Institute, Department of Materials and Interfaces, Rehovot 76100, Israel
3:35 PM – 4:05 PM	*Invited lecture* **Nanomaterials for Targeted Delivery of Antioxidant Enzymes and Enzyme Mimetics** [1] Alexey Vertegel, [1] Raisa Kiseleva, [1] Victor Maximov, [2] Carl Atkinson, [2] Mark Kindy, [2] Rodney Schlosser [1] Clemson University, Dept. Bioengineering, 301 Rhodes Hall, Clemson, SC 29634-0905, USA [2] Medical University of South Carolina, 171 Ashley Avenue Charleston, SC 29425 USA
4:05 PM – 4:25 PM	**Novel Polyampholytic Hydrogels and Multi-Responsive Microgels** [1] Vural Butun [1] Eskişehir Osmangazi University, Department of Chemistry, 26480, Eskisehir, Turkey
4:25 PM – 4:45 PM	**Functionality in 1D and 3D Bio-Inorganic Hybrid Materials** [1] Mikhail Pashchanka, [1] Joerg J. Schneider, [2] Christiane Thielemann [1] Technische Universitaet Darmstadt, Fb Chemie, Eduard-Zintl-Institut f. Anorganische und Physikalische Chemie, Alarich-Weiss-Str.12, 64287 Darmstadt, Germany [2] Hochschule Aschaffenburg, Fakultaet f. Ingenieurwissenschaften, bio-mems lab, Wuerzburger Str.45, 63743 Aschaffenburg, Germany
4:45 PM – 5:05 PM	**Engineering of a New Nanobiohybrid Composed of Titanate Nanoribbons for Regenerative Medicine** [1] Vanessa Bellat, [2] Mathieu Moreau, [1] Julien Boudon, [3] David Vandroux, [2] Franck Denat, [1] Nadine Millot [1] Laboratoire ICB UMR 6303 CNRS-Universite de Bourgogne, 9 Av. A. Savary, BP 47 870, F-21078 DIJON Cedex, France [2] Institut de Chimie Moléculaire de l'Université de Bourgogne, UMR 6302 CNRS/Université de Bourgogne, BP 47870, 21078 Dijon cedex, France [3] NVH Medicinal, Centre Hospitalier, Dijon, France

Section 06 – Polymer, Organic and Other Soft Matter Materials

3:00 PM – 5:45 PM Location: C3	**Oral session** Chairman: Professor Sergei A. Ponomarenko
3:00 PM – 3:35 PM	*Keynote lecture* **Nanostructured Functional Materials by Atom Transfer Radical Polymerization** [1] Krzysztof Matyjaszewski [1] Carnegie Mellon University, Pittsburgh, PA, 15213, USA
3:35 PM – 4:05 PM	*Invited lecture* **Functional and Light - Actuated Microgels – from Responsive Hydrogels towards Microscopic Locomotor Systems** [1] Ahmed Mourran, [1] Hang Zhang, [1] Martin Moeller [1] DWI Leibniz - Institute of Interactive Materials and RWTH Aachen University, Aachen, Germany
4:05 PM – 4:35 PM	*Invited lecture* **Stressed Polymers - Exploiting Tension in Soft Matter** [1] Sergei Sheiko [1] University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3290, USA
4:35 PM – 5:05 PM	*Invited lecture* **Towards Self-Constructing Materials: A System Chemistry Approach** [1] Nicolas Giuseppone [1] University of Strasbourg, Institut Charles Sadron - CNRS 23 rue du Loess, BP84047 67034 Strasbourg Cedex 2, France
5:05 PM – 5:25 PM	**New Examples of Supramolecular Gels and Metallogels – Exciting Members of Soft-Matter** [1] Sergey Vatsadze, [1] Alexey Medved'ko, [1] Vyacheslav Nuriev, [1] Alexander Ezhov, [2] Andrey Churakov, [2] Vladimir Ivanov, [3] Haojie Yu, [3] Li Wang [1] M. V. Lomonosov Moscow State University, Moscow 119991, Russia [2] N. S. Kurnakov Institute of General and Inorganic Chemistry, RAS, Moscow 119991, Russia [3] State Key Laboratory of Chemical Engineering, Department of Chemical and Biological Engineering, Zhejiang University, Hangzhou 310027, China
5:25 PM – 5:45 PM	**Patterned Arrays of Polyelectrolyte Multilayer Chambers** [1] Maxim V. Kiryukhin [1] Institute of Materials Research and Engineering, A*STAR, 3 Research Link 117602 Singapore

Section 07 – Nanomaterials for Energy

3:00 PM – 5:20 PM Location: B2	**Oral session** Chairman: Professor Evgeny V. Antipov
3:00 PM – 3:35 PM	*Keynote lecture* **Enabling Oxides for Oxygen Electrocatalysis** [1] Yang Shao-Horn [1] Department of Mechanical Engineering, Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139 USA
3:35 PM – 4:05 PM	*Invited lecture* **Noble-Metal-Free Electrode Materials for Alkaline Fuel Cells** [1] Elena R. Savinova [1] Institut de Chimie et Procédés pour l'Energie, l'Environnement et la Santé ECPM, Université de Strasbourg, UMR 7515 CNRS-ECPM-University of Strasbourg, 25 rue Becquerel 67087 Strasbourg Cedex 2, France
4:05 PM – 4:35 PM	*Invited lecture* **Carpets of Vertically-Aligned Carbon Nanotubes and Nanofibers for Li-Air Batteries** [1,2] Carl V. Thompson [1] Dept. of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge MA, USA [2] Skoltech Center for Electrochemical Energy, Skolkovo Institute of Science and Technology, Skolkovo, Russia
4:35 PM – 5:05 PM	*Invited lecture* **Quantum Dots, Nanosized Au, and Upconverion Nanoparticles Sensitized ZnO Nanowires-Array Photoelectrodes for Water Splitting** [1] Ru-Shi Liu, [1] Chih-Kai Chen, [1] Hao-Ming Chen, [1] Chih-Jung Chen, [2] Shu-Fen Hu [1] Department of Chemistry, National Taiwan University, Taipei, 106, Taiwan [2] Department of Physics, National Taiwan Normal University, Taipei, 116, Taiwan
5:05 PM – 5:20 PM	**Chemical Stability of Electrode Materials for Oxygen Reduction in Aprotic Media** [1] Daniil M. Itkis [1] Lomonosov Moscow State University, Leninskie gory, Moscow, 119991 Russia

Section 08 – Biological and Biomedical Nanomaterials

3:00 PM – 5:05 PM Location: C4	**Oral session** Chairman: Professor Abraham J. Domb
3:00 PM – 3:35 PM	*Keynote lecture* **Heteronanostructures for Diagnostics and Therapy** [1] Sergey M. Deyev [1] Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Miklukho-Maklaya, 16/10, Moscow, 117997 Russia
3:35 PM – 4:05 PM	*Invited lecture* **Nanoparticles for Oral and Brain Delivery** [1] Abraham (Avi) Domb [1] School of Pharmacy- Faculty of Medicine, The Hebrew University of Jerusalem and Jerusalem College of Engineering, 91120, Faculty of Medicine, Eyn Kerem Camp, Faculty of Medicine, Eyn Kerem Camp, JERUSALEM, Jeru, Israel
4:05 PM – 4:25 PM	**VEGF-Targeted Delivery of Nanoparticles to the Brain Tumor** [1] Natalia V. Nukolova, [2] Sergey A. Shein, [3] Vladimir P. Baklaushev, [2] Anna A. Korchagina, [2] Tatiana O. Abakumova, [1] Ilya I. Kuznetsov, [1] Anton D. Aleksashkin, [1] Dmitry A. Bychkov, [2] Nadezhda F. Grinenko, [4] Alexander V. Kabanov, [2] Vladimir P. Chekhonin [1] Lomonosov Moscow State University, Leninskie gori, 3/1, Moscow, 119991, Russia [2] Serbsky National Research Center for Social and Forensic Psychiatry, Kropotkinsky per, 23, Moscow, 119034, Russia
4:25 PM – 4:45 PM	**Smart Nanostructured Materials in the Biomedical Research** [1] Gianni Ciofani, [1] Giada Genchi, [1] Elmira Farrokhtakin, [1] Antonella Rocca, [1] Attilio Marino, [1] Barbara Mazzolai, [1] Virgilio Mattoli [1] Italian Institute of Technology, Viale Rinaldo Piaggio 34, 56025 Pontedera (Pisa), Italy
4:45 PM – 5:05 PM	**Nanotechnology Approaches to Parkinson's Disease Treatment** [1] Giada Graziana Genchi, [1] Barbara Mazzolai, [1] Virgilio Mattoli, [1] Gianni Ciofani [1] Istituto Italiano di Tecnologia, Center for Micro-BioRobotics, Viale Rinaldo Piaggio 34, 56025, Pontedera, PI, Italy

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

3:00 PM – 4:45 PM Location: E2	**Oral session** Chairman: Professor Robert V. Goldstein
3:00 PM – 3:35 PM	*Keynote lecture* **Metallic Muscles at Work** [1] Jeff T. DeHosson, [1] Eric Detsi, [1] Patrick Onck [1] University of Groningen, Nijenborgh 4, 9747 AG Groningen, The Netherlands
3:35 PM – 4:05 PM	*Invited lecture* **Mechanical Characterization of Cementitious Nanocomposites** [1] Maria Konsta-Gdoutos, [1] Emmanuel Gdoutos [1] School of Engineering, Democritus University of Thrace, 12 Vasilissis Sofias, Greece
4:05 PM – 4:25 PM	**Electrical Conductivity and Piezoresistive Properties of Cementitious Nanocomposites** [1] Maria Konsta-Gdoutos, [1] Chrysula Aza [1] School of Engineering, Democritus University of Thrace, 12 Vasilissis Sofias, Greece
4:25 PM – 4:45 PM	**Modeling of Elastomeric Nanocomposite Reinforcement due to the Appearance of Oriented Polymer Regions Between Filler Particle Aggregates** [1] Alexander L. Svistkov [1] Institute of continuous media mechanics UB RAS, 614013 Perm, street Academika Koroleva, 1, Russia

July 14 (Monday)

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

3:00 PM – 5:05 PM Location: F1	**Oral session** Chairman: Professor Victor M. Ustinov
3:00 PM – 3:35 PM	*Keynote lecture* **Nanophotonic Devices for Optical Sensing and Communications Applications** [1] Richard M. De La Rue [1] University of Glasgow, University of Glasgow, School of Engineering, Rankine Building, Oakfield Avenue, Glasgow G12 8LT, Scotland, U.K
3:35 PM – 4:05 PM	*Invited lecture* **Infrared Single-Photon Detection with Superconducting Nanowires** [1] Alessandro Casaburi, [1] Nathan Gemmell, [1] Michael G. Tanner, [1] Robert M. Heath, [1] Robert A. Kirkwood, [1] Andrea Pizzone, [1] Robert Hadfield [1] University of Glasgow - School of Engineering, Rankine Building, Oakfield Avenue, G12 8LT, Glasgow, UK
4:05 PM – 4:25 PM	**Colorful Light-Emitting-Diodes via Modulation of the Concentration of Red-Emitting Silicon Nanocrystal Phosphors** [1] Giuseppe Barillaro, [1] Lucanos Strambini [1] Information Engineering Dpt, University of Pisa, via G. Caruso 16, 56121 Pisa - Italy
4:25 PM – 4:45 PM	**High-k Modes in Hyperbolic Metamaterials and Their Extraction into Free Space** [1] Andrey A. Pavlov, [1] Vasily V. Klimov, [2] Ilya V. Zabkov [1] Lebedev Physical Institute, 53 Leninskij Prospekt, 119991, Moscow, Russia [2] Moscow Institute of Physics and Technology, 9 Institutskiy per., Dolgoprudny, Moscow Region, 141700, Russia
4:45 PM – 5:05 PM	**Light Emitting Panels Based on ZnS:Cu Nanostructures in Porous Anodic Alumina** [1] Rishat Valeev, [1] Artemi Beltyukov, [1] Andrey Chukavin [1] Physical-Technical Institute of UB RAS, Kirova str. 132, Izhevsk, 426000 Russia

July 14 (Monday)

Section 11 – Nanomaterials and Catalysis

3:00 PM – 5:05 PM Location: C2	**Oral session** Chairman: Professor Valentin P. Ananikov
3:00 PM – 3:35 PM	***Keynote lecture*** **High Resolution Electron Microscopy for Chemical Analysis of Nanoparticles** [1] Christian W. Lehmann [1] Max-Planck-Institut fuer Kohlenforschung, 45470 Muelheim an der Ruhr, Germany
3:35 PM – 4:05 PM	***Invited lecture*** **In-Situ Studies of Electronic Structure Using High Brilliance X-Ray Spectroscopy** [1] Pieter Glatzel [1] European Synchrotron Radiation Facility, 6 Rues Jules Horowitz, 38043 Grenoble, France
4:05 PM – 4:25 PM	**Electronic Defect Characterisation in Blue Titanium Dioxide and Implications for Visible Light Photocatalysis** [1] Campbell S. McNicoll, [2] Tim Kemmitt, [3] Vladimir B. Golovko [1] University of Canterbury, New Zealand, Private Bag 4800, Christchurch 8140, New Zealand [2] MacDiarmid Institute for Advanced materials and Nanotechnology, Victoria University of Wellington, P.O. Box 600, Wellington 6140, New Zealand [3] Callaghan Innovation Ltd, Gracefield road, P.O. Box 31-310, Lower Hutt 5040, New Zealand
4:25 PM – 4:45 PM	**Multifunctional Polymetallic Catalysts with Nanostructured Surface** [1] Vyacheslav Borshch, [2] Sergey Kolesnikov, [3] Ruslan Kazantsev, [3] Oleg Eliseev, [1] Vladimir Yukhvid, [1] Dmitry Andreev, [1] Svetlana Zhuk, [1] Elena Pugacheva, [1] Vladimir Sanin, [2] Ivan Kolesnikov [1] Institute of Structural Macrokinetics and Materials Science RAS, Chernogolovka, Moscow region, Russia [2] N.D.Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia [3] I.M.Gubkin Oil and Gas National Research University, Moscow, Russia
4:45 PM – 5:05 PM	**Electronic Structure and Coordination Environment of Cu Sites in Cu-SSZ-13 Zeolite** [1,2] Kirill A. Lomachenko, [2] Filippo Giordanino, [2] Elisa Borfecchia, [3] Pablo Beato, [2] Silvia Bordiga, [1] Alexander V. Soldatov, [1,2] Carlo Lamberti [1] Southern Federal University, Research Center for Nanoscale Structure of Matter, Zorge str. 5, 344090 Rostov-on-Don, Russia [2] University of Turin, Department of Chemistry and NIS Centre of Excellence, Via P. Giuria 7, 10125 Turin, Italy [3] Haldor Topsøe, Nymøllevej 55, DK-2800 Kgs. Lyngby, Denmark
5:30 PM – 7:30 PM	Social event – Welcome Reception

July 15 (Tuesday)

9:00 AM – 7:00 PM	Registration
10:00 AM – 6:00 PM	Exhibition
9:15 AM – 11:30 AM	Plenary session Location: Lomonosov Building Conference Hall
09:15 AM – 10:00 AM	***Plenary lecture*** **Probing Structure, Properties and Dynamics of Nanostructures Through Scanning Transmission Electron Microscopy and First-Principles Theory** [1] Stephen J. Pennycook [1] University of Tennessee, Department of Materials Science and Engineering, Knoxville, TN 37996, USA
10:00 AM – 10:45 AM	***Plenary lecture*** **Carbon Nanomaterials Synthesis and Applications** [1] James M. Tour [1] Rice University, 6100 Main Street, Houston, Texas 77005 USA
10:45 AM – 11:30 AM	***Plenary lecture*** **Spherical Nucleic Acid (SNA) Nanostructures as Intracellular Probes and Gene Regulation Agents** [1] Chad A. Mirkin [1] Department of Chemistry and International Institute for Nanotechnology Northwestern University, 2145 Sheridan Rd. Evanston, IL 60208-3113 USA
11:30 AM – 12:00 PM	Coffee break
12:00 PM – 2:00 PM	Poster session
1:00 PM – 3:00 PM	Lunch
3:00 PM – 5:00 PM	Oral sessions 01 – 11 (parallel)
5:00 PM – 5:30 PM	Coffee break
5:30 PM – 7:20 PM	Oral sessions 01 – 11 (parallel)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

3:00 PM – 5:05 PM Location: B3	**Oral session** **Interactions in Nanoparticle Ensembles** Chairman: Professor Mark C. Hersam
3:00 PM – 3:35 PM	*Keynote lecture* **Cooperative Function in Atomically Precise Nanoscale Assemblies** [1] Paul S. Weiss [1] California NanoSystems Institute and Departments of Chemistry & Biochemistry and Materials Science & Engineering, University of California, Los Angeles, CA 90095, USA
3:35 PM – 4:05 PM	*Invited lecture* **SERS Materials for Biological Objects** [1] Eugene A. Goodilin, [1] Anna A. Semenova, [1] Asia S. Sarycheva, [2] Nadezhda A. Brazhe, [2] Adil Baijumanov, [2] Georgy V. Maximov [1] Lomonosov Moscow State University, Faculty of Materials Sciences, Lenin Hills, 119991, Moscow, Russia [2] Lomonosov Moscow State University, Faculty of Biology, Lenin Hills, 119991, Moscow, Russia
4:05 PM – 4:25 PM	**Vibrational, Elastic, and Thermal Properties of Metal Nanoparticles** [1] Ignacio L. Garzon, [1] Huziel E. Sauceda, [1] Luis A. Perez, [2] Fernando Salazar [1] Universidad Nacional Autonoma de Mexico, Instituto de Fisicia, 01000 Mexico, D. F., Mexico [2] Instituto Politecnico Nacional, ESIME Culhuacan, 04430 Mexico, D. F. Mexico
4:25 PM – 4:45 PM	**Fundamental Nature of the Tube-Tube Repulsive Barrier: A Kinetics Study of SWCNT Aggregation** [1] Jordan C. Poler, [1] Thomas J. Younts, [1] Shiho Kobayashi, [1] Shawn G. Ridlen, [1] Natalie P. Herring, [1] Michael W. Forney, [1] Jeffrey R. Alston, [1] Andrea N. Giordano, [1] Anjail A. Ameen, [1] Sarah S. Subaran [1] University of North Carolina at Charlotte, 9201 University City Blvd. Charlotte NC 28223 USA
4:45 PM – 5:05 PM	**Thermal Conductivity of Polymer Composites Filled with Aligned CNTs** [1] Ekaterina A. Vorobieva, [2] Irina V. Makarenko, [1] Nikolai G. Chechenin, [3] Alexander V. Dunaev [1] Lomonosov Moscow Sate University, Faculty of Physics, Leninskie Gory, 1/2 [2] Lomonosov Moscow Sate University, Institute of New Carbon Materials and Technologies, Leninskie Gory, 1/11 [3] Lomonosov Moscow Sate University, Skobeltsyn Institute of Nuclear Physics, Leninskie Gory, 1/2

July 15 (Tuesday)

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

3:00 PM – 4:40 PM Location: C1	**Oral session** Chairman: Professor Albano Cavaleiro
3:00 PM – 3:30 PM	*Invited lecture* **The Limits to the Preparation of Super- and Ultrahard Nanocomposite Coatings, and their Industrial Applications** [1] Stan A. Veprek, [1] M.G. J. Veprek-Heijman [1] Technical University Munich, Department of Chemistry, Germany
3:30 PM – 4:00 PM	*Invited lecture* **Mechanical and Microstructural Properties of Nanocrystalline Thin Films Revealed at the Nanoscale** [1] Jozef Keckes [1] Montanuniversitaet Leoben, Jahnstrasse 12, 8700 Leoben, Austria
4:00 PM – 4:20 PM	**Mechanical Behavior of Nanostructured Coatings on Titanium Alloys Under Indentation and Cyclic Impact** [1] Mikhail Petrzhik, [1] Evgeny Levashov, [1] Dmitry Shtansky, [1] Konstantin Kuptsov, [1] Sergey Prokoshkin, [2] Ruslan Valiev [1] National University of Science and Technology MISIS, Leninsky pr. 4, Moscow 119049, Russia [2] Institute for Physics of Advanced Materials USATU, ul. K. Marx 12, Ufa 450000, Russia
4:20 PM – 4:40 PM	**The New Approach for Nanostructural Hard W-C Films Formation** [1] Vladimir V. Dushik, [1] Yuri V. Lakhotkin, [1] Vladimir P. Kuzmin, [1] Nikolay V. Rozhanskii [1] Frumkin Institute of physical chemistry and electrochemistry, Moscow, Leninskiy prospekt, 31, b. 4, Russia

Section 03 – Nanoceramics

3:00 PM – 4:55 PM Location: F2	**Oral session** Chairmen: Professor Evgeny V. Antipov, Professor Harry L. Tuller
3:00 PM – 3:35 PM	*Keynote lecture* **Cathode Materials for IT-SOFC Based on Perovskites with 3d-Metal Cations** [1] Evgeny V. Antipov, [1] Sergey Ya. Istomin [1] Department of Chemistry, Lomonosov Moscow State University, Leninskie Gory, Moscow, 119991, Russia
3:35 PM – 4:05 PM	*Invited lecture* **Fluid Mixed Elecronic-Ionic Conductors based on Percolating Nanoscale Networks, and Applications to Advanced Rechargeable Batteries** [1] Yet-Ming Chiang [1] Massachusetts Institute of Technology, Cambridge, MA 02139
4:05 PM – 4:35 PM	*Invited lecture* **Nanodomain Structure of Perovskite-Like Oxides Based on Strontium Ferrites with High Oxygen Deficiency** [1] Uliana V. Ancharova [1] Institute of Solid State Chemistry and Mechanochemistry SB RAS, Kutateladze 18, Novosibirsk 630128 Russia
4:35 PM – 4:55 PM	**In Situ Processing of Ceramic/Metal Composites** [1] Nahum Travitzky, [1] Peter Greil [1] Universitaet Erlangen-Nuernberg, Materials Science and Engineering, Glass and Ceramics, Martensstr. 5, 91058 Erlangen, Germany

Section 04 – Bulk Metallic Nanomaterials

3:00 PM – 5:05 PM Location: E1	**Oral session** Chairman: Dr. Ilchat Sabirov
3:00 PM – 3:35 PM	*Keynote lecture* **Production of Bulk Nanostructured Materials with Enhanced Functionality Using High-Pressure Torsion** [1, 2] Zenji Horita [1] Department of Materials Science and Engineering, Faculty of Engineering, Kyushu University, Fukuoka 819-0395, Japan [2] WPI, International Institute for Carbon-Neutral Energy Research (WPI-I2CNER), Kyushu University, Fukuoka 819-0395, Japan
3:35 PM – 4:05 PM	*Invited lecture* **Plastic Deformation of Cu with Highly Oriented Nanotwins** [1] Lei Lu [1] Institute of Metal Research, CAS, 72 Wenhua Road, Shenyang, China
4:05 PM – 4:25 PM	**Nanostructure and Properties of Cu-Cr Bulk Alloy Processed by High Energy Ball Milling and Spark Plasma Sintering** [1] Natalia Shkodich, [1] Alexander Rogachev, [1] Sergey Vadchenko, [2] Alexander Mukasyan, [3] Dmitry Moskovskikh, [2] Sergey Rouvimov [1] Institute of Structural Macrokinetics and Materials Science RAS, Academician Osipyan str., 8, Chernogolovka, Moscow Region, 142432, Russia [2] Department of Chemical and Biomolecular Engineering, University of Notre Dame, Notre Dame, IN, 46556 USA [3] National University of Science and Technology MISiS, Moscow, Russia
4:25 PM – 4:45 PM	**Structure Refinement by Severe Plastic Deformation with Pulse Current** [1] Vladimir V. Stolyarov [1] Mechanical Engineering Research Institute of Russian Academy of Sciences, Maly Kharitonievski lane, 4, 101990, Moscow, Russia
4:45 PM – 5:05 PM	**Self-Propagating High-Temperature Synthesis of Cast Nano-Structured Poly-metallic High Entropy Alloys and Coatings Based of Them** [1] Vladimir Sanin, [1] Denis Ikornikov, [1] Dmitry Andreev, [1] Vladimir Yukhvid [1] Institute of Structural Macrokinetics and Materials Science of the Russian Academy of Sciences, ISMAN, Academician Osipyan str., 8, Chernogolovka, Moscow Region, 142432, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

3:00 PM – 4:30 PM Location: B4	**Oral session** Chairman: Dr. Alexey A. Vertegel
3:00 PM – 3:30 PM	*Invited lecture* **ZnO-Based Composite Nanostructures for Multifunctional Applications** [1] Davide Calestani, [1] Marco Villani, [1] Nicola Coppede, [1] Laura Lazzarini, [1] Sathish C. Dhanabalan, [1] Andrea Zappettini [1] IMEM-CNR, Parco Area delle Scienze 37/A, Italy
3:30 PM – 3:50 PM	**Noble Metal Nanoparticle Deposition on Functionalised Biotemplates** [1] Cordt Zollfrank, [1] Alex Kaessner, [1] Sabine Gruber, [1] Daniel Van Opdenbosch [1] Technische Universitaet Muenchen, Schulgasse 16, 94315 Straubing, Germany
3:50 PM – 4:10 PM	**High Pressure-Induced Laser-Enhanced Polymerisation of Nanoparticulate Organic-Inorganic TiO_2-Phema Hybrids** [1] Egor Evlyukhin, [1] Luc Museur, [2] Andreas Zerr, [2] Mamadou Traore, [2] Sergey Nikitin, [2] Andrei Kanaev [1] Laboratoire de Physique des Lasers - LPL CNRS, Université Paris 13, Sorbonne Paris Cité, 93430 Villetaneuse, France [2] Laboratoire des Sciences des Procédés et des Matériaux, CNRS, Université Paris 13, Sorbonne Paris Cité, 93430 Villetaneuse, France
4:10 PM – 4:30 PM	**New Titanates Nanotubular Structures Metal-Doped and Co-Sensitized by Crystalline Metal Chalcogenide Nanoparticles** [1] Olinda C. Monteiro, [1] Tiago J. Entradas, [1] Andreia J. Mota, [1] Manuel R. Nunes, [2] Marcia C. Neves, [3] Antonio J. Silvestre [1] University of Lisbon, Faculty of Sciences, DQB-CQB Portugal, Campo Grande 1749-016 Lisbon, Portugal [2] University of Aveiro, CICECO and Department of Chemistry, 3810-193 Aveiro, Portugal [3] Instituto Superior de Engenharia de Lisboa, Department of Physics and ICEMS, Lisbon, Portugal

Section 06 – Polymer, Organic and Other Soft Matter Materials

3:00 PM – 5:05 PM Location: C3	**Oral session** Chairman: Professor Sergei Sheiko
3:00 PM – 3:35 PM	*Keynote lecture* **Materials Synthesis and Interface Engineering for Printed Opto-Electronic Devices** [1] Antonio Facchetti [1] Department of Chemistry, Northwestern University and Polyera Corporation, 2145 Sheridan Road, Evanston IL 60208 USA
3:35 PM – 4:05 PM	*Invited lecture* **Engineering of Hybrid Interfaces and Electronic Functionality via Molecular Self-Assembly** [1] Marcus Halik [1] University Erlangen-Nurnberg, Martensstrasse 7, 91058 Erlangen, Germany
4:05 PM – 4:25 PM	**Tunable Water Templates as an Accessible Nanofabrication Tool for Opto-electronics** [1] Francesco Galeotti, [1] Mariacecilia Pasini, [1] Wojtek Mroz, [1] Chiara Botta, [2] Franco Trespidi, [3] Giuseppe Quero, [4] Agostino Iadicicco, [3] Marco Pisco, [5] Michele Giordano, [3] Andrea Cusano [1] ISMAC-CNR, via bassini 15, 20133, Milano, Italy [2] RSE, Strada Torre della Razza, loc. Le Mose, 29122 Piacenza, Italy [3] University of Sannio, Corso Garibaldi 107, 82100, Benevento, Italy [4] IMCB-CNR, p.le Enrico Fermi 1, Portici, 80055 Napoli, Italy [5] University of Napoli "Parthenope", Centro Direzionale – Isola C4, 80143 Napoli, Italy
4:25 PM – 4:45 PM	**Self-Assembled Monolayer Field-Effect Transistors from Organosilicon Derivatives of Oligothiophenes** [1] Alexey S. Sizov, [1] Elena V. Agina, [1] Maxim A. Shcherbina, [1] Artem V. Bakirov, [1] Oleg V. Borshchev, [1] Sergey N. Chvalun, [2] Dmitry Yu. Paraschuk, [1] Sergei A. Ponomarenko [1] Institute of Synthetic Polymeric Materials of Russian Academy of Sciences, Profsoyuznaya st. 70, 117393 Moscow, Russia [2] Lomonosov Moscow State University, Leninskie Gory, 119991 Moscow, Russia
4:45 PM – 5:05 PM	**Polymer Surface Modification by Organosilicon Self-Assembled Layers for Flexible Electronic Devices** [1] Elena V. Agina, [1] Alexey S. Sizov, [1] Mikhail Yu. Yablokov, [2] Alexander Bessonov, [2] Marina N. Kirikova, [2] Marc Bailey, [1] Sergei A. Ponomarenko [1] Enikolopov Institute of Synthetic Polymeric Materials of the Russian Academy of Sciences, 70, Profsoyuznaya str., Moscow, Russia [2] Nokia Research Center, Skolkovo, Moscow region, Russia

Section 07 – Nanomaterials for Energy

3:00 PM – 5:05 PM Location: B2	Oral session Chairman: Professor Yang Shao-Horn
3:00 PM – 3:35 PM	*Invited lecture* **The Analysis of Nanomaterials by Powder Diffraction** [1] Tim G. Fawcett, [1] Suri N. Kabekkodu, [1] Justin R. Blanton, [1] Cyrus E. Crowder, [1] Thomas N. Blanton [1] ICDD, 12 Campus Boulevard, Newtown Square, PA, USA
3:35 PM – 4:05 PM	*Invited lecture* **Simple Synthesis of a Novel Sulfur/Multi-Walled Carbon Nanotube Nanocomposite Cathode for Lithium/Sulfur Rechargeable Batteries** [1] Yongguang Zhang, [1] Yan Zhao, [1] Zhumabay Bakenov [1] Nazarbayev University, Kabanbay Batyr Avenue 53, Astana 010000 Kazakhstan [2] Institute of Batteries, Kabanbay Batyr Avenue 53, Astana 010000 Kazakhstan
4:05 PM – 4:25 PM	**Sb-Carbon Nanocomposites as Anodes for Sodium-Ion Batteries: Charge Storage Mechanism and Effect of Composition** [1] Thrinathreddy Ramireddy, [1] Md Mokhlesur Rahman, [1] Tan Xing, [2] Neeraj Sharma, [1] Ying Chen, [1] Alexey M. Glushenkov [1] Deakin University, Institute for Frontier Materials, Australia [2] University of New South Wales, School of Chemistry, Australia
4:25 PM – 4:45 PM	**Structure and Electrochemistry of Li_2MPO_4F Fluorophosphates as Positive Electrode Materials for Li-Ion Batteries** [1] Nellie R. Khasanova, [1] Oleg A. Drozhzhin, [1] Stanislav S. Fedotov, [1] Yaroslav V. Golubev, [1] Evgeny V. Antipov [1] Lomonosov Moscow State University, Chemistry Department, Leninskie Gory 1-3, Moscow, 119991, Russia
4:45 PM – 5:05 PM	**Analysis of Charging/Discharging Processes in Li-Ion Batteries by Neutron Diffraction at Pulsed Neutron Source** [1] Ivan Bobrikov, [1] Anatoly Balagurov, [2] Chih-Wei Hu, [3] Chih-Hao Lee, [4] Deleg Sangaa [1] Joint Institute for Nuclear Research, Russia [2] National Tsing-Hua University, Taiwan [3] National Synchrotron Radiation Research Center, Taiwan [4] Institute of Physics and Technology, Mongolia

July 15 (Tuesday)

Section 08 – Biological and Biomedical Nanomaterials

3:00 PM – 5:05 PM Location: C4	Oral session Chairman: Professor Alexander V. Kabanov
3:00 PM – 3:35 PM	*Keynote lecture* **Combinatorial Development of Biomaterials and Synthetic siRNA Delivery Systems** [1] Daniel G. Anderson [1] Massachusetts Institute of Technology, 02139, 500 Main Street, Building 76, Room 653, Cambridge, Massachusetts, USA
3:35 PM – 4:05 PM	*Invited lecture* **Ionic Nanogels for Targeted Drug Delivery in Cancer** [1] Tatiana K. Bronich [1] University of Nebraska Medical Center, 985830 Nebraska Medical Center, Omaha, NE 68198-5830, USA
4:05 PM – 4:25 PM	**Amplified Plasmonic Detection of DNA Hybridization Using Post-Labelling with Doxorubicin-Capped Gold Particles** [1] Jolanda Spadavecchia, [1] Ramesh Perumal, [1] Claire-Marie Pradier, [2] Alexandre Barras, [2] Joel Lyskawa, [2] Patrice Woisel, [2] William Laure, [2] Rabah Boukherroub, [2] Sabine Szuneritz [1] 1Laboratoire de Réactivité de Surfaces, UMR CNRS 7197, Université Pierre & Marie Curie – Paris VI, 3 rue Galilee Site d'Ivry – Le Raphaël, 94200 Ivry-sur-Seine, France [2] de Recherche Interdisciplinaire (IRI, USR 3078 CNRS), Université Lille 1, 50 Avenue de Halley, BP 70478, 59658 Villeneuve d'Ascq, France
4:25 PM – 4:45 PM	**Magnetic Nanoparticles in Biomimetic and Biological Systems: Generation of Iron Oxide Magnetic Nanoparticles in DNA Complexes, Isolated Chloroplasts and High Plants** [1] Gennady B. Khomutov, [1] Kirill V. Potapenkov, [1] Yury A. Koksharov, [1] Boris V. Trubitsin, [1] Alexander N. Tikhonov, [2] Mahir D. Mamedov, [3] Aygun N. Nasibova, [4] S M. Ismailova, [4] Rovshan I. Khalilov [1] Lomonosov Moscow State University, Faculty of Physics, Lenin Gory 1-2, Moscow, Russia [2] Lomonosov Moscow State University, A.N. Belozersky Institute of Physical–Chemical Biology, Lenin Gory 1-5, Moscow, Russia [3] Baku State University, Faculty of Biology, Academic Zahid Khalilov street, 23, Baku city, Azerbaijan Republic [4] Institute of Radiation problems NAS of Azerbajan Republic, B.Vaxabzade street 9, Baku city, Azerbaijan Republic
4:45 PM – 5:05 PM	**Protein Coated Magnetic Nanoparticles for Cancer Therapy and Diagnostics** [1] Maxim A. Abakumov, [1] Alevtina S. Semkina, [1] Natalia V. Nukolova, [1] Vladimir P. Chekhonin, [2] Alexander V. Kabanov [1] Russian National Research Medical University, Ostrovityanova st, 1, Russia [2] Moscow State University, Chemistry Department, 119991 Moscow, Russia

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

3:00 PM – 4:45 PM Location: E2	**Oral session** Chairman: Professor Nikita F. Morozov
3:00 PM – 3:35 PM	*Keynote lecture* **Deformation and Fracture of Ultrafine Grained and Nanocrystalline Materials** [1,2] Reinhard Pippan, [2] T. Leitner, [1] O. Renk, [1] C. B. Yang, [1] M. Kapp, [1] L. Krämer, [2] A. Hohenwarter [1] Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Jahnstrasse 12, A-8700, Austria [2] Department of Material Physics, University of Leoben, Leoben, Jahnstrasse 12, A-8700, Austria
3:35 PM – 4:05 PM	*Invited lecture* **Mechanics and Tribology of Ultrathin Films** [1] Tobin Filleter [1] University of Toronto, 5 King's College Rd, Canada
4:05 PM – 4:25 PM	**A Theoretical Approach to Describe the Formation of Fine Grain Structure in Severe Plastic Deformation Processes and in the Vicinity of Frictional Surfaces in Traditional Metal Forming Processes** [1] Sergei Alexandrov, [1] Robert Goldstein [1] A. Ishlinskii Institute for Problems in Mechanics, 101-1 Prospect Vernadskogo, 119526 Moscow, Russia **Grain Size Refinement of Carbon Steel by V-Shape Dies Compression** [1] Marko Vilotic, [1] Damir Kakas, [2] Sergei Alexandrov, [1] Leposava Sidjanin, [3] Yeau-Ren Jeng [1] University of Novi Sad, Faculty of Technical Sciences, Trg Dositeja Obradovica 6, 21000 Novi Sad, Serbia [2] A.Yu. Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, 101-1 Prospect Vernadskogo, 119526 Moscow, Russia [3] Department of Mechanical Engineering and Advanced Institute of Manufacturing with High-tech Innovations, National Chung Cheng University, 62102 Chia-Yi, Taiwan
4:25 PM – 4:45 PM	**Formation of Dislocation Substructure Nano Gradients in Rails** [1] Victor E. Gromov, [2] K. V. Volkov, [3,4] Yu. F. Ivanov, [3] K. V. Morozov, [1] S. V. Konovalov, [1] V. I. Myasnikova [1] Departament Physics Siberian State Industrial University, 654007, Novokuznetsk, Kirov Street 42, Russia [2] Research Tomsk Polytechnic University, Tomsk, Russia [3] PLC «EVRAZ – ZSMK», Novokuznetsk, Russia [4] Institute of High Current Electronics SO RAN, Tomsk, Russia

July 15 (Tuesday)

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

3:00 PM – 4:10 PM Location: F1	**Oral session** Chairman: Professor Grigorii S. Sokolovskii
3:00 PM – 3:30 PM	*Invited lecture* **Silicon Based Nanoheterostructures for Nanophotonics and Nanoelectronics** [1] Anatoly V. Dvurechenskii [1] Rzhanov Institute of Semiconductor Physics, Siberian Branch of Russian Academy of Science, Lavrentiev Prospect 13, 630090, Novosibirsk, Russia [2] Novosibirsk State University, Pirogova 2, 630090, Novosibirsk, Russia
3:30 PM – 3:50 PM	**Nonlinear Photonics in Carbon Nanoforests and Graphene Multifences** [1,2] Alexander K. Popov, [3] Sergey A. Myslivets, [4] Igor S. Nefedov [1] Birck Nanotechnology Center, Purdue University, West Lafayette, IN 47907, USA [2] University of Wisconsin-Stevens Point, Stevens Point, WI 54481, USA [3] Institute of Physics, Siberian Branch of the Russian Academy of Sciences, 660036 Krasnoyarsk, Russian Federation [4] Aalto University, FIN-00076 Aalto, Finland
3:50 PM – 4:10 PM	**Modeling and Optimization of Radiative Properties of Nanolasers and NanoLEDs with Plasmonic Nanoantennas Using Methods of Superradiance Theory** [1,3] Igor E. Protsenko, [2,3] Victor M. Rudoy, [1,3] Alexander V. Uskov [1] Lebedev Physical Institute, Leninsky prospect 53, Moscow 119991 Russia [2] Frumkin Institute of Physical Chemistry and Electrochemistry, Leninsky prospect 31, Moscow 119071 Russia [3] Advanced Energy Technologies Ltd, Skolkovo, Novaya ul. 100, 143025, Moscow Region, Russia

Section 11 – Nanomaterials and Catalysis

3:00 PM – 5:05 PM Location: C2	**Oral session** Chairman: Professor Christian W. Lehmann
3:00 PM – 3:35 PM	*Keynote lecture* **Self-Assembled Metal Chalcogenides: From Nanotechnology to Material Science and Adaptive Catalysis** [1,2] Valentine P. Ananikov [1] Zelinsky Institute of Organic Chemistry of the Russian Academy of Sciences, Leninsky Prospect 47, Moscow, 119991, Russia [2] Department of Chemistry, Saint Petersburg State University, Stary Petergof, 198504, Russia
3:35 PM – 4:05 PM	*Invited lecture* **Contribution of Pd(0) Nanoparticles in C-C Cross-Coupling Reactions** [1] Anna M. Trzeciak [1] UniversFaculty of Chemistry, University of Wroclaw, 14 F. Joliot-Curie St., 50-383 Wroclaw, Poland
4:05 PM – 4:25 PM	**Sophisticated Ruthenium and Cobalt Colloids for Catalysis** [1] Pascal Lignier, [1] Eric Bonnefille, [2] Pier-Francesco Fazzini, [3] Pierre Lecante, [4] Ronan Bellabarba, [4] Robert P. Tooze, [1] Karine Philippot, [2] Bruno Chaudret [1] CNRS, LCC (Laboratoire de Chimie de Coordination), 205 route de Narbonne, F-31077 Toulouse, France; Université de Toulouse, UPS, LCC, F-31077 Toulouse, France [2] Sasol Technology (U.K.) Ltd, Purdie Building, St. Andrews KY16 9ST, United Kingdom [3] LPCNO (Laboratoire de Physique et Chimie de Nano-Objets), 135 avenue de Rangueil, F-31077 Toulouse, France [4] CNRS, CEMES (Centre d'Elaboration de Matériaux et d'Etudes Structurales), BP 94347, 29 rue Jeanne Marvig, F-31055 Toulouse, France
4:25 PM – 4:45 PM	**A Facile Route to Monodisperse MPd (M = Co, Ni) Alloy Nanoparticles and Their Catalysis in the Reduction of Nitro/Nitrile Compounds to Primary Amines** [1] Onder Metin, [1] Haydar Goksu, [2] Sally F. Ho, [1] Mehmet S. Gultekin, [2] Shouheng Sun [1] Ataturk University, Department of Chemistry, Science Faculty, Erzurum 25240, Turkey [2] Brown University, Department of Chemistry, Providence, RI 02912, USA
4:45 PM – 5:05 PM	**Laser Ablation in Liquids for Preparation of Highly Active Nanocomposite Catalysts of Low Temperature CO Oxidation** [1] Andrei I. Boronin, [1] Elena M. Slavinskaya, [1] Roman V. Gulyaev, [2] Dmitryi Y. Osadchii, [1] Olga A. Stonkus, [3] Valerii A. Svetlichnyi, [3] Ivan N. Lapin, [4] Tatyana I. Izaak, [4] Darya O. Martynova [1] Boreskov Institute of Catalysis, Prospekt Lavrentieva 5, Novosibirsk 630090, Russia [2] Novosibrsk State University, St. Pirogova 2, Novosibirsk 630090, Russia [3] Siberian Physical-Technical Institute of the Tomsk State University, Novosobornaya pl. 1, Tomsk 634050, Russia [4] Tomsk State University, 36, Lenina Avenue, Tomsk, 634050, Russia

5:00 PM – 5:30 PM	Coffee break
5:30 PM – 7:20 PM	Oral sessions 01 – 11 (parallel)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

5:30 PM – 7:00 PM Location: B3	**Oral session** **Optical Functions of Nanoparticles** Chairman: Professor Ignacio L. Garzon
5:30 PM – 6:00 PM	*Invited lecture* **Synthesis and Self-Assembly of Gold Nanorods and Nanowires** [1] Eugene Zubarev [1] Rice University, 6100 Main St. Houston TX 77005 USA
6:00 PM – 6:20 PM	**Amorphous to Crystal Conversion as a Mechanism Governing the Structure of Luminescent YVO_4:Eu Nanoparticles** [1] Blaise Fleury, [2] Marie-Alexandra Neouze, [3] Jean-Michel Guigner, [3] Nicolas Menguy, [2] Olivier Spalla, [1] Thierry Gacoin, [2] David Carriere [1] CEA de Saclay, NIMBE/LIONS, 91191 Gif-sur-Yvette cedex, France [2] Ecole polytechnique, PMC, 91128 Palaiseau, France [3] Universite Pierre et Marie Curie, IMPMC, 75252 Paris, France
6:20 PM – 6:40 PM	**Colloidal $LaPO_4$ Nanorods: From Liquid Crystalline Behavior to Directed Assembly into Anisotropic Thin Layers** [1] JongWook Kim, [1] Khalid Lahlil, [1] Jean-Pierre Boilot, [1] Jacques Peretti, [1] Thierry Gacoin [1] CNRS - Ecole Polytechnique, PMC lab, Ecole Polytechnique, route de saclay, 91128 Palaiseau, France
6:40 PM – 7:00 PM	**Tunable Resonant Properties of Out-Diffused Nanoisland Films: SERS Applications** [1,2] Semen Chervinskii, [1] Antti Matikainen, [3] Alexey Dergachev, [2,4] Andrey Lipovskii, [1] Seppo Honkanen [1] Institute of Photonics, University of Eastern Finland, P.O.Box 111 FI-80101 Joensuu, Finland [2] Institute of Physics, Nanotechnology and Telecommunications, St.Petersburg State Polytechnic University, 29 Polytechnicheskaya, 195251 St.-Petersburg, Russia [3] Ioffe Physical-Technical Institute of the RAS, 26 Polytekhnicheskaya, 194021 St.-Petersburg, Russia [4] Department of Physics and Technology of Nanostructures, St.-Petersburg Academic University, 8/3 Khlopina, 194021 St.-Petersburg, Russia

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

5:30 PM – 7:20 PM Location: C1	**Oral session** Chairman: Professor Paul Mayrhofer
5:30 PM – 6:00 PM	*Invited lecture* **Multicomponent Nanostructured Films with Unique Characteristics for Mechanical Engineering and Medicine** [1] Dmitry V. Shtansky [1] National University of Science and Technology «MISIS», Leninsky prospect 4, Moscow 119049, Russia
6:00 PM – 6:20 PM	**Investigation of the Structure and Properties of Nanostructured Transparent Magnetic Metallic Thin Films** [1] Dmitri V. Louzguine, [1] S. V. Ketov, [1] S. Mizukami, [1] T. Hitosugi, [1] V. Yu. Zadorozhnyy, [1] A. Caron, [1] N. Chen, [2] A. Sluger [1] WPI Advanced Institute for Materials Research, Tohoku University, Katahira 2-1-1, Aoba-Ku, Sendai, Japan [2] Department of Physics and Astronomy, University College London, London WC1E 6BT, United Kingdom
6:20 PM – 6:40 PM	**New Class of Super Soft Magnetic Nanocrystalline Fe-Based Films** [1] Elena N. Sheftel [1] Baikov Institute of Metallurgy and Material Science RAS, Leninskii pr. 49, Moscow, 119991 Russia
6:40 PM – 7:00 PM	**Nanocomposite and Amorphous MeSiBN (Me: Mo,Zr,Cr,Al,Ti) Coatings with Extremely High Oxidation Resistance** [1] Philipp V. Kiryukhantsev-Korneev, [1] Evgeny A. Levashov, [1] Yuriy S. Pogozhev, [1] Andrey V. Bondarev, [1] Artem Yu. Potanin, [1] Dmitry V. Shtansky [1] National University of Science and Technology «MISIS», Leninsky pr., 4, Moscow 119049, Russia
7:00 PM – 7:20 PM	**Ion-Plasma Coatings Based on Nitrides of Multi-Element High Entropy Metal Alloys** [1] Nikolai A. Azarenkov, [1] Vyacheslav M. Beresnev, [2] Aleksandr D. Pogrebnyak, [3] Oleg V. Sobol, [1] Uliana S. Nyemchenko, [4] Petr V. Turbin, [5] Igor Ju. Goncharov [1] Karazin Kharkiv National University, 4, Svobody square, Kharkiv, Ukraine [2] Sumy National University, 2, Rymskogo-Korsakova str., Sumy, Ukraine [3] National Technical University "Kharkiv Plytechnic Institute", 21, Frunze str., Kharkiv, Ukraine [4] Scientific Center of Physical Technologies, 6, Svobody square, Kharkiv, Ukraine [5] Belgorod State University, 85 Pobedy str., Belgorod, Russia

Section 03 – Nanoceramics

5:30 PM – 6:50 PM Location: F2	**Oral session** Chairmen: Professor Sergey M. Barinov, Professor Jan Dusza
5:30 PM – 6:00 PM	*Invited lecture* **Ion Dynamics in Ceramics and the Effects of Mechanical Treatment** [1] Paul Heitjans [1] Leibniz University Hannover, Institute of Physical Chemistry and Electrochemistry, Callinstr. 3-3a, 30167 Hannover, Germany
6:00 PM – 6:30 PM	*Invited lecture* **Ceramic + Carbon Based Filler Nanocomposites** [1] Jan Dusza [1] IMR SAS, Slovak Academy of Science, Kosice, Slovakia
6:30 PM – 6:50 PM	**Transition-Metal Oxide Fermi Glasses: Electronic Structure, Conduction, and Band Offsets** [1] Ilan Goldfarb, [2] Joshua Yang, [2] John Paul Strachan, [2] Matthew Pickett, [2] Stanley Williams [1] Tel Aviv University, Israel [2] Hewlett-Packard Laboratories, USA

Section 04 – Bulk Metallic Nanomaterials

5:30 PM – 7:20 PM Location: E1	**Oral session** Chairman: Professor Lei Lu
5:30 PM – 6:00 PM	*Invited lecture* **Nanocrystals Prepared by Melt Quenching and Severe Plastic Deformation** [1] Alex M. Glezer, [1] Inga E. Permyakova [1] I.P. Bardin Central Research Institute for Ferrous Metallurgy, 105005, 2nd Baumanskaya st., bldg. 9/23, Moscow, Russia
6:00 PM – 6:20 PM	**Chemical Nanostructuring of Bulk Metal Matrix is a Route for Directional Regulation of Mechanical Properties of Composite Material** [1] Alexey V. Monin, [1] Vladimir M. Smirnov, [1] Elena G. Zemtsova, [1] Denis V. Yurchuk [1] Saint-Petersburg State University, St-Petersburg, Universitetsky pr 25, Russia
6:20 PM – 6:40 PM	**Grain Refinement Mechanisms Under Hot And Warm Plastic Deformation in TiNi-Based Alloys** [1] Alexander I. Lotkov, [1] Victor N. Grishkov, [1] Anatoly A. Baturin, [2] Vladimir I. Kopylov [1] Institution of Strenghth Physics and Materials Science SB RAS, 2/4, pr. Akademicheskii, Tomsk, 634021, Russia [2] Physical Technical Institute of the National Academy of Sciences of Belarus, Minsk, Belarus, 10, Kuprevich St., Minsk, 220141, Belarus
6:40 PM – 7:00 PM	**SPD-Produced Nanostructured TiNi Alloys with Enhanced Strength and Superelasticity** [1] Dmitry V. Gunderov, [1] Anna A. Churakova, [2] Alexandr V. Lukyanov, [2] G. Raab, [3] Y. Tong, [2] Nikolai K. Tsenev [1] Ufa State Aviation Technical University, K.Marks 12, Ufa, 450000, Russia [2] Institute of Molecule and Crystal Physics RAS, Prospekt Oktyabrya 151 Ufa, 450075 Russia [3] Modern Technologies LLC, Tramvainaia 5/1 Ufa, 450027, Russia [4] Harbin Engineering University, Harbin 150001, China
7:00 PM – 7:20 PM	**Bulk Metallic Nanomaterials at Extremes** [1] Rostislav A. Andrievski [1] Institute of Problems of Chemical Physics, Russian Academy of Sciences, Semeno Prospect, 1, Chernogolovka, Moscow Region, 142432, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

5:30 PM – 7:10 PM Location: B4	Oral session Chairman: Professor Yury A. Shchipunov
5:30 PM – 6:00 PM	*Invited lecture* **Nanostructure and Gas Transport of Polymer - Molecular Sieve Mixed Matrix Membranes** [1] Gianni Golemme, [1] Anna Santaniello [1] University of Calabria, Via P. Bucci 45/A, 87036 Rende, Italy [2] INSTM Consortium, at University of Calabria, Italy
6:00 PM – 6:30 PM	*Invited lecture* **Bimodal Meso-/Macroporous Silica of SBA-15 Type Prepared via Regulated Phase Decomposition** [1] Yury Shchipunov, [1] Irina Postnova [1] Institute of Chemistry, Far East Department, Russian Academy of Sciences, Institute of Chemistry, Far East Department, Russian Academy of Sciences, Russia
6:30 PM – 6:50 PM	**Magnetic Nano-Sorbent Based on Graphene/Cellulose Nanocrystals (CNC)/ Fe_3O_4 NPs for the Efficient Removal of Boron from Seawater** [1] Khaled A. Mahmoud, [1] Deema Elmasri, [2] Ahmed Abdel-Wahab [1] Qatar Environment & energy Research Institute, Doha, Qatar [2] Chemical Engineering Department, Texas A&M University at Qatar, Doha, Qatar
6:50 PM – 7:10 PM	**Making Nanoparticles Sustainable: Ultralight Magnetic Composites from Processing Waste** [1] Yury V. Kolen'ko, [1] Carlos Rodríguez-Abreu [1] International Iberian Nanotechnology Laboratory, Av. Mestre José Veiga, 4715-330 Braga, Portugal

Section 06 – Polymer, Organic and Other Soft Matter Materials

5:30 PM – 7:00 PM Location: C3	Oral session Chairman: Professor Kalle Levon
5:30 PM – 6:00 PM	*Invited lecture* **Design of Novel Nanostructured Materials for Organic Electronics and Photonics** [1] Sergei A. Ponomarenko [1] Enikolopov Institute of Synthetic Polymeric Materials of the Russian Academy of Sciences, 70 Profsoyuznaya str., Mocow 117393, Russia
6:00 PM – 6:20 PM	**Optical and Photoelectrical Properties of Polymer Nanocomposites** [1] Alexey Tameev, [1] Anatoly Vannikov [1] A.N.Frumkin Institute of Physical Chemistry and Electrochemistry, 31, bld.4, Leninsky prospect, Moscow 119071, Russia
6:20 PM – 6:40 PM	**The Neighbor Effect in Charge-Transfer Complex Formation Between a Conjugated Polymer and Small-Molecule Organic Acceptor** [1] Andrey Y. Sosorev, [1] Olga D. Parashchuk, [1] Sergei A. Zapunidi, [1] Grigoriy S. Kashtanov, [2] Igor F. Perepichka, [1] Dmitry Y. Paraschuk [1] Lomonosov Moscow State University, Moscow, 119991, Russian Federation [2] School of Chemistry, Bangor University, Bangor LL57 2UW, UK
6:40 PM – 7:00 PM	**Terbium Aromatic Carboxylate-Based Organic Light-Emitting Diodes** [1] Valentina V. Utochnikova, [1] Alena S. Kalyakina, [1] Elena Yu. Sokolova, [2] Andrey A. Vaschenko, [2] Leonid S. Lepnev, [1] Natalia P. Kuzmina [1] Lomonosov Moscow State University, Leninskie gory 1/ 3, 119991 Moscow, Russia [2] EVOLED Ltd, Pushkina str. 1a -24, LV 1050 Riga, Latvia [3] P.N. Lebedev Physical Institute, Russian Academy of Sciences, Leninsky Prospect 53, 119991 Moscow, Russia

Section 07 – Nanomaterials for Energy

5:30 PM – 7:00 PM Location: B2	**Oral session** Chairman: Dr. Dmitry Paraschuk
5:30 PM – 6:00 PM	*Invited lecture* **ZnTe/CdSe Superlattices for Photovoltaics Investigated by Transmission Electron Microscopy and Atom Probe Tomography** [1] Catherine Bougerol, [2] Bastien Bonef, [1] Lionel Gerard, [2] Pierre-Henri Jouneau, [3] Adeline Grenier, [1] Regis Andre [1] Institut Néel, CNRS-Université Grenoble Alpes, 25 avenue des martyrs 38042 Grenoble France [2] CEA-INAC/UJF, SP2M, LEMMA, 17 rue des martyrs 38054 Grenoble France [3] CEA-LETI, Minatec Campus 38054 Grenoble France
6:00 PM – 6:20 PM	**Electronics and Photonics Towards Plasmonics and New Solar Energy Devices** [1] Mihaela Girtan [1] Photonics Laboratory, Angers University, 2, Bd. Lavoisier, 49045, Angers, France
6:20 PM – 6:40 PM	**Doped Metal Oxides for High Performance Inverted Organic Photovoltaics** [1] Achilleas Savva, [1] Stelios A. Choulis [1] Cyprus University of Technology, Molecular Electronics and Photonics Research Unit, 45 Kitiou Kyprianou St, Limassol 3041, Cyprus
6:40 PM – 7:00 PM	**TBTBT Unit as a Building Block for Designing Novel Low Band Gap Conjugated Polymers for Efficient Organic Solar Cells** [1] Pavel A. Troshin, [1] Alexander V. Akkuratov, [1] Diana K. Susarova, [1] Dmitry V. Novikov, [1] Lyubov A. Frolova, [1] Vladimir F. Razumov [1] Institute for Problems of Chemical Physics of RAS, Semenov ave. 1, Chernogolovka, Moscow region, 142432, Russia

July 15 (Tuesday)

Section 08 – Biological and Biomedical Nanomaterials

5:30 PM – 7:20 PM Location: C4	**Oral session** Chairman: Professor Daniel G. Anderson
5:30 PM – 6:00 PM	*Invited lecture* **Poly(2-oxazoline) Nanocarriers for Cancer Therapy** [1] Rainer Jordan [1] TU Dresden, Chair of Macromolecular Chemistry, Mommsenstr. 4, 01069 Dresden, Germany
6:00 PM – 6:20 PM	**Molecular Effects of Nanostructured Formulation of Biological Response Modifier P-MAPA on Bladder Cancer** [1, 5, 4] Nelson Duran, [2] Priscyla D. Marcato, [3] Queila C. Dias, [3] Parick V. Garcia, [4, 3] Wagner J. Favaro, [3] Ana Claudia S. Lima [1] Institute of Chemistry, BiolChemLab, UNICAMP-SP, CP.6154, CEP 13083-970, Campinas, SP, Brazil [2] CCNH-UFABC-SP, Brazil [3] Farmabrasilis R&D Division, Campinas, SP, Brazil [4] FCF-USP-Riberão Preto, Brazil [5] Depart. Struct. Funct. Biol, UNICAMP-SP, Brazil
6:20 PM – 6:40 PM	**Docetaxel-Titanate Nanotubes Nanohybrids for Dual Therapy with a View to Prostate Cancer Treatment** [1] Julien Boudon, [2] Celine Mirjolet, [1] Thomas Gautier, [1] Alexis Loiseau, [1] Jeremy Paris, [2] Gilles Crehange, [1] Nadine Millot [1] Laboratoire ICB UMR 6303 CNRS-Universite de Bourgogne, 9 Av. A. Savary, BP 47 870, F-21078 Dijon Cedex, France [2] Centre Georges-Francois Leclerc, BP 77980, 21079 Dijon cedex, France
6:40 PM – 7:00 PM	**Non-Washing Layer-by-Layer Assembly of Anticancer Drug Nanocapsules** [1] Tatsiana G. Shutava [1] Institute of Chemistry of New Materials, National Academy of Sciences of Belarus, F.Skoriny St, 36, 220141, Minsk, Belarus
7:00 PM – 7:20 PM	**Nontraditional Method for Drug Nanoform Synthesis** [1] Yury N. Morozov, [1] Anastasia Yu. Utehina, [1] Vladimir P. Shabatin, [1] Vladimir V. Chernyshev, [1] Gleb B. Sergeev [1] Chemistry Department of Lomonosov Moscow State University, Leninskie Gory 1-3, Moscow 119991, Russia

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

5:30 PM – 7:00 PM Location: E2	Oral session Chairman: Professor Nikita F. Morozov
5:30 PM – 6:00 PM	*Invited lecture* **The Stability of Nanosized Plates** [1] Svetlana Bauer, [1] Stanislava Kashtanova, [1] Nikita Morozov, [1] Boris Semenov [1] St. Petersburg State University, Universitetsky pr., 28, Peterhof, St. Petersurg, 198504 Russia
6:00 PM – 6:20 PM	**Transition to Nanostructural State as the Form of Criticality in Solid with Defects** [1] Oleg Naimark [1] Institute of Continuous Media Mechanics UB RAS, 1 Acad.korolev str., 614013 Perm, Russia
6:20 PM – 6:40 PM	**The Investigation of Rotational Field into Solid Nanostructures at the Pulse Uniaxial Compression** [1] Igor F. Golovnev, [1] Elena I. Golovneva, [1] Aleksei M. Demianenko, [1] Vasily M. Fomin [1] Siberian Branch of Russian Academy of Science Khristianovich Institute of Theoretical and Applied Mechanics, 630090, Institutskaya str., 4/1, Novosibirsk, Russia
6:40 PM – 7:00 PM	**Nanogauges for Optical Strain Sensors** [1] Thomas F. Maurer, [1] Joseph Marae Djouda, [1] Guillaume Montay, [1] Pierre-Michel Adam, [2] Yazid Madi, [3] Thomas Burgi, [4] Roberto Caputo [1] Universite de Technologie de Troyes, 12 rue Marie Curie, CS 42060, 10004 Troyes Cedex, France [2] Liquid Crystals Laboratory,University of Calabria, Calabria, Italy [3] Université de Genève, Geneve, Switzerland [4] Ecole Polytechnique Feminine, Sceaux, France

July 15 (Tuesday)

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

5:30 PM – 7:10 PM Location: F1	Oral session Chairman: Professor Anatoly V. Dvurechenskii
5:30 PM – 6:00 PM	*Invited speaker* **Direct Laser Writing: Principles, Materials and Applications** [1] Maria Farsari, [1] Alexandros Selimis, [1] Elmina Kabouraki, [1] Maria Vamvakaki [1] IESL-FORTH, N. Plastira 100, 70013, Heraklion, Crete, Greece
6:00 PM – 6:30 PM	*Invited lecture* **High-Contrast Grating Vertical-Cavity Surface-Emitting Lasers** [1] Marcin Gebski, [1] Olga Kuzior, [1] Maciej Dems, [1] Michal Wasiak, [2] Anna Szerling, [2] Anna Wojcik-Jedlinska, [3] Norbert Palka, [4] Dao Hua Zhang, [1] Tomasz Czyszanowski [1] Lodz University of Technology, ul. Wolczanska 219, 90-924 Lodz, Poland [2] Institute of Electron Technology, Al. Lotników 32/46 02-668 Warszawa [3] Military University of Technology, ul. gen. Sylwestra Kaliskiego 2 00-908 Warszawa [4] Nanyang Technological University, 50 Nanyang Ave., 639798, Singapore
6:30 PM – 6:50 PM	**Metallic Photonic Crystals for Spectral Control in High-Temperature Energy Conversion** [1] Veronika Rinnerbauer, [2] Yi X. Yeng, [2] Walker R. Chan, [2] Veronika Stelmakh, [2] Jay J. Senkevich, [2] Andrej Lenert, [2] David M. Bierman, [2] Evelyn N. Wang, [2] John D. Joannopoulos, [2] Marin Soljacic, [2] Ivan Celanovic [1] Johannes Kepler University Linz, Austria, Altenberger Str. 69, 4040 Linz, Austria [2] Massachusetts Institute of Technology, 77 Massachusetts Avenue, MA, Cambridge 02139, USA
6:50 PM – 7:10 PM	**Photoabsorption and Photorefraction at Nanocomposite Structure Based on Quantum Dots Embedded at Silica Matrix** [1] Sergey S. Voznesenskiy, [1] Yuri N. Kulchin, [1] Alexander A. Sergeev, [1] Anna N. Galkina, [2] Yuri A. Shchipunov, [2] Irina V. Postnova [1] Institute of Automation and Control Processes FEB RAS, 5, Radio Street, Vladivostok 690041, Russia [2] Institute of Chemistry FEB RAS, 159, Prosp. 100-Letiya Vladivostoka, Vladivostok 690022, Russia

July 15 (Tuesday)

Section 11 – Nanomaterials and Catalysis

5:30 PM – 6:40 PM Location: C2	**Oral session** Chairman: Dr. Pieter Glatzel
5:30 PM – 6:00 PM	***Invited lecture*** **Nanoparticles Immobilized on Ordered Organic and Hybride Materials as Catalysts for Selective Hydrogenation** [1] Edward A. Karakhanov, [1] Anton L. Maximov, [2] Edward Rosenberg [1] Lomonosov Moscow State University, Department of Chemistry, Moscow, Russia [2] Department of Chemistry and Biochemistry, University of Montana, Missoula, MT USA
6:00 PM – 6:20 PM	**Palladium-Polypyrrolyl Nanocomposites in Catalysis of Carbon-Carbon Bond Formation: Advantages and Limitations** [1] Tatiana V. Magdesieva, [1, 2] Oleg M. Nikitin, [3] Ekaterina V. Zolotukhina, [1, 3] Mikhail A. Vorotyntsev [1] Lomonosov Moscow State University, Chemistry Dept, Leninskie Gory, 1/3, Moscow, Russia [2] A.N.Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences, Vavilov St. 28, Moscow, Russia [3] Institute for Problems of Chemical Physics, Russian Academy of Sciences, Semenov av. 1, Chernogolovka, Moscow region, Russia
6:20 PM – 6:40 PM	**About Intrinsic Activity of Graphene-Like Carbon Shell of Me@C Nanocomposites in H_2 Activation** [1] Ekaterina S. Lokteva, [1] Alexey V. Erokhin, [2] Anatoly Ye. Yermakov, [2] Mikhail G. Uimin, [3] Danil W. Boukhvalov, [1] Valery V. Lunin [1] Moscow Lomonosov State University, Chemistry Department, Lengory 1 stroenie 3 Moscow 119991 Russian Federation [2] Institute of Metal Physics Ural Branch of RAS, Yekaterinburg S.Kovalevskaya str. 620990 Russian Federation [3] School of Computational Studies, Korea Institute for Advanced Study (KIAS), Seoul 130-722 Korea

July 16 (Wednesday)

9:00 AM – 7:00 PM	Registration
10:00 AM – 6:00 PM	Exhibition
10:00 AM – 11:30 AM	Plenary session Location: Lomonosov Building Conference Hall
10:00 AM – 10:45 AM	***Plenary lecture*** **Carbon in Nano and Outer Space** [1] Harold W. Kroto [1] Florida State University, Department of Chemistry and Biochemistry, Chieftan Way, Tallahassee, Florida 32306 USA
10:45 AM – 11:30 AM	***Plenary lecture*** **Positive And Negative Aspects Of The Nano-Approach Within The Field Of Li-Based Batteries** [1] Jean-Marie Tarascon [1] Collège de France, 11 place Marcelin Berthelot, 75005 Paris, France
11:30 AM – 12:00 PM	Coffee break
12:00 PM – 2:00 PM	Poster session
1:00 PM – 3:00 PM	Lunch
3:00 PM – 6:15 PM	ACS Lectureship Award
3:00 PM – 5:00 PM	Oral sessions 01 – 11 (parallel)
5:00 PM – 5:30 PM	Coffee break
5:30 PM – 7:20 PM	Oral sessions 01 – 11 (parallel)

July 16 (Wednesday)

3:00 PM – 6:15 PM	ACS Lectureship Award Location: Lomonosov Building Conference Hall
3:00 PM – 3:10 PM	***Introduction*** Paul S. Weiss University of California, Los Angeles, USA
3:10 PM – 3:55 PM	***ACS Nano awardee lecture*** ***In Silico Veritas:* Toward Computational Models of Realistic Nanosystems** [1] Amanda S. Barnard [1] Virtual Nanoscience Laboratory, Commonwealth Scientific and Industrial Research Organisation, 343 Royal Parade, Parkville VIC 3052, Australia
3:55 PM – 4:20 PM	***ACS Nano guest lecture*** **Future Directions for First-Principles Calculations in Nanoscience** [1] Manolo C. Per [1] Virtual Nanoscience Laboratory, Commonwealth Scientific and Industrial Research Organisation, 343 Royal Parade, Parkville VIC 3052, Australia
4:20 PM – 5:05 PM	***ACS Nano awardee lecture*** **Nucleic Acid-Modified Nanostructures as Programmable Atom Equivalents: Forging a New "Table of Elements"** [1] Chad A. Mirkin [1] Department of Chemistry and International Institute for Nanotechnology, Northwestern University, 2145 Sheridan Rd. Evanston, IL 60208-3113 USA
5:05 PM – 5:15 PM	Coffee break
5:15 PM – 5:40 PM	***ACS Nano guest lecture*** **Nanoscale Controlled Dynamic (Non-)Covalent Chemistry in 2D** [1] Paolo Samorì [1] ISIS – University of Strasbourg & CNRS, 67000 Strasbourg, France
5:15 PM – 6:00 PM	***ACS Nano awardee lecture*** **Graphene Nanoribbons: The Next-Generation Semiconductors?** [1] Klaus Müllen [1] Max-Planck-Institute for Polymer Research, Mainz, 55128, Germany
6:00 PM – 6:15 PM	Gift presentation / Photo session

July 16 (Wednesday)

3:00 PM – 5:00 PM	Oral sessions 01 – 11 (parallel)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

3:00 PM – 4:50 PM Location: B3	**Oral session** **Self-organization and Self-assembling** Chairman: Professor Eugene Zubarev
3:00 PM – 3:30 PM	*Invited lecture* **Carpets of Vertically-Aligned Carbon Nanotubes and Nanofibers for Water Treatment and Li-Air Batteries** [1] Carl V. Thompson [1] Massachusetts Institute of Technology, Room 13-5069, 77 Massachusetts Ave., Cambridge, MA, 02139, USA
3:30 PM – 3:50 PM	**Self-Assembly in Thin Films during Copolymerization on Patterned Surfaces** [1] Alexey A. Gavrilov, [1] Alexander V. Chertovich [1] Lomonosov Moscow State University, Physics Department, 119991, Moscow, Russia
3:50 PM – 4:10 PM	**Advances in the Structures and Properties of Self-Assembling Nanoscale Uranyl Peroxide Cage Clusters** [1] Peter C. Burns [1] University of Notre Dame, 156 Fitzpatrick Hall, Notre Dame, IN 46556 USA
4:10 PM – 4:30 PM	**Direct Synthesis of Metal and Metal Oxide Microspheres by Solution Combustion in Ultrasonic–Generated Aqueous Aerosols** [1] Alexey Tarasov, [2] German Trusov [1] Institute of Problems of Chemical Physics RAS, Academician Semenov avenue 1, Chernogolovka, 142432, Russia [2] Department of Chemistry, Lomonosov Moscow State University, Lenin Hills, Moscow, 119992, Russia
4:30 PM – 4:50 PM	**AFM Metrology of Nanoparticles** [1] Gian Bartolo Picotto, [1] Roberto Bellotti [1] Istituto Nazionale di Ricerca Metrologica (INRIM), Strada delle Cacce 73, 10135 Torino, Italy

July 16 (Wednesday)

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

3:00 PM – 4:40 PM Location: C1	**Oral session** Chairman: Professor Dmitry V. Shtansky
3:00 PM – 3:30 PM	*Invited lecture* **Two-Dimensional Boron Nitride and Metal Dichalcogenide Nanostructures** [1] Dmitri Golberg [1] National Institute for Materials Science (NIMS), Namiki 1-1, Tsukuba, Ibaraki 3050044, Japan
3:30 PM – 4:00 PM	*Invited lecture* **Electrolytic Plasmas as a Tool for Fabrication of Nanostructured Materials and Surfaces** [1] Aleksey Yerokhin, [1] Allan Matthews [1] Department of Materials Science and Engineering, University of Sheffield, S1 3JD, Dept MSE, Sir Robert Hadfield Building, Mappin Street, Sheffield, United Kingdom
4:00 PM – 4:20 PM	**Synthesis and Characterization of Amorphous and Nanocrystalline CVD** BC_xN_y Films from Boron-Containing Precursors [1] Veronica S. Sulyaeva, [1] Yurii M. Rumyantsev, [1] Marina L. Kosinova [1] Nikolaev Institute of Inorganic Chemistry SB RAS, 3, Acad. Lavrentiev Ave.,Novosibirsk, 630090 Russia
4:20 PM – 4:40 PM	**Soft Chemistry Routes to Functional Optical Coatings with Tailored Dielectric Microstructure** [1] Thierry Gacoin, [1] Jong Wook Kim, [1] Barbara Brudieu, [1] Lucie Devys, [1] Jacques Peretti, [1] Geraldine Dantelle, [2] Francois Guillemot, [2] Jeremie Teisseire, [3] Fabien Sorin [1] CNRS - Ecole Polytechnique, labo PMC, Ecole Polytechnique, 91128 Palaiseau cedex, Switzerland [2] Saint-Gobain recherche, SGR, Quai Lucien lefranc, 93303 Aubervilliers, France [3] Institute of Materials, EPFL, Lausanne CH-1015XG) Station 12 CH-1015 Lausanne, Switzerland

Section 03 – Nanoceramics

3:00 PM – 5:10 PM Location: F2	Oral session Chairmen: Professor Valery I. Putlyaev, Professor Vladimir S. Komlev
3:00 PM – 3:30 PM	*Invited lecture* **Towards Micromechanics- and X-ray Physics Supported Design and Safety Assessment of Bioceramics** [1] Christian Hellmich, [1] Alexander Dejaco, [2] Wojciech Swieszkowski, [3] Vladimir Komlev [1] Vienna University of Technology (TU Wien), Institute for Mechanics of Materials and Structures, Vienna University of Technology, Karlsplatz 13/202, A-1040 Wien (Vienna), Austria [2] Warsaw University of Technology, Faculty for Materials Science, ul. Wołoska 141, 02-507 Warszawa (Warsaw), Poland [3] IMET Russian Academy of Sciences, Leninsky prospect 49, 119991 Moscow, Russia
3:30 PM – 4:00 PM	*Invited lecture* **Nanostructured Hard and Superhard Coatings for Technological Applications** [1] Julietta V. Rau [1] The Institute of Structure of Matter, Italian National Research Council, Via del Fosso del cavaliere, 100 - 00133 Rome, Italy
4:00 PM – 4:30 PM	*Invited lecture* **Nanomaterials Based on Calcium Phosphate for Bone Tissue Engineering** [1] Vladimir S. Komlev, [1] Sergey M. Barinov [1] IMET RAS, Leninsky prospect 49, 119991 Moscow, Russia
4:30 PM – 4:50 PM	**Resorbable Osteoconductive Ceramics Based on Double Phosphates of Calcium and Alkali Metals with Kelvin Architecture** [1] Pavel V. Evdokimov, [1] Valery I. Putlyayev, [1] Nikolay K. Orlov, [1] Elena S. Kovaleva, [2] Dmitrii V. Prosvirin [1] Lomonosov Moscow State University, 119991, Moscow, Leninskie Gory, d.1, Russia [2] A. A. Baikov Institute of Metallurgy and Materials Science, 119991, Moscow, Leninskii prospekt, d.44, Russia
4:50 PM – 5:10 PM	**Synthesis of Ordered Mesoporous Bioactive Glasses with Large Pore Diameter Using Triblock Terpolymers as Template** [1] Oliver Winter, [1] Stephanie Melchers, [2] Joerg Werner, [2] Ulrich Wiesner, [1] Dominik Eder [1] Institute of Physical Chemistry, Westfaelische Wilhelms-Universitaet Muenster, Corrensstrasse 28/30, 48149 Muenster, Germany [2] Dept. of Chemistry and Chemical Biology / Dept. of Materials Science and Engineering, Cornell University, 330 Bard Hall, Ithaca NY 14853, USA

July 16 (Wednesday)

Section 04 – Bulk Metallic Nanomaterials

3:00 PM – 5:00 PM Location: E1	Oral session Chairman: Professor Alex M. Glezer
3:00 PM – 3:30 PM	*Invited lecture* **Phase Transformations Driven by the Severe Plastic Deformation** [1] Boris B. Straumal, [1] Andrei A. Mazilkin, [2] Yulia Ivanisenko, [2] Lilia Kurmanaeva, [2] Askar R. Kilmametov, [2] Brigitte Baretzky [1] Institute of Solid State Physics RAS, Chernogolovka, 142432 Russia [2] Karlsruher Institut für Technologie, Institut für Nanotechnologie, Eggenstein-Leopoldshafen, 76344 Germany [3] University of California, Davis, CA 95616, USA
3:30 PM – 4:00 PM	*Invited lecture* **Ultra-Fine Grained Mg and Mg Alloys for Hydrogen Storage** [1] Walter J. Botta, [1] Ricardo Floriano, [1] Tomaz T. Ishikawa, [1] Alberto M. Jorge Jr, [1] Claudemiro Bolfarini, [1] Claudio S. Kiminami, [1] Daniel R. Leiva [1] Federal University of São Carlos, Rod. Washington Luiz, km 235, São Carlos, SP, CEP 13565-905, Brazil
4:00 PM – 4:20 PM	**Corrosion Resistance of Ultrafine Grained and Nanocrystalline Bulk Metallic Materials: A Review of Methodology and Recent Results** [1] Andrey B. Rozhnov, [1] Sergey A. Nikulin, [1] Stanislav O. Rogachev [1] National University of Science and Technology MISiS, 119049, Leninsy prospekt, 4, Russia
4:20 PM – 4:40 PM	**Mechanisms of Formation of High-Strength State in Nanostructured Steel 10, Subjected to Severe Plastic Deformation** [1] Artur V. Ganeev, [2] Xavier Sauvage, [3] Ruslan Z. Valiev [1] Ufa State Aviation Technical University, K. Marx Street 12, Ufa 450000 Russia [2] Saint Petersburg State University, 7-9, Universitetskaya nab., St.Petersburg, Russia 199034 [3] University of Rouen, 76801 ST ET. Du Rouvray, Rouen, France
4:40 PM – 5:00 PM	**High Fatigue Strength and Enhanced Biocompatibility of UFG CP Ti for Innovation Medical Applications** [1] Alexander V. Polyakov, [1] Irina P. Semenova, [2] Ruslan Z. Valiev [1] Institute of physics of advanced materials, Ufa state aviation technical university, Ufa, 450000, 12 K.Marx st., Russia [2] Laboratory for Mechanics of Bulk Nanostructured Materials, Saint Petersburg State University, Saint Petersburg, Peterhof, 198504, Universitetsky pr. 28, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

3:00 PM – 4:40 PM Location: B4	Oral session Chairman: Dr. Giovanni Golemme
3:00 PM – 3:30 PM	*Invited lecture* **Band Gap Expansion, Lattice Phonon and Phase-Change Properties of Low-Dimensional Crystals in Single-Walled Carbon Nanotubes** [1] Jeremy Sloan, [2] Suyetin Mikhail, [1] Reza J. Kashtiban, [3] Joseph Spencer, [2] Elena Bichoutskaia, [1] Gavin Bell, [4] Zheng Liu, [4] Kazu Suenaga, [5] Eric Faulques, [3] David C. Smith [1] University of Warwick, Department of Physics, Coventry, CV4 7AL UK [2] University of Nottingham, Department of Chemistry, Nottingham, NG7 2RD UK [3] University of Southampton, School of Physics and Astronomy, Southampton SO17 1BJ UK [4] University of Nantes CNRS, 3Institut des Matériaux Jean Rouxel, UMR6502, F-44322 Nantes, France [5] National Institute of Advanced Industrial Science and Technology (AIST), Nanotube Research Center, Higashi 1-1-1, Tsukuba, 305-8565, Japan
3:30 PM – 4:00 PM	*Invited lecture* **Doping Single-Walled Carbon Nanotubes by Introduction of Inorganic Compounds** [1] Andrei A. Eliseev, [1] Alexey V. Lukashin, [1] Nickolay I. Verbitsky, [2] Nickolay A. Kiselev, [2] Andrei S. Kumskov, [3] Maria Brzhezinskaya, [1] Lada V. Yashina [1] Department of materials Science, Lomonosov Moscow State University, Moscow, Russia [2] Institute of Crystallography RAS, Moscow, Russia [3] BESSY, Helmholtz-Zentrum Berlin, Berlin, Germany
4:00 PM – 4:20 PM	**Nature and Extent of Charge/Energy Transfer at the Nanocarbon-Metal Oxide Interface** [1] Nina Kemnade, [2] Cameron J. Shearer, [1] Dominik Eder [1] Institut fuer Physikalische Chemie, Westfaelische Wilhelms-Universitaet Muenster, Corrensstr. 28/30, 48149 Muenster, Germany [2] Institut fuer Physikalische Chemie, Westfaelische Wilhelms-Universitaet Muenster, Corrensstr. 28/30, 48149 Muenster, Germany, and Graduate School of Chemistry, University of Muenster, Wilhelm-Klemm-Str. 10, 48149 Muenster, Germany
4:20 PM – 4:40 PM	**Design of Nanocrystalline Metals Wrapped in Graphene Layers - "Giant Fullerenes". Synthesis, Properties and Applications in Catalysis and Nanobiotechnology** [1] Anatoly Ye. Yermakov, [1] Michail A. Uimin, [1] Ilya V. Byzov, [1] Artem S. Minin, [1] Vadim R. Galakhov, [1] Sergey V. Zhakov, [2] Ekaterina S. Lokteva, [3] Danil W. Boukhvalov [1] Institute of Metal Physics, Ural Branch of RAS, S.Kovalevskaya st.,18, Ekaterinburg, Russia [2] Department of Chemistry, Lomonosov Moscow State University, Leninskie Gory, 1, Moscow, Russia [3] School of Computational Sciences, Korea Institute for Advanced Study (KIAS), Hoegiro 87, Dongdaemun-Gu, Seoul, 130-722, Korean Republic

Section 06 – Polymer, Organic and Other Soft Matter Materials

3:00 PM – 5:00 PM Location: C3	Oral session Chairman: Professor Dimitri Ivanov
3:00 PM – 3:30 PM	*Invited lecture* **Light-Induced Surface Mass-Transfer Phenomena in Photochromic LC Polymer Systems** [1] Alexey Yu. Bobrovsky, [1] Valery Shibaev [1] Lomonosov Moscow State Universilty, Lenin Hills, 119991, Moscow, Russia
3:30 PM – 4:00 PM	*Invited lecture* **Friendly Cooperation of LC Polymer Matrices and Quantum Dots: Properties of Nanocomposites** [1] Raisa V. Talroze, [2] Jurgen Plenge, [2] Eckert Ruehl, [3] Gleb I. Celikov, [3] Victor Y. Timoshenko, [1] Olga A. Otmakhova, [1] Alexei S. Merekalov, [1] Yaroslav I. Derikov, [1] Alina M. Shatalova, [1] George A. Shandryuk, [3] Alexander A. Ezhov [1] AV Topchiev Institute of Petrochemical Synthesis, 29 Leninsky prospect, Moscow, 119991, Russia [2] Department of Physics, M.V.Lomonosov Moscow State University, Leninskie Gory, Moscow 119991, Russia [3] Physikalische und Theoretische Chemie Institut für Chemie und Biochemie Fachbereich Biologie, Chemie, Pharmazie, Freie Universität Berlin, Takustr. 3 14195 Berlin, Germany
4:00 PM – 4:20 PM	**In Situ Determination and Imaging of Physical Properties of Soft Organic Materials by ATEM** [1] Nadejda B. Matsko, [1] Franz P. Schmidt, [1] Ilse Letofsky-Papst, [2] Artem A. Rudenko, [3] Vikas Mittal [1] Institute for Electron Microscopy and Nanoanalysis, Graz University of Technology, Steyrergasse 17, 8010 Graz, Austria [2] J. R. Macdonald Laboratory, Department of Physics, Kansas State University, Kansas, USA [3] Chemical Engineering Department, the Petroleum Institute, Abu Dhabi, UAE
4:20 PM – 4:40 PM	**Phase Diagram and Aging Behaviour of a Laponite Colloidal Suspension** [1] Roberta Angelini, [1] Barbara Ruzicka, [2] Emanuela Zaccarelli, [3] Giancarlo Ruocco [1] National Research Council - IPCF, Piazzale A. Moro 5, 00185, Rome, Italy [2] National Research Council - ISC, Piazzale A. Moro 5, 00185, Rome, Italy [3] Physics Department, University La Sapienza, Piazzale A. Moro 2, 00185, Rome, Italy
4:40 PM – 5:00 PM	**Molecular Arrangements in Monolayer J-Aggregates of Cyanine and Carbcyanine Dyes** [1] Valery V. Prokhorov, [1] Olga M. Perelygina, [1] Sergey I. Pozin, [1] Eugeny I. Maltsev [1] Institute of Physical Chemistry and Electrochemistry, RAS, Leninskii pr. 31, Moscow 119991, Russia

Section 07 – Nanomaterials for Energy

3:00 PM – 4:20 PM Location: B2	**Oral session** Chairman: Professor Zhumabay Bakenov
3:00 PM – 3:20 PM	**Amorphous Carbon Nitride: A Promising Material for Energy Conversion and Storage** [1] Oleg Semenikhin [1] The University of Western Ontario, 1151 Richmond St, London, Ontario, Canada
3:20 PM – 3:40 PM	**Vertically Aligned Carbon Nanotubes Based Materials for Electrochemical Energy Storage** [1] Mathieu Pinault, [2] Florent Tatard, [3] Marina Porcher, [3] Fouad Ghamouss, [3] Francois Tran-Van, [2] Pierre-Henri Aubert, [1] Martine Mayne-L'hermite [1] CEA-Saclay DSM-IRAMIS-NIMBE, Bat. 522, 91191 Gif ur Yvette Cedex, France [2] Laboratoire de Physico-chimie des Polymères et des Interfaces, EA 2528, Université de Cergy-Pontoise, France [3] Laboratoire de Physico-Chimie des Matériaux et des Electrolytes pour l'Energie, EA 6299, Université François Rabelais, Parc de Grandmont, 37 200 Tours, France
3:40 PM – 4:00 PM	**New Nanostructured Composite Cathode Materials via Mechanochemical Route** [1] Nina V. Kosova [1] Institute of Solid State Chemistry and Mechanochemistry SB RAS, 18 Kutateladze, Novosibirsk 630128, Russia
4:00 PM – 4:20 PM	**Beyond the Conventional Electrochemical Double Layer Capacitors: A Novel Hybrid Micro-Ultracapacitor Based on Silicon Nanowires with Conducting Polymer** [1] David Aradilla, [2] Hülya Sahin, [2] Thomas Schubert, [3] Pedro Gómez-Romero, [3] Vanesa Ruiz, [1] Fleur Thissandier, [1] Patrick Weathers, [1] Pascal Gentile, [1] Gerard Bidan, [1] Saïd Sadki [1] CEA, 17 rue des Martyrs, 38054 Grenoble, France [2] ICN2 (CSIC - ICN), Campus UAB, 08193 Barcelona, Spain [3] IOLITEC, Salzstrasse 184, 74076 Heilbronn, Germany

July 16 (Wednesday)

Section 08 – Biological and Biomedical Nanomaterials

3:00 PM – 4:40 PM Location: C4	**Oral session** Chairman: Professor Andrei V. Zvyagin
3:00 PM – 3:30 PM	*Invited lecture* **Plasmonic Gold and Composite Nanoparticles for Analytical and Theranostic Applications** [1] Nikolai Khlebtsov [1] Institute of Biochemistry and Physiology of Plants and Microorganisms, Russian Academy of Science, 13 prospekt Entuziastov, 410049 Saratov, Russia [2] Saratov State University, 83 Astrakhanskaya Str., Saratov 410012, Russia
3:30 PM – 4:00 PM	*Invited lecture* **Gold Nanoparticles Based Sensors for the Colorimetric Detection of Biomarkers** [1] Paola Valentini, [1] Paola Cecere, [1] Stefano Persano, [1] Stefania Sabella, [1] Pier Paolo Pompa [1] Istituto Italiano di Tecnologia - CBN, via Barsanti, Arnesano, Lecce, Italy
4:00 PM – 4:20 PM	**Synthesis, Characterization and Evaluation of Antimicrobial Activity of Nitric Oxide-Releasing Alginate/Chitosan Nanoparticles: A New Approach to Combat Chagas' Disease** [1] Amedea B. Seabra, [1] Nidia A. Kitice, [2] Cesar AC. Lancheros, [2] Sueli F. Yamada-Ogatta [1] Universidade Federal de Sao Paulo, Exact and Earth Sciences Department, Rua Sao Nicolau 210, 09913-030, Diadema, SP, Brazil [2] Universidade Estadual de Londrina, Department of Microbiology, Londrina, PR, Brazil
4:20 PM – 4:40 PM	**Production and Properties of Highly Voluminous Nanofibrous Structures Based on Hyaluronic Acid Made by 4SPIN® Technology** [1] Jana Ruzickova, [1] Katerina Knotkova, [1] Jindrich Novak, [1] Marek Pokorny [1] Contipro Biotech s.r.o, Dolni Dobrouc 401, 56102 Czech Republic

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

3:00 PM – 5:00 PM Location: E2	Oral session Chairman: Professor Emmanuel Gdoutos
3:00 PM – 3:30 PM	*Invited lecture* **Nanomechanics of Defects in Thin Film Materials and Small Particles** [1] Alexei E. Romanov, [2] Anatoly A. Vikarchuk, [3] Anna L. Kolesnikova [1] Ioffe Physical-Technical Institute, St. Petersburg, Russia [2] Togliatti State University, Togliatti, Russia [3] Institute of Problems of Mechanical Engineering, St. Petersburg, Russia [4] ITMO University, St. Petersburg, Russia
3:30 PM – 4:00 PM	*Invited lecture* **A New Mechanism of Elastic Energy Relaxation in Heteroepitaxy of Monocrystallin Films: Interaction of Point Defects and Dilatation Dipoles** [1] Sergey A. Kukushkin, [1] Andrey V. Osipov [1] Institute of Problems of Mechanical Engineering Russian Academy of Sciences IPME RAS, 199178, Bolshoy 61, V.O., St. Petersburg, Russia
4:00 PM – 4:20 PM	**Buckling Simulation of Single Layer Graphene Sheets by the Molecular Mechanics Method** [1] Sergey N. Korobeynikov, [1] Vladimir V. Alyokhin, [1] Boris D. Annin, [2] Alexey V. Babichev [1] Lavrentyev Institute of Hydrodynamics, Lavrentyev ave., 15, 630090, Novosibirsk, Russia [2] Sobolev Institute of Geology and Mineralogy, Koptyug av., 3, Novosibirsk, 630090, Russia
4:20 PM – 4:40 PM	**Chemical Affinity Tensor and Coupled Problems of Mechanochemistry** [1] Alexander B. Freidin, [1] Elena N. Vilchevskaya, [1] Igor K. Korolev, [1] Sergey P. Aleshchenko, [2] Igor V. Telezhko [1] Institute for Problems in Mechanical Engineering of Russian Academy of Sciences, Bolshoy Pr., 61, V.O. St. Petersburg, 199178 Russia [2] St. Petersburg State Polytechnical University, Politechnicheskaya Str., 29, St. Petersburg, 195251 Russia
4:40 PM – 5:00 PM	**On Stability of Solids with FCC-BCC Crystal Structure at Finite Strains** [1] Ekaterina Podolskaya, [2] Artem Panchenko, [1] Alexander Freidin, [2] Anton Krivtsov [1] Institute for Problems in Mechanical Engineering RAS, 61, Bolshoy pr. V. O., 199178, St. Petersburg, Russia [2] St. Petersburg State Polytechnical University, 29, Politechnicheskaya str., 195251, St. Petersburg, Russia

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

3:00 PM – 4:40 PM Location: F1	Oral session Chairman: Professor Victor M. Ustinov
3:00 PM – 3:30 PM	*Invited lecture* **Nanostructured III-V Solar Cells** [1] Viacheslav M. Andreev, [1,2] Antonio I. Luque, [1] Victor M. Emelyanov, [1] Nikolay A. Kalyuzhnyy, [1] Sergey A. Mintairov, [1] Maxim Z. Shvarts [1] Ioffe Physical-Technical Institute, 26 Polytekhnicheskaya str. 194021, Saint-Petersburg, Russia [2] Technical University of Madrid, Avda Complutense 30, Ciudad Universitaria, 28040 Madrid, Spain
3:30 PM – 4:00 PM	*Invited lecture* **Optical Characterization at the Nanoscale: Experimental Approaches** [1] Pavel Dorozhkin, [1] Artyom Shelaev, [1] Mikhail Yanul, [1] Igor Arkov, [1] Victor Bykov [1] NT-MDT Co, Build. 100, Zelenograd Moscow, 124460 Russia
4:00 PM – 4:20 PM	**Super-Resolution Imaging Using Metal Coated Carbon Nanotube Forest Nanolens** [1] Choon-Gi Choi, [1] Jong-Ho Choe [1] Creative Research Center for Graphene Electronics, Electronics and Telecommunications Research Institute (ETRI), Yuseong-Gu, Daejeon, 305-700, Republic of Korea
4:20 PM – 4:40 PM	**Surface and Volume Photoeffects in Schottky Photodetectors with Plasmonic Nanoantennas** [1] Alexander V. Uskov, [2] Igor E. Protsenko, [3] Renat Sh. Ikhsanov, [4] Viktoriia E. Babicheva, [4] Sergei V. Zhukovsky, [4] Andrey V. Lavrinenko, [5] Eoin P. O'Reilly, [6] Hongxing Xu [1] P. N. Lebedev Physical Institute, Russian Academy of Sciences, Leninsky pr. 53, 119991 Moscow, Russia [2] Advanced Energy Technologies Ltd, Skolkovo, Novaya ul. 100, 143025, Moscow Region, Russia [3] School of Physics & Technology, Wuhan University, Wuhan, 430072, P. R. China [4] Research Institute of Scientific Instruments, State Nuclear Energy Corporation "Rosatom", Moscow, Russia [5] DTU Fotonik, Technical University of Denmark, Orsteds Plads 343, DK-2800 Kgs. Lyngby, Denmark [6] Tyndall National Institute, Cork, Ireland

Section 11 – Nanomaterials and Catalysis

3:00 PM – 4:40 PM Location: C2	**Oral session** Chairman: Professor Anna Trzeciak
3:00 PM – 3:30 PM	***Invited lecture*** **Visible Light Photocatalysts Based on TiO_2 and CdS Hybrid Nanoparticles** [1,2] Andrey A. Rempel [1] Institute of Solid State Chemistry, Russian Academy of Science, Pervomaiskaya 91, Ekaterinburg 620990, Russia [2] Ural Federal University named after the first president of Russia B.N. Yeltsin, Mira 19, Ekaterinburg 620002, Russia
3:30 PM – 4:00 PM	***Invited lecture*** **The Optimization of Platinum Promoted Gold-Palladium Catalysts** [1] Peter J. Miedziak, [2] Qian He, [1] Nikolaos Dimitratos, [1] Jennifer K. Edwards, [1] Stuart H. Taylor, [2] Christopher J. Kiely, [1] Graham J. Hutchings [1] Cardiff University, Main Building, Park Place, Cardiff, CF10 3AT, UK [2] Lehigh University, Department of Materials Science and Engineering, 5 East PAcker Avenue, Bethlehem, Pennsylvania, PA, 18015, USA
4:00 PM – 4:20 PM	**Synthesis of Sub-5 nm Co-Doped SnO_2 Nanoparticles and Their Structural, Microstructural, Optical and Photocatalytic Properties** [1] Tiago Entradas, [1] Joana Cabrita, [1] Manuel R. Nunes, [1] Olinda C. Monteiro, [2] Antonio J. Silvestre [1] Instituto Superior de Engenharia de Lisboa, Department of Physics and ICEMS, R. Conselheiro Emídio Navarro 1, 1959-007 Lisboa, Portugal [2] University of Lisbon, Faculty of Sciences, Department of Chemistry and Biochemistry and CQB, Campo Grande, 1749-016 Lisboa, Portugal [3] University of Lisbon, Faculty of Sciences, Department of Physics and ICEMS, Campo Grande, 1749-016 Lisboa, Portugal
4:20 PM – 4:40 PM	**Nanocatalysts Based on Hypercrosslinked Polystyrene Containing Metal Nanoparticles** [1] Lyudmila Bronstein, [2] Esther Sulman, [2] Valentina Matveeva [1] Indiana University, 800 E. Kirkwood Av. Bloomington, IN 47405, USA [2] Tver Technical University, A. Nikitin, 22, Tver, 170026, Russia
5:00 PM – 5:30 PM	Coffee break
5:30 PM – 7:20 PM	Oral sessions 01 – 11 (parallel)

July 16 (Wednesday)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

5:30 PM – 7:00 PM Location: B3	**Oral session** **Nanodiamond** Chairman: Professor Alexander Sinitskii
5:30 PM – 6:00 PM	***Invited lecture*** **Nanodiamond Particles: Challenges and Opportunities** [1] Olga Shenderova, [2] Gary McGuire, [3] Michail Ivanov, [4] Igor Vlasov [1] International Technology Center, 8100 Brownleigh Dr., Raleigh, NC, USA [2] Adámas Nanotechnologies, 8100 Brownleigh Dr. S.120, Raleigh, NC, USA [3] Ural Federal University, Yekaterinburg, Russia [4] General Physics Institute, Moscow, Russia
6:00 PM – 6:20 PM	**Analytical Chemistry of Nanodiamonds and Nanodiamond Materials** [1] Dmitry S. Volkov, [2] Mikhail A. Proskurnin, [2] Mikhail V. Korobov [1] Lomonosov Moscow State University, Chemical Department, Lomonosov Moscow State University, Chemistry Department, 119991, 1-build. 3, Leninskie gori, MSU, Moscow, 119991 Russia [2] Analytical Centre of Chemistry Department of M.V. Lomonosov Moscow State University, Lomonosov Moscow State University, Chemistry Department, Leninskie Gory, 1-3, GSP-1, Moscow, 119991 Russia
6:20 PM – 6:40 PM	**Study of Nanodiamonds Transformation into Onion-Like Carbon Nanoparticles when Heated Directly in the Transmission Electron Microscope** [1] Vladimir A. Popov, [2] Christian Kuebel, [2] Di Wang [1] NUST "MISIS", Leninsky prospect,4, 119049 Moscow, Russia [2] Institute of Nanotechnology (INT) and Karlsruhe Nano Micro Facility (KNMF), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz Platz 1, 76344 Eggenstein-Leopoldshafen, Germany
6:40 PM – 7:00 PM	**Structure of Nanoporous Carbons as Revealed by X-Ray Scattering and TEM** [1] Andrei A. Shiryaev, [2] Pascaline Pré, [3] Jean-Nöel Rouzaud, [4] Vladimir V. Volkov, [1] Albert M. Voloshchuk [1] Frumkin Institute of physical chemistry and electrochemistry RAS, Leninsky pr. 31, korp. 4, Moscow 119071 Russia [2] GEPEA, Ecole des Mines de Nantes, UMR CNRS 6144, 4 rue Alfred Kastler, 44307 Nantes, France [3] ENS, UMR CNRS 8538, 75231 Paris, France [4] Shubnikov Institute of Crystallography, Moscow, Russia

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

5:30 PM – 7:20 PM Location: C1	**Oral session** Chairman: Dr. Aleksey Yerokhin
5:30 PM – 6:00 PM	*Invited lecture* **Tile-Based Templates for Directed Self-Assembly of Complex Circuit-Like Patterns with Block Copolymers** [1] Jae-Byum Chang, [1] Adam Hannon, [1] Alfredo Alexander-Katz, [1] Caroline A. Ross, [1] Karl K. Berggren [1] Massachusetts Institute of Technology, 77 Massachusetts Ave, Cambridge, MA 02139, USA
6:00 PM – 6:20 PM	**Self-Assembly of Gold Nanoparticles via Copolymer Templates** [1] Thomas F. Maurer, [1] Arthur Gontier, [1] Alexandre Plaud, [1] Aurelien Sarrazin, [1] Jeremie Beal, [2] Samuel S. Lamarre, [2] Anna M. Ritcey [1] Universite de Technologie de Troyes-Laboratoire de Nanotechnologie et d'Instrumentation Optique, 12 rue Marie Curie, CS 42060, 10004 Troyes Cedex, France [2] Département de chimie and CERMA, Université Laval, Pavillon Alexandre-Vachon, 1045, avenue de la Médecine, Québec (Québec), G1V 0A6 Canada
6:20 PM – 6:40 PM	**$Ti_{0.05}Al_{0.95}N$ Coating with Nanocomposite Microstructure Through Self-Organization of Nanolamellae During Low-Pressure CVD** [1] Juraj Todt, [2] Arno Koepf, [2] Ronald Weissenbacher, [2] Reinhard Pitonak, [1] Jozef Keckes [1] Department for Materials Physics, University of Leoben and Erich Schmid institute, Austrian Academy of Sciences, Jahnstrasse 12, 8700 Leoben, Austria [2] Boehlerit GmbH & Co KG, 8605 Kapfenberg, Austria
6:40 PM – 7:00 PM	**Transrotational 2.5 D Nanostructures: Novel Solid State Order Observed by TEM in Crystallizing Amorphous Films** [1] Vladimir Yu. Kolosov [1] Ural Federal University, Ekaterinburg, Russia
7:00 PM – 7:20 PM	**InN/GaN Superlattices – Resolving the Discrepancies between Theory and Experiment** [1] T. Markurt, [1] T. Schulz, [2] N. Christensen, [3] X.Q. Wang, [3] X.T. Zheng, [3] D.Y. Ma, [4] T. Suski, [4] I. Gorczyca, [1] M. Albrecht, [1] T. Remmele, [2] A. Savane [1] Leibniz-Institute for crystal growth, Max Born Str. 2, 12489 Berlin, Germany [2] Institute of High Pressure Physics, UNIPRESS, 01-142 Warsaw, Poland [3] State Key Laboratory of Artificial Microstructure and Mesoscopic Physics, School of Physics, Peking University, Beijing, 100871, China [4] Department of Physics and Astronomy, Aarhus University, 8000 Aarhus C, Denmark

July 16 (Wednesday)

Section 04 – Bulk Metallic Nanomaterials

5:30 PM – 7:00 PM Location: E1	**Oral session** Chairman: Professor Michael Zehetbauer
5:30 PM – 6:00 PM	*Invited lecture* **Nano- and Submicrocrystalline Cu-Based Alloys with Cr, Zr and Hf: Structure, Mechanical Behaviour and Electrical Conductivity** [1, 2] Sergey V. Dobatkin, [1] D. V. Shangina, [1] N. R. Bochvar, [1] P. B. Straumal [1] A.A.Baikov Institute of Metallurgy and Materials Science, Russian Academy of Sciences, Leninskiy prospect 49, 119991 Moscow, Russia [2] National University of Science and Technology «MISIS», Laboratory of Hybrid Nanostructured Materials, Leninskiy prospect 4, 119049 Moscow, Russia
6:00 PM – 6:20 PM	**Ultrahigh-Strength 2024 Aluminium Alloy Sheet Due to Multilevel Nanostructuring Under Cryorolling and Heat Treatment** [1] Stanislav Krymskiy, [1] Elena Avtokratova, [1] Oleg Sitdikov, [1] Michael Markushev [1] Institute for Metals Superplasticity Problems, 450001, Khalturin str., Ufa, Russia
6:20 PM – 6:40 PM	**Autowave Plastic Deformation on Torsion of Nanostructured Titanium** [1] Maxim B. Ivanov, [1] Alexey V. Penkin, [1] Yury R. Kolobov [1] Belgorod National Research University, Pobedy 85, Belgorod, Russia
6:40 PM – 7:00 PM	**Titanium and Zirconium Base Alloys in Ultra-Fine Grained State: Mechanical Stability and Failure Behavior** [1] Yurii P. Sharkeev, [1] Vladimir I. Danilov, [1] Anna Eroshenko, [1] Dina Orlova, [1] Lev B. Zuev [1] Institute of Strength Physics and Materials Science of SB RAS, 634055, Tomsk, Academicheskii pr. 2/4, ISPMS of SB RAS, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

5:30 PM – 7:10 PM Location: B4	**Oral session** Chairman: Dr. Curtis Marcott
5:30 PM – 6:00 PM	*Invited lecture* **Electronic Structure and Many-Body Effects in Chemically Functionalized Graphene** [1] Alexander A. Gruneis, [2] Alexander Fedorov, [1] Nikolay I. Verbitskiy, [2] Danny Haberer, [3] Dmitry Usachov, [3] Oleg Vilkov, [4] Denis V. Vyalikh, [2] Joerg Fink, [5] Claudia Struzzi, [5] Luca Petaccia [1] University of Vienna, Faculty of Physics, Boltzmanngasse 5, 1090 Wien, Austria [2] IFW-Dresden, Helmholtzstrasse 20, 01069 Dresden, Germany [3] St. Petersburg State University, St. Petersburg, 198504, Russia [4] ELETTRA synchrotron, Area Science Park, I-34012 Basovizza, Trieste, Italy [5] TU-Dresden, D-01062 Dresden, Germany
6:00 PM – 6:30 PM	*Invited lecture* **Innovative Electrochemical Sensor Based on Electroactive Nanoparticles of Molecularly Imprinted Polymers for the Indirect Detection of Vancomicyn** [1] Antonio Turco, [1] Elisabetta Mazzotta, [1] Cosimino Malitesta, [2] Iva Chianella, [2] Sergey A. Piletsky [1] University of Salento, Dipartimento di scienze e tecnologie biologiche ed ambientali, Via Monteroni, 1 Lecce, Italy [2] Cranfield University, Cranfield Health Vincent Building, MK43 0AL, Bedfordshire, Cranfield, UK
6:30 PM – 6:50 PM	**Elaboration Application of TiO_2/MWCNT (Multiwall Carbon Nanotubes) Nanocomposites and Their Application in Solid State Dye Sensitized Solar Cells** [1] Jin Wang, [1] Yaochen Lin, [1] Aurelie Habert, [1] Mathieu Pinault, [2] Arianna Filoramo, [3] Bernard Ratier, [3] Johann Boucle, [1] Nathalie C. Herlin Boime [1] IRAMIS-NIMBE-LEDNA-LFP, CEA-CNRS URA2453, CEA Saclay, France [2] IRAMIS-NIMBE-LICSEN, CEA Saclay, France [3] XLIM, Universit de Limoges, France
6:50 PM – 7:10 PM	**Towards Production of Composites with Tailored Characteristics via Optimization of Multi-Walled Carbon Nanotube Properties** [1] Vladimir L. Kuznetsov, [2] Dmitry V. Krasnikov [1] Boreskov Institute of Catalysis, Novosibirsk, Russia [2] Novosibirsk State University, Novosibirsk, Russia

July 16 (Wednesday)

Section 06 – Polymer, Organic and Other Soft Matter Materials

5:30 PM – 7:30 PM Location: C3	**Oral session** Chairman: Dr. Dmitry Paraschuk
5:30 PM – 6:00 PM	*Invited lecture* **Electropreparation of Functional Nanoparticles** [1] Kalle Levon [1] NYU, Six Metrotech Center, Brooklyn, NY 11201, USA
6:00 PM – 6:30 PM	*Invited lecture* **Role of Morphology in Formation of Charge Transfer and Triplet States in OPV Materials** [1] Vladimir Dyakonov [1] Julius Maximilian University of Wuerzburg, Am Hubland, Germany
6:30 PM – 6:50 PM	**A Potential of Indigo Derivatives as Environment-Friendly Organic Semiconductors for Sustainable Organic Electronics** [1] Pavel A. Troshin, [1] Lidiya I. Leshanskaya, [1] Irina V. Klimovich, [2] Sergei I. Troyanov, [1] Alexander V. Zhilenkov, [1] Dmitry V. Novikov, [1] Lyubov A. Frolova, [3] Denis A. Anokhin, [1] Vladimir F. Razumov [1] Institute for Problems of Chemical Physics of RAS, Semenov ave. 1, Chernogolovka, Moscow region, 142432, Russia [2] Department of Chemistry, Moscow State University, Leninskie gory, Moscow, 119991, Russia [3] M. V. Lomonosov Moscow State University, Department of Fundamental Physical and Chemical Engineering, Leninskie gory, Moscow, 119991, Russia
6:50 PM – 7:10 PM	**Electrical Resistivity Dependences on Temperature and Solar Irradiation Flow of Some Conducting Polymers Used in Organic Solar Cells** [1] Mihaela Girtan [1] Photonics Laboratory, Angers University, 2, Bd. Lavoisier, 49045, Angers, France
7:10 PM – 7:30 PM	**Highly Efficient Indium-Tin-Oxide Free Printed Solar Cells** [1] Marios Neophytou, [1] Efthymios Georgiou, [1] Felix Hermerschmidt, [1] Stelios A. Choulis [1] Cyprus University of Technology, Molecular Electronics and Photonics Research Unit, 45 Kitiou Kyprianou St., 3041, Limassol, Cyprus

Section 07 – Nanomaterials for Energy

5:30 PM – 6:50 PM Location: B2	**Oral session** Chairman: Professor Elena R. Savinova
5:30 PM – 5:50 PM	**Synthesis and Post-Treatment Effects to the Properties of Core-Shell Pt-M/C Nanostructured Electrocatalyst for PEMFC** [1] Vladimir E. Guterman, [1] Sergey V. Belenov, [1] Andrey Yu. Pakharev, [1] Tatiana A. Lastovina, [1] Larisa L. Vysochina, [1] Helena B. Micheikina, [1] Nataliya Yu. Tabachkova [1] Southern Federal University, Zorge st., 7. Rostov-on-Don, Russia
5:50 PM – 6:10 PM	**Synthesis of Pt/Carbon Xerogel Electrocatalysts for Proton Exchange Membrane Fuel Cells (PEMFC): Effect of the Reduction Procedure** [1] Anthony Zubiaur, [2] Marian Chatenet, [2] Frédéric Maillard, [1] Nathalie Job [1] Laboratory of Chemical Engineering – Nanomaterials, Catalysis, Electrochemistry, University of Liège, B6a, 4000 Liège, Belgium [2] LEPMI, UMR 5279 CNRS/Grenoble INP/U. de Savoie/U. Joseph Fourier, Grenoble, France
6:10 PM – 6:30 PM	**Catalytic Layers for PEMFC Based on Carbon Xerogels** [1] Fabien L. Deschamps, [1] Jean-Paul Pirard, [1] Nathalie Job [1] Université de Liège, Laboratoire de Génie chimique - Nanomatériaux, Catalyse, Electrochimie, Institut de Chimie B6a, Sart-Tilman, B-4000 Liège, Belgium
6:30 PM – 6:50 PM	**Polybenzimidazoles for High Temperature Fuel Cell Membranes** [1] Dmitry Y. Razorenov, [2] Mikhail S. Kondratenko, [1] Yulia A. Volkova, [1] Kirill M. Skupov, [2] Marat O. Galyamov, [1] Igor I. Ponomarev [1] A.N.Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, 28 Vavilova St., Moscow, 119991, Russia [2] Faculty of Physics, Moscow State University, Leninskie Gory, Moscow, 119991, Russia

July 16 (Wednesday)

Section 08 – Biological and Biomedical Nanomaterials

5:30 PM – 7:00 PM Location: C4	**Oral session** Chairman: Professor Nikolai G. Khlebtsov
5:30 PM – 6:00 PM	*Invited lecture* **Nanoparticle Biocomplexes for Ultrahigh-Sensitivity Photoluminescence Imaging** [1] Andrei V. Zvyagin [1] Macquarie University, Sydney, Australia [2] Lobachevsky State University of Nizhni Novgorod, Nizhny Novgorod, Russia
6:00 PM – 6:20 PM	**DNA Metallization in Solution and on Surface** [1] Nina Kasyanenko, [1] Peter Sokolov, [1] Zakhar Reveguk, [1] Georgy Alekseev, [1] Zhang Qiushi, [1] Vladimir Bakulev [1] St.-Petersburg State University, Faculty of Physics SPbU, Uluanovskaya 1, Petrodvorets, St.-Petersburg, 199504 Russia
6:20 PM – 6:40 PM	**Energy Transfer at a Silica/Water Interface as New Route to Reveal Properties of Phospholipid Bilayers Deposited onto Silica Nanoparticles** [1] Alsu Mukhametshina, [2] Asiya Mustafina, [2] Nikolay Davydov, [1] Valery Gorbatchuk [1] Kazan Federal University, Kremlyovskaya 18, Russia [2] A.E. Arbuzov Institute of Organic and Physical Chemistry, Arbuzov 8, Russia
6:40 PM – 7:00 PM	**Microstructure Deformation of Bi-Directionally Oriented Cylindrical Block Copolymers Under Fast Cyclical Loading for Potential Prosthetic Heart Valve Application** [1] Joanna Stasiak, [1] Jacob Brubert, [1] Marta Serrani, [1] Amanda Talhat, [2] Francesco De Gaetano, [2] Maria L. Costantino, [1] Geoff D. Moggridge [1] Department of Chemical Engineering and Biotechnology, University of Cambridge, UK, Pembroke Street, Cambridge, CB2 3RA, UK [2] Department of Chemistry, Materials and Chemical Engineering, Politecnico di Milano, Italy, Piazza Leonardo da Vinci, 32 20133 Milano, Italy

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

5:30 PM – 7:20 PM Location: E2	**Oral session** Chairman: Professor Alexei E. Romanov
5:30 PM – 6:00 PM	*Invited lecture* **Hydrogen Embrittlement, Microcracking, and Piezonuclear Fission Reactions at the Ni and Pd Electrodes of Electrolysis "Cold Fusion" Experiments** [1] Alberto Carpinteri, [1] Oscar Borla, [2] Alessandro Goi, [1] Amedeo Manuello, [1] Diego Veneziano [1] Politecnico di Torino, Corso Duca degli Abruzzi 24 – 10129 Torino, Italy [2] Private Researcher, Via Borsotti – 210390 Bedero Valcuvia, Italy
6:00 PM – 6:20 PM	**Nanofluids with Control Properties: Dreams and Reality** [1] Valery Ya. Rudyak [1] Novosibirsk State University of Architecture and Civil Engineering, 630008, Novosibirsk, 113 Leningradskaya str., Russian Federation
6:20 PM – 6:40 PM	**Transport of Polar and Nonpolar Fluids Through Nanotubes Placed into Liquid Medium** [1] Andrei K. Abramian, [1] Leonid V. Mirantsev, [1] Nicholas M. Bessonov, [1] Natasha A. Reynberg [1] IPME RAS, St.Petersburg, Russia
6:40 PM – 7:00 PM	**Dynamics of the Modulated Distortions and Microflows in Confined Nematic Liquid Crystals** [1] Anna A. Vakulenko, [1] Alex V. Zakharov [1] Institute of Problems of Mechanical Engineering, RAS. St.Petersburg, 199178, Russia, 199178 St-Petersburg V.O. Bolshoj ave. 61 room 11, Russia
7:00 PM – 7:20 PM	**Effective Nanofluid Thermal Conductivity Based on Temperature-Dependent Interfacial Nano-Layer and Nanoparticle Brownian Motion** [1] Haifeng Jiang, [1] Lin Shi [1] Tsinghua University, Department Of Thermal Engineering, Tsinghua University, Beijing, 100084, China

July 16 (Wednesday)

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

5:30 PM – 7:00 PM Location: F1	**Oral session** Chairman: Professor Edik U. Rafailov
5:30 PM – 6:00 PM	*Invited lecture* **A New Method for the Synthesis of Epitaxial Layers of SiC on Si for the Growth of Wide Bandgap Semiconductor Films** [1] Sergey A. Kukushkin, [1] Andrey V. Osipov, [2] Andrey V. Lukyanov [1] Institute of Problems of Mechanical Engineering Russian Academy of Sciences IPME RAS, 199178, Bolshoy 61, V.O., St. Petersburg, Russia [2] New Silicon Technology Ltd, 195027, Magnitogoskay st., 51, leter 3, St. Petersburg, Russia
6:00 PM – 6:20 PM	**Optical Coupling between SiGe Heterostructures in 1.3-1.6 µm Wavelength Range** [1] Alexey V. Novikov, [2] Alexander A. Tonkikh, [1] Dmitry V. Yurasov, [1] Alexander V. Antonov, [1] Natalia A. Baydakova, [1] Konstantin E. Kudryavtsev, [1] Michail V. Shaleev, [1] Dmitry N. Lobanov, [1] Zakhary F. Krasilnik [1] Institute for Physics of Microstructures RAS, 603950, GSP-105, Nizhny Novgorod, Russia
6:20 PM – 6:40 PM	**Synthesis, Morphology and Structure of Sn-Catalyzed Si-SiO_2 Nanowires Grown from Different Gas Mixtures** [1,2] Alexandr O. Zamchiy, [1] Sergey Ya. Khmel', [1] Evgeniy A. Baranov, [1,2] Irina V. Cheskovskaya [1] Kutateladze Institute of thermophysics, 1, Lavrentiev Ave., 630090 Novosibirsk, Russia [2] Novosibirsk State University, 2, Pirogova Str., 630090 Novosibirsk, Russia
6:40 PM – 7:00 PM	**Two-Dimensional Dipolar Electron-Hole Liquid in Si/SiGe Heterostructures** [1] Dmitry S. Kozyrev, [2] Timur M. Burbaev [1] Moscow State University, Leninskie Gory, Moscow, 119991 Russia [2] Lebedev Physical Institute, Russian Academy of Sciences, 53 Leninskij Prospekt, Moscow, 119991 Russia

Section 11 – Nanomaterials and Catalysis

5:30 PM – 7:00 PM Location: C2	**Oral session** Chairman: Professor Edward A. Karakhanov
5:30 PM – 6:00 PM	*Invited lecture* **Nanostructured Thin Film for Energy Conversion: Pros and Cons of the Sol-Gel Approach** [1] Christel Laberty-Robert [1] Laboratoire de Chimie de la Matière Condensée de Paris – UMPC-7574 CNRS, Collège de France, 11 Place Marcelin Berthelot, 75005 Paris, France
6:00 PM – 6:20 PM	**Study of PtPd Nanoalloys: From Solution Growth to Self-Organized Deposition and Structural Changes Under Influence of Gases** [1] Suzanne F. Giorgio, [1] Astrid Declercq, [1] Walid Dachraoui, [1] Olivier Margeat, [1] Katrin Pelzer, [1] Claude Henry [1] CNRS- Aix Marseille University, CINAM, UMR 7325, Aix Marseille Université-CNRS, Campus de Luminy, Case 913, 13288 Marseille Cedex 9 France
6:20 PM – 6:40 PM	**Hybrid Nanocomposite Nafion Membranes for Adsorption and Photocatalytic Degradation of Methyl Orange Dye in Water** [1] Simona Filice, [2] Daniele D'Angelo, [2] Sebania Libertino, [1] Vassiliki Kosma, [1] Isabella Nicotera, [3] Vittorio Privitera, [2] Silvia Scalese [1] Institute for Microelectronics and Microsystems CNR-IMM, Zona Industriale Strada VIII, 5. I-95121 Catania, Italy [2] Dipartimento di Chimica e Tecnologie Chimiche, CTC. Università della Calabria, via P. Bucci. I-87036 Arcavacata di Rende (CS), Italy [3] IMM-CNR, via Santa Sofia 64. I-95123 Catania, Italy
6:40 PM – 7:00 PM	**EXAFS Study of Bimetallic Nanoparticles Atomic Structure in Metal-Carbon Catalysts Pt_xAg/C: Determination of Components Distribution in the Range from the Uniform Solid Solutions to "Core-Shell" Structures** [1] Vasiliy V. Pryadchenko, [1] Artem D. Galustov, [1] Elena B. Mikheykina, [1] Vasiliy V. Srabionyan, [1] Leon A. Avakyan, [2] Yan V. Zubavichus, [3] Ivo Zizak, [1] Vladimir E. Guterman, [1] Lusegen A. Bugaev [1] Southern Federal University, B. Sadovaya Str. 105/42, 344006 Rostov-on-Don, Russia [2] Kurchatov Center for Synchrotron Radiation and Nanotechnology, National Research Centre "Kurchatov Institute", Academic Kurchatov Sq. 1, 123182 Moscow, Russia [3] Institute Nanometre Optics and Technology, Helmholtz-Zentrum Berlin, Glienicker Str. 100, 14109 Berlin, Germany

July 17 (Thursday)

9:00 AM – 7:00 PM	Registration
10:00 AM – 6:00 PM	Exhibition
10:00 AM – 11:30 AM	Plenary session Location: Lomonosov Building Conference Hall
10:00 AM – 10:45 AM	*Plenary lecture* **Nanostructured Semiconductors for Opto- and Nanoelectronics** [1] Alexander L. Aseev, [1] Anatoly V. Dvurechenskii, [1] Alexander V. Latyshev [1] Rzhanov Institute of Semiconductor Physics, Siberian Branch of the Russian Academy of Sciences, pr. Lavrentieva 13, Novosibirsk, 630090 Russia
10:45 AM – 11:30 AM	*Plenary lecture* **Imaging Nanomaterials in Three Dimensions** [1] Gustaaf Van Tendeloo, [1] Sara Bals [1] EMAT research group, University of Antwerp, Belgium
11:30 AM – 12:00 PM	Coffee break
12:00 PM – 2:00 PM	Poster session
1:00 PM – 3:00 PM	Lunch
3:00 PM – 5:00 PM	Oral sessions 01 – 11 (parallel)
5:00 PM – 5:30 PM	Coffee break
5:30 PM – 7:20 PM	Oral sessions 01 – 11 (parallel)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

3:00 PM – 4:50 PM Location: B3	**Oral session** **Graphene-Based Nanostructures and Nanotubes** Chairman: Professor Eugene A. Goodilin
3:00 PM – 3:30 PM	*Invited lecture* **Guided Nanowires: New Building Blocks for Self-Integrated Nanosystems** [1] Ernesto Joselevich [1] Weizmann Institute of Science, Herzl 234, Rehovot 76100 Israel
3:30 PM – 3:50 PM	**Atomic Resolution Structure Study of Fluorinated Graphene by Phase Restoration of Focal Series of Images** [1] Reza J. Kashtiban, [1] Mark A. Dyson, [2] Rahul R. Nair, [3] Recep Zan, [1] Jeremy Sloan, [4] Ursel Bangert, [2] Andre K. Geim [1] The University of Warwick, Coventry, UK [2] The University of Manchester, Manchester, UK [3] University of Limerick, Limerick, Ireland [4] Niğde University, Niğde, Turkey
3:50 PM – 4:10 PM	**Synthesis of PbI_2 Single-Layered Inorganic Nanotubes Encapsulated within Carbon Nanotubes** [1] Laura Cabana, [2] Belen Ballesteros, [1] Eudar Batista, [3] Cesar Magen, [4] Raul Arenal, [1] Gerard Tobias [1] Institut de Ciencia de Materials de Barcelona (ICMAB-CSIC), Campus UAB, 08193, Bellaterra Barcelona, Spain [2] ICN2 – Institut Catala de Nanociencia i Nanotecnologia, Campus UAB, 08193, Bellaterra Barcelona, Spain [3] Instituto de Nanociencia de Aragon (INA), Universidad de Zaragoza, 50018 Zaragoza, Spain [4] Universidad de Zaragoza, 50009 Zaragoza, Spain
4:10 PM – 4:30 PM	**Structural Analysis of Cu Nanowires Deposited into Porous Al_2O_3 via Supercritical Fluid Electrodeposition** [1] Samuel Marks, [1] Reza Kashtiban, [2] David Smith, [2] David Cook, [2] Charlie Cummings, [1] Richard Beanland, [1] Jeremy Sloan [1] University Of Warwick, Coventry, UK [2] University Of Southampton, Southampton, UK
4:30 PM – 4:50 PM	**Quasi-Graphite: Hybrid Graphene-Nanotube Structure with Tunable Properties** [1] Maria G. Ganchenkova, [2] Vladimir A. Borodin [1] National Research Nuclear Unversity MEPhI, Kashirskoe Sh. 31, 115409, Moscow, Russia [2] NRC Kurchatov Institute, Kurchatov Sq. 1, 123182, Moscow, Russia

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

3:00 PM – 5:00 PM Location: C1	**Oral session** Chairman: Professor Carl Thompson
3:00 PM – 3:30 PM	*Invited lecture* **Advanced Hard Nanocomposite Coatings with Unique Properties** [1] Jindrich Musil [1] University of West Bohemia, Univerzitni 8, CZ-306 14 Plzen, Czech Republic
3:30 PM – 4:00 PM	*Invited lecture* **Irradiation Effect on Structure and Properties of Thin Films** [1] Rostislav A. Andrievski [1] Institute of Problems of Chemical Physics, Russian Academy of Sciences, Semenov Prospect, 1, Chernogolovka, Moscow Region 142432, Russia
4:00 PM – 4:20 PM	**Nucleation and Growth of Ordered Ge Nanoislands on Si Surface Patterned by Ion Irradiation** [1] Zhanna V. Smagina, [1] Anatoly V. Dvurechenskii, [1] Pavel L. Novikov, [1] Alexey V. Nenashev, [1] Polina A. Kuchinskaya [1] Institute of Semiconductor Physics SB RAS, Lavrentjeva 13, Novosibirsk, 630090, Russia
4:20 PM – 4:40 PM	**Advanced Fluorinated Graphene-Based Materials: New Approach for Creation and Application Perspectives** [1] Nadezhda A. Nebogatikova, [1] Irina V. Antonova, [1] Viktor Ya. Prinz [1] Rzhanov Institute of Semiconductors Physics SB RAS, Novosibirsk, 630090, Lavrent'ev av. 13, Russia
4:40 PM – 5:00 PM	**The Investigation of Phase Transition between Multilayered Graphene and Quasi-2D-Diamond Films** [1] Pavel B. Sorokin, [1] Alexander G. Kvashnin, [2] Leonid A. Chernozatonskii, [3] Boris I. Yakobson [1] Technological Institute for Superhard and Novel Carbon Materials, 7 a Centralnaya street, Troitsk, Moscow, Russia [2] Emanuel Institute of Biochemical Physics, Russian Academy of Sciences, 4 Kosygin st., Moscow, Russia [3] Department of Mechanical Engineering & Materials Science and the Smalley Institute for Nanoscale Science and Technology, Rice University, Houston, Texas, USA

Section 03 – Nanoceramics

3:00 PM – 4:50 PM Location: F2	**Oral session** Chairmen: Professor Sergey M. Barinov, Dr. Julietta Rau
3:00 PM – 3:30 PM	*Invited lecture* **Nanostructural Superconducting Materials for Fault Current Limiters, Cryogenic Electric Machines, High-Performance Magnets, and Magnetic Bearings** [1] Tatiana A. Prikhna [1] Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Institute for Superhard Materials of the National Academy of Sciences of Ukraine
3:30 PM – 4:00 PM	*Invited lecture* **Bipolar Redox-Based Resistive Switching in Binary Metal Oxides** [1] Vikas Rana, [1] Rainer Waser [1] Forschungszentrum Juelich, PGI-7, Forschungszentrum Jülich, 52425 Jülich
4:00 PM – 4:30 PM	*Invited lecture* **Self-Sustained Synthesis of 2D-Nano Materials** [1] Alexander S. Mukasyan [1] University Of Notre Dame, Department of Department of Chemical and Biomolecular Engineering University of Notre Dame, Notre Dame, IN, 46556, USA
4:30 PM – 4:50 PM	**Nanostructured Powders for Rare Earth Oxides Based Ceramics – From Laboratory to Production** [1] Georgy A. Dosovitskiy, [1] Alexander L. Mikhlin, [1] Daria E. Kuznetsova, [1] Konstantin B. Bogatov, [1] Alexey E. Dosovitskiy [1] Institute of Chemical Reagents and High Purity Chemical Substances, IREA, 107076, Moscow, Bogorodskiy val, 3, Russia

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Section 04 – Bulk Metallic Nanomaterials

3:00 PM – 5:00 PM Location: E1	**Oral session** Chairman: Professor Sergei Dobatkin
3:00 PM – 3:30 PM	*Invited lecture* **Designing Bulk Functional Nanomaterials By Severe Plastic Deformation Techniques** [1] Michael J. Zehetbauer [1] University of Vienna, Faculty of Physics, Research Group Physics of Nanostructured Materials, Boltzmanngasse 5, A-1090 Wien, Austria
3:30 PM – 4:00 PM	*Invited lecture* **Investigation of the Mechanical Properties and Deformation Behaviour of Bulk Metallic Glassy and Mixed-Phase Nanostructured Alloys** [1] Dmitri V. Louzguine-Luzgin, [1] S. V. Ketov, [2] V. Yu. Zadorozhnyy, [1,2] A. I. Bazlov, [1] D. M. Packwood, [3] G. Q. Xie [1] WPI Advanced Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan [2] National University of Science and Technology «MISIS», Leninsky prosp., 4, Moscow, 119049, Russia [3] Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan
4:00 PM – 4:20 PM	**Composition and Grain Size Effects on the Structural and Mechanical Properties of CuZr Nanoglasses** [1] Paulo S. Branicio, [1] Sara Adibi, [1] Yong Wei Zhang, [2] Shailendra P. Joshi [1] Institute of High Performance Computing, Singapore, A*STAR, 138632, Singapore [2] 2Mechanical Engineering Department, National University of Singapore, National University of Singapore, 117576, Singapore
4:20 PM – 4:40 PM	**Microstructure and Properties of UFG Metals and Alloys** [1] Lembit A. Kommel [1] Tallinn University of Technology, Ehitajat tee 5, 19086 Tallinn, Estonia
4:40 PM – 5:00 PM	**Multiscale Simulation of Atomic Structure in the Vicinity of Nanovoids** [1] Andrei V. Nazarov, [1] Irina V. Ershova, [1] Alexander A. Zaluzhnyi [1] National research nuclear university (MEPhI), Kashirskoe shosse 31, Russia [2] SSC RF Institute for Theoretical and Experimental Physics (ITEP), Bolshaya Cheremushkinskaya 25, 117218, Moscow, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

3:00 PM – 4:30 PM Location: B4	**Oral session** Chairman: Dr. Davide Calestani
3:00 PM – 3:30 PM	*Invited lecture* **Characterization of Polymer Nanocomposites Using AFM-Based Nanothermal, Nanomechanical, and Nanoscale Infrared Spectroscopy and Imaging** [1] Curtis Marcott, [2] Vera Neudachina, [3] Michael Lo, [3] Kevin Kjoller, [3] Roshan Shetty, [3] Qichi Hu, [3] Eoghan Dillon, [3] Craig B. Prater [1] Department of Materials Science and Engineering, University of Delaware, Newark, Delaware, USA [2] Light Light Solutions, Athens, GA, USA [3] Intertech, Moscow, Russia [4] Anasys Instruments, Santa Barbara, CA, USA
3:30 PM – 3:50 PM	**Enhanced Gold Film-Coupled Graphene-Based Plasmonic Nanosensor** [1] Thomas Maurer, [1] Pierre-Michel Adam, [2] Bahram Djafari-rouhan, [3] Abdellatif Akjouj, [3] Rabah Boukherroub, [1] Jerome Plain, [4] Michel Kazan, [5] Ziad Herro, [2] Jean-Pierre Vilcot, [1] Jeremie Beal, [2] Palan Subramanian, [3] Gatan Leveque, [1] Rana Nicolas, [2] Sabine Szunerits [1] Universite de Technologie de Troyes-Laboratoire de Nanotechnologie et d'Instrumentation Optique, 12 rue Marie Curie, CS 42060, 10004 Troyes Cedex, France [2] Institut d'Electronique, de Microélectronique et de Nanotechnologie (IEMN, CNRS-8520), Cité Scientifique, Avenue Poincaré, 59652 Villeneuve d'Ascq, France [3] Institut de Recherche Interdisciplinaire (IRI), USR-3078, Université Lille 1, 50 Avenue de Halley, BP 70478, Villeneuve d'Ascq 59658, France [4] Université Libanaise, EDST, Platforme de Recherche en NanoSciences et NanoTechnologie PR2N, FanarBP 90239, Lebanon [5] Department of Physics, American University of Beirut, Riad El-Solh, 1107 2020 Beirut, Lebanon
3:50 PM – 4:10 PM	**0-3 Connectivity 2-phase PZT/PVDF Composite Hydrophone** [1] Sara Qaisar, [2] Muhammad Siddiq, [3] Muhammad Altaf [1] National Center for Physics, Quaid-i-Azam University, Islamabad 45320, Pakistan [2] Quaid-i-Azam University, Islamabad 45320, Pakistan [3] Institute of Industrial Control Systems, Islamabad, Pakistan
4:10 PM – 4:30 PM	**Photosensitive Nanocomposites "Metal Oxide / CdSe QD" for Gas Sensor Application** [1] Artyom S. Chizhov, [1] Marina N. Rumyantseva, [1] Roman B. Vasiliev, [2] Artyom M. Abakumov, [1] Alexander M. Gaskov [1] Lomonosov Moscow State University, Moscow, Russia [2] University of Antwerp, Antwerp, Belgium

Section 06 – Polymer, Organic and Other Soft Matter Materials

3:00 PM – 5:05 PM Location: C3	**Oral session** Chairman: Professor Martin Möller
3:00 PM – 3:35 PM	*Keynote lecture* **Shape-Persistent Dendrimers as Multifunctional Nanoparticles** [1] Klaus Muellen [1] Max Planck Institute for Polymer Research, Mainz, 55128, Germany
3:35 PM – 4:05 PM	*Invited lecture* **Manipulation of Polymer Chain Conformation via Supramolecular Complexation** [1] Xiaomin Zhu, [1] Lei Li, [2] Martin Rosenthal, [2] Dimitri Ivanov, [1] Martin Moeller [1] DWI – Leibniz-Institute for Interactive Materials Research and Institute for Technical and Macromolecular Chemistry of RWTH Aachen University, Forckenbeckstrasse 50, Aachen, 52056, Germany [2] Institut de Sciences des Matériaux de Mulhouse (CNRS IS2M), 15 Rue Jean Starcky, 68057 Mulhouse, France
4:05 PM – 4:25 PM	**Amphiphilic Dendritic Stars of Oxiranes for Immobilization of Anticancer Ruthenium Complex** [1] Marcin Libera, [1] Andrzej Dworak, [1] Barbara Trzebicka, [2] Petr Formanek [1] Center of Polymer and Carbon Materials PAS, M. Curie-Sklodowskiej 34, 41-819 Zabrze, Poland [2] Leibniz-Institut für Polymerforschung Dresden e.V, Hohe Straße 6, 01069 Dresden, Germany
4:25 PM – 4:45 PM	**New Nanocomposite Planar Nanostructures and Colloid Capsules Based on the Complexes of Polymers, Lipids, Amphiphiles and Functional Nanoparticles: Synthesis, Structure, Properties and Controlled Stimuli-Addressed Activation** [1] Gennady B. Khomutov, [2] Igor V. Taranov, [2] Vladimir A. Vdovin, [2] Valery A. Cherepenin, [2] Yury V. Gulyaev, [3] Dmitry A. Gorin, [3] Eugeny G. Glukhovskoy, [3] Alexey B. Ermakov, [4] Elena G. Yaroslavova, [4] Andrey V. Sybachin, [4] Alexander A. Yaroslavov, [4] Anna A. Rakhnyanskaya, [1] Nikolay N. Usmanov, [1] Alexander M. Saletsky, [1] Kirill V. Potapenkov, [1] Polina A. Kormakova, [1] Yury A. Koksharov, [1] Vitaly P. Kim, [2] Viktor V. Faikin [1] Lomonosov Moscow State University, Faculty of Physics, Lenin Gory 1-2, Moscow, Russia [2] Lomonosov Moscow State University, Faculty of Chemistry, Lenin Gory 1-3, Moscow, Russia [3] Saratov State University, Faculty of nano- and biomedical technologies, 83 Astrakhanskaya St., Saratov, Russia [4] Institute of Radio-engineering and Electronics RAS, Mokhovaya 11-7, Moscow, Russia
4:45 PM – 5:05 PM	**Stimuli Sensitive Nanocapsules of Star Architecture** [1] Andrzej Dworak, [1] Barbara Trzebicka, [1] Agnieszka Kowalczuk, [1] Barbara Mendrek, [2] Mario Smet [1] Center of Polymer and Carbon Materials Polish Academy of Sciences, 41-819 Zabrze, M. Curie-Sklodowskiej 34 str., Poland [2] University of Leuven, Department of Chemistry, Celestijnenlaan, 200F, B-3001 Leuven (Heverlee), Belgium

Section 07 – Nanomaterials for Energy

3:00 PM – 5:00 PM Location: B2	**Oral session** Chairman: Dr. Catherine Bougerol
3:00 PM – 3:20 PM	**Thermophotovoltaic Fuel-to-Electricity Conversion Enabled by High-Temperature Photonic Crystals** [1] Walker Chan, [1] Veronika Stelmakh, [2] Veronika Rinnerbauer, [1] Jay J. Senkevich, [1] Marin Soljacic, [1] John D. Joannopoulos, [1] Ivan Celanovic [1] Massachusetts Institute of Technology, 77 Massachusetts Avenue Cambridge MA 02139 USA [2] Johannes Kepler University, Altenbergerstr. 69 4040 Linz, Austria
3:20 PM – 3:40 PM	**Tantalum Tungsten Alloy Photonic Crystals for High-Temperature Energy Conversion** [1] Veronika Stelmakh, [2] Veronika Rinnerbauer, [1] Jay J. Senkevich, [1] John D. Joannopoulos, [1] Marin Soljacic, [1] Ivan Celanovic [1] Massachusetts Institute of Technology, Institute for Soldier Nanotechnologies, 77 Massachusetts Avenue Cambridge MA 02139 USA [2] Johannes Kepler University Linz, Institute of Semiconductor and Solid State Physics, Altenbergerstr. 69 4040 Linz, Austria
3:40 PM – 4:00 PM	**Intrinsic Inhomogeneity in Superconducting and Non-Superconducting $Rb_xFe_{2-y}Se_2$ at Nano Level** [1] Maria V. Roslova, [2] Oleg I. Lebedev, [1] Igor V. Morozov, [1] Andrei V. Shevelkov [1] Lomonosov Moscow State University, Leninskie Gory 1-3, 119991 Moscow, Russia [2] CRISTMAT, CNRS-ENSICAEN, UMR 6508, CNRS-ENSICAEN, 14050 Caen, France
4:00 PM – 4:20 PM	**Electron Microscopy of New Superconducting Materials for Energy Applications** [1] Alexander L. Vasiliev, [1] Michail Yu. Presnyakov, [1] Vladimir I. Bondarenko, [1] Alexey A. Mikhutkin, [1] Igor A. Karateev, [1] Mikhail V. Kovalchuk, [2] Elena A. Dergunova, [3] Irina P. Makarova, [4] Evgeny V. Antipov [1] NRC "Kurchatov Institute", Kurchatova sq.,1 Moscow 123182, Russia [2] Institute of Crystallography RAS, Leninskij pr.59, Moscow 119333, Russia [3] Bochvar institute of nonorganic materials, Rogova 5a, Moscow 123098, Russia [4] Chemistry Department, Moscow State University, Chemistry Department Moscow State University, 119991 Moscow, Russia
4:20 PM – 4:40 PM	**Nanocarbon-Inorganic Hybrid Materials as Next-Generation Photocatalysts** [1] Dominik Eder [1] University of Muenster, Corrensstrasse 28-30, Germany
4:40 PM – 5:00 PM	**Synthesis of Nanocrystalline HoN Particles for Magnetic Refrigerant in Hydrogen Storage System** [1] Dongsoo Kim, [1] Jongbin Ahn, [1] Kookchae Chung [1] Korea Institute of Materials Science, 797 Changwondaero, Seongsan-gu, Changwon, Gyeongnam, 642-831, South Korea

Section 08 – Biological and Biomedical Nanomaterials

3:00 PM – 4:40 PM Location: C4	**Oral session** Chairman: Professor Rainer Jordan
3:00 PM – 3:30 PM	*Invited lecture* **DOTA-Functionalized Magnetite Nanoparticles as Contrast Agents for MRI/PET Double Imaging** [1] Guillaume Thomas, [1] Frederic Demoisson, [1] Julien Boudon, [1] Jeremy Paris, [1] Nadine Millot [1] Laboratoire Interdisciplinaire Carnot de Bourgogne, Universite de Bourgogne, UMR 6303 CNRS-Université de Bourgogne, 9 Av. A. Savary, BP 47870 F-21078 DIJON Cedex, France
3:30 PM – 4:00 PM	*Invited lecture* **Design of Water Soluble Fullerene Derivatives as Promising Lead Compounds for Antiviral Pharmaceuticals** [1] Pavel A. Troshin, [1] Ekaterina A. Khakina, [2] Regina R. Klimova, [3] Sergei I. Troyanov, [2] Natalia E. Fedorova, [4] Jan Balzarini, [2] Alla A. Kushch [1] Institute for Problems of Chemical Physics of RAS, Semenov ave. 1, Chernogolovka, Moscow region, 142432, Russia [2] D.I. Ivanovsky Institute of Virology of the Ministry of Health and Social Development of the Russian Federation, Moscow, Russia [3] M. V. Lomonosov Moscow State University, Department of Fundamental Physical and Chemical Engineering, Leninskie gory, Moscow, 119991, Russia [4] Rega Institute for Medical Research, Minderbroedersstraat 10, B-3000, Leuven, Belgium
4:00 PM – 4:20 PM	**Chitosan-Dextran Sulfate Nanoparticles for Ocular Drug Delivery** [1] Wanachat Chaiyasan, [1] Waree Tiyaboonchai, [2] Sangly P. Srinivas, [3] Uday B Kompella, [1] Sakonwun Prapertbut [1] Naresuan University, Faculty of Pharmaceutical Sciences, Phitsanulok, Thailand [2] Indiana University, School of Optometry, Bloomington, Indiana, United States [3] University of Colorado, Pharmaceutical Sciences, Denver, Colorado, United States
4:20 PM – 4:40 PM	**Lutien-Loaded Chitosan-Dextran Sulfate Nanoparticles: Development and Characterization** [1] Waree Tiyaboonchai, [1] Wanachat Chaiyasan, [2] Sangly P. Srinivas, [1] Sakonwun Prapertbut, [3] Uday B Kompella [1] Naresuan University, Faculty of Pharmaceutical Sciences, Phitsanulok, Thailand [2] Indiana University, School of Optometry, Bloomington, Indiana, United States [3] University of Colorado, Pharmaceutical Sciences, Denver, Colorado, United States

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

3:00 PM – 4:50 PM Location: E2	**Oral session** Chairman: Professor Alberto Carpinteri
3:00 PM – 3:30 PM	*Invited lecture* **Some Current Trends in Mechanics of Nanomaterials** [1] Robert V. Goldstein [1] A.Yu.Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences, 119526, Moscow, pr. Vernadskogo, 101-1, Russia
3:30 PM – 3:50 PM	**Mechanical Properties of Nanomaterials Based on Graphene** [1] Leonid A. Chernozatonskii [1] Institute of biochemical physics, Russian Academy of Sciences, 4 Kosygin St., Moscow 119334, Russia **Rectangular Bilayered Graphene Nanomeshes: Structures and Properties** [1] Victor A. Demin, [1] Leonid A. Chernozatonskii [1] IBCP RAS, 119334, Moscow, Kosygina, 4, Russia
3:50 PM – 4:10 PM	**Discrete-Continuum Modeling of Carbon-Based Nanomaterials Deformation and Fracture** [1] Alexander Chentsov [1] IPMech RAS, Vernadskogo prosp. 101-1, Russia
4:10 PM – 4:30 PM	**Cubic, Hexagonal and Rhombohedral Nano/Microtubes with Curvilinear Anisotropy** [1] Robert V. Goldstein, [1] Valentin A. Gorodtsov, [1] Dmitry S. Lisovenko, [1] Mihail A. Volkov [1] A.Yu. Ishlinsky Institute for Problems in Mechanics RAS, prospect Vernadskogo 101, b1, Moscow, 119526, Russia
4:30 PM – 4:50 PM	**Elastic and Dynamical Properties of Differential Graphene Resonator** [1] Igor E. Berinskii, [1] Dmitry A. Indeitsev, [1] Nikita F. Morozov, [2] Lev V. Shtukin, [2] Dmitry Yu. Skubov [1] Institute for Problems in Mechanical Engineering of Russian Academy of Sciences, 199178, St. Petersburg, Bol'shoy pr. V.O., 61, Russia [2] St. Petersburg State Polytechnical University, 195251, St. Petersburg, Politechnicheskaya st., 29, Russia

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Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

3:00 PM – 4:20 PM Location: F1	**Oral session** Chairman: Professor Vladimir G. Dubrovskii
3:00 PM – 3:30 PM	*Invited lecture* **"Green" Laser-Ablative Synthesis of Ultrapure Nanophotonic Materials** [1] Andrei V. Kabashin [1] Laboratoire LP3 (UMR 7341 CNRS), Aix-Marseille University, Case 917, 13288 Marseille, France
3:30 PM – 4:00 PM	*Invited lecture* **Semiconductor Quantum Dot Lasers: High-Power Short Pulse Generation, Two-State Lasing and Sensing Applications** [1] Stefan Breuer [1] Institute of Applied Physics, Technische Universitat Darmstadt, Schlossgarten-str. 7, 64289 Darmstadt, Germany
4:00 PM – 4:20 PM	**The Influence of Morphology and Structure on Magnetic Properties of FePd:-Cu Thin Alloy Films Nanopatterned by Self-Assembly Methods** [1] Michal Krupinski, [1] Marcin Perzanowski, [1] Yevhen Zabila, [1] Arkadiusz Zarzycki, [1] Marta Marszalek [1] Institute of Nuclear Physics Polish Academy of Sciences, Radzikowskiego 152, 31-342 Krakow, Poland
5:00 PM – 5:30 PM	Coffee break
5:30 PM – 7:20 PM	Oral sessions 01 – 11 (parallel)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

5:30 PM – 7:20 PM Location: B3	**Oral session** **2D Exfoliated Nanostructures and Inorganic Nanotubes** Chairman: Professor Yury G. Gogotsi
5:30 PM – 6:00 PM	*Invited lecture* **Processing and Characterisation of Liquid-Phase Exfoliated Two-Dimensional Nanosheets: Towards Large Scale Production & Energy Storage Applications** [1] Beatriz Mendoza-Sanchez, [2] Valeria Nicolosi [1] School of Chemistry, CRANN, Trinity College Dublin, Dublin, Ireland [2] School of Chemistry, School of Physics, CRANN & AMBER, Trinity College Dublin, Dublin, Ireland
6:00 PM – 6:20 PM	**Exfoliation of Hexagonal Boron Nitride Particles** [1] Alexander Steinman, [1] Andrei Matveev, [1] Dmitry Stansky, [2] Dmitri Golberg [1] National university of science and technology "MISiS", Leninsky prospect 4, 119991 Moscow, Russia [2] National Institute for Materials Science, Namiki 1-1, Tsukuba, Ibaraki 3050044, Japan
6:20 PM – 6:40 PM	**Synthesis, Properties and Potential Application of Carbon Nanoscrolls with Polygonal Cross-Section** [1] Rinat R. Ismagilov, [1] Sergei A. Malykhin, [1] Andrey M. Alexeev, [1] Alexander N. Obraztsov [1] Lomonosov Moscow State University, Department of Physics, Leninskie Gory, Moscow 119991 Russia
6:40 PM – 7:00 PM	**Formation of Heteronanostructures with Quasi-2D Geometry Based on Atomically Thin CdSe And CdTe Nanoplates via Ligand Exchange** [1] Maria S. Sokolikova, [1] Elizaveta P. Lazareva, [1] Roman B. Vasiliev, [1] Alexander M. Gaskov [1] Lomonosov Moscow State University, Leninskie Gory, GSP-1, Moscow, 119991, Russia
7:00 PM - 7:20 PM	**Hexagonalization of Imogolite Nanotubes** [1] Mohamed-Salah Amara, [1] Stephan Rouziere, [1] Erwan Paineau, [2] Antoine Thill, [1] Pascale Launois [1] Laboratory of Solid State Physics, Paris Sud 11 University, B.510, , 91405 Orsay, France [2] Laboratoire Interdisciplinaire sur l'Organisation Nanométrique et Supramoléculaire, CEA Saclay, IRAMIS, LIONS, 91191 Gif-sur-Yvette, France

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Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

5:30 PM – 7:20 PM Location: C1	**Oral session** Chairman: Professor Jindrich Musil
5:30 PM – 6:00 PM	*Invited lecture* **Non-Ideal Behaviors in Atomic Layer Deposition of Functional Chalco-Genide Thin Films** [1] Cheol Seong Hwang [1] Seoul National University, Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, 1 Gwanak-ro, Gwanak-gu, Seoul, 151-742, Republic of Korea
6:00 PM – 6:20 PM	**ZnO-Based 3-D Structures for Novel Devices** [1] Rui Li, [1] Pavel I. Reyes, [1] Yang Zhang, [1] Wen-chiang Hong, [1] Yicheng Lu [1] Department of Electrical and Computer Engineering, Rutgers University, 94 Brett Road, Piscataway, NJ 08854, USA
6:20 PM – 6:40 PM	**GeSn Nanocrystals in Ge and Si Matrix** [1] Alexander A. Tonkikh, [2] Alexandra A. Suvorova, [1] J Schilling, [3] Nikolai D. Zakharov, [3] Peter Werner [1] The University of Western Australia, 35 Stirling Highway, Crawley 6009, Australia [2] ZIK SiLi-nano, Martin Luther University Halle-Wittenberg, Karl-Freiherr-von-Fritsch-Str. 3, D-06120, Halle(Saale), Germany [3] Max Planck Institute of Microstructure Physics, Weinberg 2, D-06120, Halle(Saale), Germany [4] Institute for Physics of Microstructures RAS, GSP-105, Nizhnii Novgorod, Russia
6:40 PM – 7:00 PM	**3D Microfabrication of Molecularly Imprinted Polymers by Light-Activated Electropolymerization on Micromachined Silicon. Characterization and Applications in Sulfadimethoxine Electrochemical Detection** [1] Elisabetta Mazzotta, [1] Antonio Turco, [1] Cosimino Malitesta, [2] Salvatore Surdo, [2] Giuseppe Barillaro [1] Di.S.Te.B.A. - Universita' del Salento, via Monteroni 73100 Lecce, Italy [2] Dip.to di Ingegneria Elettronica - Universit di Pisa, via G. Caruso, 16 56122 Pisa, Italy
7:00 PM – 7:20 PM	**Characterization of Ultra-Thin Metal on Silicon Structures for Future Field Effect Devices** [1] Bernhard Lutzer, [1] Ole Bethge, [1] Christina Zimmermann, [1] Sinan Simsek, [1] Juergen Smoliner, [1] Emmerich Bertagnolli [1] Vienna University of Technology, Institute of Solid State Electronics, Floragasse 7/1, 1040 Wien, Austria

Section 04 – Bulk Metallic Nanomaterials

5:30 PM – 6:40 PM Location: E1	**Oral session** Chairman: Professor Deliang Zhang
5:30 PM – 6:00 PM	*Invited lecture* **Advanced Technologies and Properties of Consolidated Nanopowder Materials** [1] Mikhail Iv. Alimov [1] ISMAN, Academician Osipyan str., 8, Chernogolovka, Moscow Region, 142432, Russia
6:00 PM – 6:20 PM	**Features of Dynamic Strain Aging and Formation of a Nanostructured State in Aluminum 6101 Alloy Subjected to SPD** [1] Vil Sitdikov, [1] Marat Hasanov, [2] Pavel Chizhov, [1] Maxim Murashkin, [1] Ruslan Valiev [1] Ufa State Aviation Technical University, Ufa, K. Marx 12, Russia [2] Moscow State University, Moscow, Leninskie Gory, 1, Russia
6:20 PM – 6:40 PM	**Effect of Severe Cryodeformation on Intergranular Corrosion of 2024 Aluminum Alloy** [1] Stanislav Krymskiy, [1] Elena Avtokratova, [1] Oleg Sitdikov, [1] Michael Markushev [1] Institute for Metals Superplasticity Problems, 450001, Khalturin str., 39, Ufa, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

5:30 PM – 6:50 PM Location: B4	**Oral session** Chairman: Professor Alexander Grüneis
5:30 PM – 5:50 PM	**Hybrid Metal-Mesogenic Nanosystems** [1] Tatyana I. Shabatina [1] M.V.Lomonosov Moscow state University, Department of Chemistry, Leninskie Gori 1/3, 119991 Moscow, Russia
5:50 PM – 6:10 PM	**Nanostructured Hybrid Metal/Dielectric Thin Films with Outstanding Electrical and Optical Properties** [1] Tapajyoti Das Gupta, [1] Joelle Corde, [1] Sandrine Perruchas, [1] Jean-Pierre Boilot, [1] Alistair Rowe, [1] Thierry Gacoin [1] Ecole Polytechnique, 91128 palaiseau, France
6:10 PM – 6:30 PM	**The Nanothermites: Functional Nanocomposites for Fast Energy Release** [1] Marc Comet, [2] Boris Khasainov, [1] Vincent Pichot, [3] Barbara Baschung, [1] Denis Spitzer [1] Laboratory NS3E, UMR 3208 CNRS/ISL/UdS, BP 70034, 68301 SAINT-LOUIS Cedex, France [2] CNRS • Université de Poitiers • ISAE-ENSMA • UPR 3346 ISAE-ENSMA, Téléport 21, avenue Clément Ader • BP40109 F86961 FUTUROSCOPE CHASSENEUIL Cedex, France [3] ISL, BP 70034, 68301 SAINT-LOUIS Cedex, France
6:30 PM – 6:50 PM	**Using Hybrid Nanoscope for Research Nanocomposites and Hybrid Nanomaterials** [1] Vladimir D. Gelever, [1] Alecsey Al. Manushkin, [1] Evgeniy E. Usachev [1] Moscow State Technical University for Radioengineering, Electronics and Automation (MSTU MIREA), 5 Sokolinaja gora st., 22, 105275 Moscow, Russia

Section 06 – Polymer, Organic and Other Soft Matter Materials

5:30 PM – 7:30 PM Location: C3	**Oral session** Chairman Professor Sergey Vatsadze
5:30 PM – 6:00 PM	*Invited lecture* **Biomimetic Soft Microorigami: Smart 3D Micro-Constructs from Self-Folding Polymer Films** [1] Leonid Ionov [1] Leibniz Institute of Polymer Research, Hohe Str 6; 01069 Dresden, Germany
6:00 PM – 6:30 PM	*Invited lecture* **Nature-Inspired Synthesis of Soft and Biohybrid Nanomaterials Based on a Smart Use of Natural Hyperbranched Polyelectrolytes – Humic Substances** [1] Irina V. Perminova [1] Department of Chemistry of the Lomonosov Moscow State University, Leninskie Gory 1-3, Moscow 119991 Russia
6:30 PM – 6:50 PM	**New Thermal Superinsulating Materials from Pectin Based Bio-Aerogels** [1] Arnaud Demilecamps, [1] Cyrielle Rudaz, [2] Claudia Hildenbrand, [2] Arnaud Rigacci, [1] Tatiana Budtova [1] Centre for material forming (CEMEF) Mines Paristech, 1 Rue Claude Daunesse, Sophia Antipolis, France [2] Centre Procédés, Energies renouvelables et Systèmes Energétiques (PERSEE) Mines ParisTech, 1 Rue Claude Daunesse, Sophia Antipolis, France
6:50 PM – 7:10 PM	**Reactive Polymeric Materials for Bioimmobilization Applications** [1] Tugce N. Gevrek, [2] Luca Beria, [1] Asli Erdog, [1] Rana Sanyal, [2] Dario Pasini, [1] Amitav Sanyal [1] Bogazici University, Department of Chemistry, Bogazici University, Bebek, 34342, Istanbul, Turkey [2] University of Pavia, Department of Chemistry and INSTM Research Unit, University of Pavia, 27100, Pavia, Italy
7:10 PM – 7:30 PM	**Formation of Poly(styrene-block-4-vinyl pyridine) Nanoreactors in Solutions in Carbonic Acid** [1] Marina A. Pigaleva, [1] Marat O. Gallyamov, [2] Martin Möller, [1] Alexei R. Khokhlov [1] Faculty of Physics, Lomonosov Moscow State University, Leninskie gory 1-2, GSP-1, Moscow 119991, Russian Federation [2] DWI Leibniz – Institut for Interactive Materials, Forckenbeckstr. 50, Aachen D-52056, Germany

July 17 (Thursday)

Section 07 – Nanomaterials for Energy

5:30 PM – 6:40 PM Location: B2	**Oral session** Chairman: Professor Andrei Shevelkov
5:30 PM – 6:00 PM	*Invited lecture* **Advance Transmission Electron Microscopy of Epitaxy-Enabled Morphology Controling ITO Nanowires** [1] Oleg I. Lebedev, [2] Stuart Turner, [3] Youde Shen, [4] Tom Wu [1] Laboratoire CRISMAT,UMR 6508, CNRS ENSICAEN, F-14050 Caen, France [2] EMAT, Department of Physics, University of Antwerp, B-2020 , Antwerpen, Belgium [3] Division of Physics and Applied Physics, Nanyang Technological University, 637371 Singapore [4] Materials Science and Engineering, King Abdullah University of Science and Technology, Thuwal 23955, Saudi Arabia
6:00 PM – 6:20 PM	**Multiresonant Coherent Multidimensional Spectroscopy of Semiconductor Nanocrystals** [1] Andrei V. Pakoulev, [1] Danial D. Kohler, [1] John C. Wright [1] University of Wisconsin-Madison, 1101 University Avenue, Madison, Wisconsin, 53705 USA
6:20 PM – 6:40 PM	**Development of Nanomaterials and Nanotechnologies in Nuclear Industry of Russia** [1] Vadim F. Petrunin [1] Nation Investigation Nuclear University, 31, Kashirskoe av., Moscow, 115409, Russia

Section 08 – Biological and Biomedical Nanomaterials

5:30 PM – 6:30 PM Location: C4	**Oral session** Chairman: Professor Sergey M. Deyev
5:30 PM – 5:50 PM	**A Fluorescent Microbead Sensor for Detecting Nitric Oxide (NO)** [1] Eunhae Koo [1] Korea Institute of ceramic Engineering and Technology, Digital-ro 10-gil Geumcheon-gu, Seoul, Korea
5:50 PM – 6:10 PM	**Structural and Optical Properties of DNA-Based Silver Fluorescent Nanoclusters** [1] Alexei Kononov, [1] Ivan Volkov, [1] Ruslan Ramazanov, [1] Pavel Serdobintsev, [1] Viktoria Karpenko, [1] Dmitriy Usachov, [1] Vera Adamchuk [1] Saint Petersburg State University, Ulyanovskaya 1, Saint-Petersburg, 198504 Russia
6:10 PM – 6:30 PM	**Induced Antimicrobial Resistance to Nanosilver** [1] Cindy Gunawan, [2] Wey Yang Teoh, [1] Christopher P. Marquis, [1] Rose Amal [1] UNSW Australia, Sydney, Australia [2] City University of Hong Kong, Kowloon, Hong Kong S. A. R

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

5:30 PM – 7:20 PM Location: E2	**Oral session** Chairman: Professor Jeffrey Th. M. De Hosson
5:30 PM – 6:00 PM	*Invited lecture* **Mechanical Effects in Contact Interaction of the Surfaces at Micro- and Nanoscales** [1] Irina G. Goryacheva, [2] Nikolai K. Myshkin [1] Ishlinsky Institute for Problems in Mechanics of Russian Academy of Sciences, Prospect Vernadskogo,101 Bld.1, Moscow 119526 Russia [2] V.A. Belyi Metal-Polymer Research Institute of NASB, 32A Kirov Street, 246050 Gomel, Belarus
6:00 PM – 6:20 PM	**Application of Piezoresonance Probe for the Mapping of Nanostructured Materials Mechanical Properties** [1] Igor I. Maslenikov, [2] Alexey S. Useinov, [3] Vladimir N. Reshetov [1] Moscow Institute of Physics and Technology, 9 Institutskiy per., Dolgoprudny, Moscow Region, Russia [2] Technological Institute for Superhard and Novel Carbon Materials, 7a Centralnaya Street, Troitsk, Moscow, Russia [3] National Research Nuclear University "MEPhI", 31 Kashirskoe Hwy, Moscow, Russia
6:20 PM – 6:40 PM	**Following the Deformation Processes of Nanocrystalline Pd_xAu_{1-x} by the Combination of In-Situ Straining and ACOM-TEM** [1] Aaron Kobler, [1] Christian Kuebel, [2] Horst Hahn [1] Karlsruhe Institute of Technology (KIT), 76021 Karlsruhe, Germany [2] Technische Universität Darmstadt (TUD), 64287 Darmstadt, Germany
6:40 PM – 7:00 PM	**From Thin Film Buckling to Interfacial Adhesion** [1] Sergey Grachev, [1] Jean-Yvon Faou, [2] Guillaume Parry, [1] Etienne Barthel [1] Surface du Verre et Interfaces, UMR 125 CNRS/Saint-Gobain, 39 quai Lucien Lefranc, F-93303 Aubervilliers Cedex, France [2] SIMaP – Laboratoire de Thermodynamique et Physico-Chimie Métallurgiques, Grenoble-INP, Domaine Universitaire Grenoble, BP75, 38402 Saint Martin d'Hères Cedex, France
7:00 PM – 7:20 PM	**The Prediction of Defects in the Carbon Nanostructures Based on the Analysis of the Local Stress Field for Atomic Grid** [1] Olga E. Glukhova, [1] Anna S. Kolesnikova, [1] Michael M. Slepchenkov [1] Saratov State University, Astrakhanskaya street 83, Saratov, 410012 Russia

July 17 (Thursday)

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

5:30 PM – 7:30 PM Location: F1	**Oral session** Chairman: Professor Grigorii S. Sokolovskii
5:30 PM – 6:00 PM	*Invited lecture* **Crystal Phase Design in III-V Nanowires and Optical Wurtzite-Zincblende Heterostructures** [1] Vladimir G. Dubrovskii [1] Saint Petersburg Academic University - Nanotechnology Research and Education Centre of the Russian Academy of Sciences (the Academic University), Khlopina 8/3, 194021 St.-Petersburg, Russia
6:00 PM – 6:30 PM	*Invited lecture* **Energy Relaxation of Hot Carriers in Silicon Nanocrystals** [1] Irina N. Yassievich [1] Ioffe Physical Technical Institute, Polytechnicheskaya 26, 194021 St. Petersburg, Russia
6:30 PM – 6:50 PM	**Controlled Doping of Semiconductor Nanowires** [1] Yossi Rosenwaks, [1] Iddo Amit, [1] Elad Koren, [1] Eliezer Halpern, [1] Gil Shalev, [1] Alex Henning, [2] Uri Givan, [2] Eric Hemesath, [2] Lincoln J. Lauhon, [3] Ori Hazut, [3] Roie Yerushalmi [1] Tel-Aviv University, Tel-Aviv 69978, Israel [2] Northwestern University, Evanston, Illinois, United States [3] The Hebrew University of Jerusalem, Edmond J. Safra Campus, Givat Ram Jerusalem, 91904 Israel
6:50 PM – 7:10 PM	**Stimulated Low-Frequency Raman Scattering in Nanomaterials** [1] Nikolay V. Tcherniega, [2] Anatoly N. Baranov, [2] Heinrich V. Ehrlich, [1] Anna D. Kudryavtseva, [2] Georgi V. Lisichkin, [2] Marina P. Zhilenko [1] P.N.Lebedev Physical Institute of the RAS, Leninskii pr., 53, Moscow, 119991, Russia [2] M. V. Lomonosov Moscow State University, Vorob'eby Gory, Moscow, 119991, Russia
7:10 PM – 7:30 PM	**Femtosecond Intrapulse Evolution of the Transverse Magneto-Optic Kerr Effect in One-Dimensional Iron-Based Magnetoplasmonic Crystal** [1] Aleksandr Yu. Frolov, [1] Polina P. Vabishchevich, [1] Maxim R. Shcherbakov, [1] Tatyana V. Dolgova, [1] Andrey A. Fedyanin [1] Faculty of Physics, Lomonosov Moscow State University, Moscow, 119991, Russia
7:30 PM – 10:00 PM	Social event – Conference Banquet

July 18 (Friday)

9:00 AM – 12:00 PM	Registration
10:00 AM – 3:00 PM	Exhibition
10:00 AM – 12:00 PM	Oral sessions 01 – 11 (parallel)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

10:00 AM – 11:50 AM Location: B3	**Oral session** **Graphene Derivatives and Their Applications** Chairman: Professor Ernesto Joselevich
10:00 AM – 10:30 AM	*Invited lecture* **Synthetic Graphene Nanoribbons** [1] Alexander Sinitskii [1] Department of Chemistry and Nebraska Center for Materials and Nanoscience, University of Nebraska - Lincoln, Lincoln, NE 68588, USA
10:30 AM – 10:50 AM	**Graphene Oxide for Effective Radionuclide Removal from Aqueous Solutions** [1] Stepan Kalmykov, [1] Anna Romanchuk, [2] Alexander Slesarev, [2] James Tour [1] Lomonosov Moscow State University, Leninsky Gory, 1, bld. 3, Moscow, Russia [2] Rice University, MS-700 6100 Main St., Houston, TX 77005, USA
10:50 AM – 11:10 AM	**Fluorination of Isotopically Labelled Bilayer Graphene** [1] Johan Ek Weis, [1] Sara Costa, [1] Otakar Frank, [1] Martin Kalbac [1] J. Heyrovský Institute of Physical Chemistry, Dolejškova 3, CZ-18223 Prague 8, Czech Republic
11:10 AM – 11:30 AM	**Resistive Switching Nanostructures Based on Graphene Oxide** [1] Olesya Kapitanova, [2] Gennady Panin, [1] Andrey Baranov, [2] Tae Won Kang [1] Lomonosov Moscow State University, 1199992, Moscow, Russia [2] Dongguk University, 100715, Seoul, South Korea
11:30 AM – 11:50 PM	**Electrical Contacts in Graphene and Carbon Nanotube Transistors** [1] Vasili Perebeinos [1] Skolkovo Institute of Science and Technology, 100 Novaya st., Skolkovo, Moscow Region, 143025 Russia

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

10:00 AM – 12:00 PM Location: C1	**Oral session** Chairman: Professor Rostislav Andrievskii
10:00 AM – 10:30 AM	*Invited lecture* **Self-Sustained Exothermic Waves in Nanostructured Foils: Macroscopic Behavior, Reaction Mechanisms, Applications** [1] Alexander S. Rogachev [1] Instutute of structural macrokinetics and materials science (ISMAN), 142432 Russia, Chernogolovka, Moscow region, acad.Osipyana str., 8, Russia
10:30 AM – 11:00 AM	*Invited lecture* **Pulsed Electrospark Deposition of Functional Nanostructured Coatings** [1] Evgeny A. Levashov, [1] Evgeniya I. Zamulaeva, [1] Alexander E. Kudryashov [1] National University of Science and Technology «MISIS», Leninsky prospect, 4, Moscow, 119049, Russia
11:00 AM – 11:20 AM	**Study of Mechanical and Tribological Properties of Multinanolayer Ti/Al Coatings** [1] Marina Ya. Bychkova, [1] Mikhail I. Petrzhik, [1] Evgeny A. Levashov, [1] Philipp V. Kiryukhantsev-Korneev, [2] Petr A. Tsygankov [1] National University of Science and Technology «MISiS», 119049, Moscow, Leninskiy prospekt 4, Russia [2] Bauman Moscow State Technical University, 105005, Moscow, Baumanskaya 2-ya 5, Russia
11:20 AM – 11:40 AM	**From Ni/Ti Nano-Multilayers to Micro-Joints: A In-Situ Synchrotron Radiation Study** [1] André J. Cavaleiro, [1] A. S. Ramos, [2] F.M. B. Fernandes, [3] C. Baehtz, [4] N. Schell, [1] M. T. Vieira [1] DEM-FCTUC, Department of Mechanical Engineering, University of Coimbra, R. Luís Reis Santos, 3030-788 Coimbra, Portugal [2] CENIMAT/I3N, Department of Materials Science, Faculty of Sciences and Technology, University Nova de Lisboa, 2829-516 Caparica, Portugal [3] Helmholtz Zentrum Dresden Rossendorf HZDR, Institute of Ion Beam Physics and Materials Research, D-01314 Dresden, Germany [4] Helmholtz-Zentrum Geesthacht, Max-Planck-Str. 1, 21502 Geesthacht, Germany
11:40 AM – 12:00 PM	**Intrinsic Stresses in Thin Metal Films on Cu and Silica-Based Substrates** [1] Grigory P. Egorov, [1] Andrey A. Volkov [1] National Research Nuclear University "MEPhI", Kashirskoye shosse 31, Moscow, 115409, Russian Federation

Section 04 – Bulk Metallic Nanomaterials

10:00 AM – 12:00 PM Location: E1	**Oral session** Chairman: Professor Yuri Estrin
10:00 AM – 10:30 AM	*Invited lecture* **Microstructures and Mechanical Properties of Bulk Ultrafine Structured Al and Cu based Metal Matrix Nanocomposites Synthesized by Powder Metallurgy** [1] Deliang Zhang, [1] Xun Yao, [1,2] Dengshan Zhou, [1] Jiamiao Liang, [1] Yifeng Zheng [1] State Key Laboratory of Metal Matrix Composites, School of Materials Science and Engineering, Shanghai Jiao Tong University, 800 Dongchuan Road, Shanghai 200240, China [2] Waikato Centre for Advanced Materials, School of Engineering, The University of Waikato, Hamilton, New Zealand
10:30 AM – 11:00 AM	*Invited lecture* **Bulk Nanostructured Al Alloys with Improved Mechanical and Functional Properties** [1] Ilchat Sabirov [1] IMDEA Materials Institute, Getafe, Madrid, Spain
11:00 AM – 11:20 AM	**Fatigue Properties of Ultra-Fine Grained Al-Cu-Mg Alloy** [1] Elvira Khafizova, [1] Rinat Islamgaliev, [1] Vil Sitdikov [1] Ufa State Aviation Technical University, Karl Marks St 12, 450000 Ufa, Russia
11:20 AM – 11:40 AM	**Formation of Amorphous State in TiNiCu Alloy by High Pressure Torsion** [1] Viacheslav Yu. Slesarenko, [2] Dmitry A. Gunderov, [3] Askar R. Kilmametov, 1 Ruslan Z. Valiev [1] Saint Petersburg State University, 28 Universitetskiy pr., Saint Petersburg 198504 Russia [2] Institute of Physics of Advanced Materials, 12 K. Marx str., Ufa 450000 Russia [3] Institute of Nanotechnology, Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, Eggenstein-Leopoldshafen 76344 Germany
11:40 AM – 12:00 PM	**Transformation of the TiNi Alloy Microstructure Caused by Repeated Martensitic Transformations B2-B19'** [1] Anna Churakova, [1] Dmitry Gunderov, [1] Alexandr Lukyanov [1] Ufa State Aviation Technical university, K. Marks street, 12, Russia [2] Institute of Molecule and Crystal Physics RAS, Prospekt Oktyabrya, 71, Russia

Section 06 – Polymer, Organic and Other Soft Matter Materials

10:00 AM – 12:00 PM Location: C3	**Oral session** Chairman: Dr. Pavel A. Troshin
10:00 AM – 10:30 AM	*Invited lecture* **Chiral Polymer Crystals: Beyond Left and Right** [1,2] Dimitri A. Ivanov [1] Institut de Sciences des Matériaux, 15, rue Jean Starcky BP 2488 68057 Mulhouse cedex, Mulhouse, France [2] Faculty of Fundamental Physical and Chemical Engineering, Lomonosov Moscow State University, GSP-1, Leninskie Gory, 119991, Moscow, Russia
10:30 AM – 11:00 AM	*Invited lecture* **Organic Single-Crystal Devices: Addressing Intrinsic Transport Properties of Organic Semiconductors** [1] Vitaly Podzorov [1] Rutgers University, 136 Frelinghuysen Rd., Piscataway, NJ 08854 USA
11:00 AM – 11:20 AM	**Conjugated Polymer Self-Organization due to Charge-Transfer Complexation with Small-Molecule Acceptors** [1] Dmitry Paraschuk [1] Faculty of Physics & International Laser Center, Lomonosov Moscow State University, Moscow 119991, Russia
11:20 AM – 11:40 AM	**High Tunable Thermochromism in Polymer Donor-Acceptor Blends** [1] Olga D. Parashchuk, [1] Ilya V. Golovnin, [1] Vladimir V. Bruevich, [1] Dmity Yu. Paraschuk, [2] Igor F. Perepichka [1] Lomonosov Moscow State University, Leninskie Gory, 1, Russia [2] International Laser Center, Leninskie Gory, 1, bld 62, Russia [3] School of Chemistry, Bangor University, Bangor LL57 2UW, UK
11:40 AM – 12:00 PM	**Design of Photoswitchable Organic Field Effect Transistors for Organic Memory Applications** [1] Lyubov A. Frolova, [1] Alexander V. Mumyatov, [1] Diana K. Susarova, [1] Pavel A. Troshin [1] Institute of Problems of Chemical Physics RAS, Academician Semenov av. 1, Chernogolovka, Moscow region, 142432, Russia

Section 08 – Biological and Biomedical Nanomaterials

10:00 AM – 11:40 AM Location: C4	**Oral session** Chairman: Professor Tatiana K. Bronich
10:00 AM – 10:20 AM	**Aqueous Synthesis of Biocompatible Magnetite Nanocrystals with High Saturation Magnetization Values** [1] Carlos J. Serna, [1] Marzia Marciello, [1] Sabino Veintemillas-Verdaguer, [2] Manuel Andres-Verges, [1] M Puerto Morales [1] Instituto de Ciencia de Materiales de Madrid, ICMM/CSIC, Campus UAM, Madrid, Spain [2] bDepartamento de Química Orgánica e Inorgánica, Universidad de Extremadura, Badajz, Spain
10:20 AM – 10:40 AM	**CdSe/ZnS/CdS/ZnS Multishell Quantum Dots with a Fluorescence Quantum Yield Reaching 100%** [1] Pavel A. Linkov, [1] Pavel S. Samokhvalov, [1] Igor R. Nabiev [1] Laboratory of Nano-Bioengineering, National Research Nuclear University "Moscow Engineering Physics Institute", 115409 Moscow, Kashirskoe av. 31, Russian Federation
10:40 AM – 11:00 AM	**Interaction of Type I Collagen with TiO_2 Nanoparticles: Evidences of Changes of Supramolecular Organization in the Adsorbed Phase** [1] Degabriel Thomas, [1] Jolanda Spadavecchia, [1] Jessem Landoulsi, [1] Claire-Marie Pradier [1] UPMC, 3, rue Galilée 94200 IVRY SUR SEINE, France
11:00 AM – 11:20 AM	**SiOZO-plex: Complex of Mesoporous Nanoparticles of SiO_2-ZnO with DNA for Therapeutic Applications** [1,2] Vijay Bhooshan Kumar, [1] Yitzhak Mastai, [1] Aharon Gedanken, [2] Pradip Paik [1] Institute for Nanotechnology and Advanced Materials, Department of Chemistry, Bar-Ilan University, Ramat Gan 52900, Israel [2] School of Engineering Sciences and Technology, University of Hyderabad, Hyderabad 500046, A.P., India
11:20 AM – 11:40 AM	**Self-Assembly of Fatty Acids on Hydroxylated Aluminum Surface: Nanoscale Organization, Wettability and Effect on Protein Adsorption** [1] Jessem Landoulsi, [2] Irma Liascukiene, [3] Vincent Dupres, [1] Marie Steffenhagen, [1] Nesrine Aissaoui, [2] Joseph Asadauskas, [1] Jean-Franois Lambert [1] UPMC, F-75005, Paris, France [2] Pasteur Institute, Lille, France [3] State Research Institute Center for Physical Sciences and Technology, Vilnius, Lithunia

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

10:00 AM – 11:50 AM Location: E2	**Oral session** Chairman: Professor Leonid Chernozatonskii
10:00 AM – 10:30 AM	*Invited lecture* **Experimental and Theoretical Study of Physical-Mechanical Properties of Nanoresonators Based on Graphene and Nanowhiskers** [1,2] Alexander O. Golubok, [1,3] I. S. Mukhin, [4,5] I. E. Berinskii, [4,5] D. A. Indeitsev, [4,5] A. M. Krivtsov, [4] N. F. Morozov, [4,5] D. Yu. Skubov, [4,5] L. V. Shtukin [1] St. Petersburg National Research University of information technologies, mechanics and optics (ITMO University), Saint-Petersburg, Russia [2] Institute for Analytical Instrumentation RAS, Saint-Petersburg, Russia [3] St. Petersburg Academic University RAS, Saint-Petersburg, Russia [4] Institute for Problems in Mechanical Engineering RAS, Saint-Petersburg, Russia [5] St. Petersburg State Polytechnical University, Saint-Petersburg, Russia
10:30 AM – 10:50 AM	**Large-Area Gecko-Inspired Reversible Adhesives with Hierarchical Structure** [1] Vladimir A. Seleznev, [1] Victor Ya. Prinz, [1] Ivan A. Korneev [1] Institute of Semiconductor Physics, The Siberian Branch of Russian Academy of Sciences, Lavrent'ev Ave. 13, 630090 Novosibirsk, Russia
10:50 AM – 11:10 AM	**Mechanical Models of Nanocorrugated 3D Materials** [1] Victor Ya. Prinz, [1] Alexander V. Kopilov, [1] Alexander V. Prinz [1] Institute of Semiconductor Physics, The Siberian Branch of Russian Academy of Sciences, Lavrent'ev Ave. 13, 630090 Novosibirsk, Russia
11:10 AM – 11:30 AM	**On Refined Theory of Microstructure-Dependent Beams and Plates** [1] Sergey A. Lurie [1] Inst. of Appl. Mech. (RAS) and Inst. for Problems of Mech (RAS), Leningradskii pr. 7, 125040, Moscow, Russia
11:30 AM – 11:50 AM	**Influence of Defects on the State Switching Kinetics and Domain Structure in Quasi-One-Dimensional Nanosystems** [1] Boris V. Petukhov [1] Shubnikov Institute of Crystallography RAS, 119333 Moscow, Leninsky pr., 59, Russia

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

10:00 AM – 11:10 AM Location: F1	**Oral session** Chairman: Professor Edik U. Rafailov
10:00 AM – 10:30 AM	*Invited lecture* **Interaction of Plasmonic Nanostructures and Quantum System: Recent Results** [1] Arkadi Chipouline [1] Institute of Applied Physics, Friedrich-Schiller-University of Jena, Max-Wien-Platz 1, D-07743 Jena, Germany
10:30 AM – 10:50 AM	**Magnetic Size Effects in Mesoscopically Ordered Silicide Nanoislands** [1] Ilan Goldfarb, [1] Gil Markovich, [2] Wayne Kaplan [1] Tel Aviv University, Israel [2] Technion - Israel Institute of Technology, Israel
10:50 AM – 11:10 AM	**Ordered Arrays of Magnetic Nanowires Investigated by Polarized Small-Angle Neutron Scattering** [1] Thomas F. Maurer, [2] Sbastien Gautrot, [2] Frederic Ott, [2] Gregory Chaboussant, [3] Fatih Zighem, [4] Laurent Cagnon, [4] Olivier Fruchart [1] Universite de Technologie de Troyes-Laboratoire de Nanotechnologie et d'Instrumentation Optique, 12 rue Marie Curie, CS 42060, 10004 Troyes Cedex, France [2] LSPM, Institut Galilee, Universite Paris 13, 93430 Villetaneuse, France
12:00 PM – 2:00 PM	Lunch
2:00 PM – 4:30 AM	Plenary session. Closing ceremony Location: Lomonosov Building Conference Hall
2:00 PM – 2:45 PM	*Plenary lecture* **Building with Artificial Atoms: Programming the Assembly of Multi-Functional Nanocrystal Thin Films through Precise Control of Particle Size and Shape** [1] Christopher B. Murray, [1] Taejong Paik, [1] Xingchen Ye, [1] Benjanin T. Diroll, [1] Matteo Cargnello, [1] Elizabeth E. Gaulding, [1] Cherie R. Kagan [1] University of Pennsylvania, 231 South 34th Street, Philadelphia, PA 19104-6323 USA
2:45 PM – 3:30 PM	*Plenary lecture* **Polymeric Micelles for Drug Delivery** [1] Alexander Kabanov [1] Center for Nanotechnology in Drug Delivery, Eshelman School of Pharmacy, University of North Carolina at Chapel Hill, NC 27599, USA
4:00 PM – 4:30 PM	Closing ceremony

Poster session
July 14 (Monday)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp01.001	**Two-Dimensional Alignment and Patterning of Single-Walled Carbon Nanotubes Forest** [1] Ana P. Mousinho, [1] Ronaldo D. Mansano, [1] Nelson Ordonez [1] University of Sao Paulo, Avenida Luciano Gualberto, 158, trav 3, Sao Paulo - SP, Brazil
pp01.002	**Role of Nanotube Diameter in Atomic Oxygen Adsorption on the Surface of Carbon and Boron Nitride Nanotubes** [1] Ekaterina N. Voronina, [1] Lev S. Novikov [1] Lomonosov Moscow State University, Skobeltsyn Institute of Nuclear Physics, Leninskie Gory, Moscow, 119991, Russia
pp01.003	**Size Effects in Chiral Finite-Length Single-Walled Carbon Nanotubes** [1] Andrei V. Tuchin [1] Voronezh State University, 394006, Voronezh, Universitetskaya pl.1, Russia
pp01.004	**Antimicrobial Properties of Copper Oxide Nanoparticles** [1] Maribel G. Guzman, [2] Celine Rousse, [3] Jean Dille, [3] Stéphane Godet [1] Pontificia Universidad Catolica del Peru, Av. Universitaria 1801, Lima-32, Peru [2] UFR Sciences Exactes et Naturelles, BP 1039, 51687 Reims cedex 2, France [3] Université Libre de Bruxelles, CP 194/03, 50 Avenue Roosevelt, B-1050 Brussels, Belgium
pp01.005	**Characterization and Behavior of Ceria Nanoparticles in Aqueous Solutions** [1] Tatiana V. Plakhova, [1] Anna Yu. Romanchuk, [2] Vladimir K. Ivanov, [3] David K. Shuh, [1] Stepan N. Kalmykov [1] Lomonosov Moscow State University, 119991, Leninskie Gory 1, Moscow, Russia [2] Kurnakov Institute of General and Inorganic Chemistry of RAS, 117901, Leninskii prosp. 31, Moscow, Russia [3] Lawrence Berkeley National Laboratory, 94720, Cyclotron Rd 1, Berkeley, CA, USA
pp01.006	**Characterization of Metal Nanoparticles Obtained Using Plant Extracts** [1] Anna O. Dudnik, [1] Svetlana Makarova, [1] Valentine V. Makarov, [1] Natalia O. Kalinina, [1] Olga V. Sinitsyna, [1] Igor V. Yaminsky [1] Lomonosov Moscow State University, Leninsky Gory 1, Russia
pp01.007	**Characterization of Metal Oxides Aerosol Nanoparticles Produced by Spark Discharge Method** [1,2] Anna A. Lizunova, [1,2] Alexey A. Efimov, [1,2] Victor V. Ivanov [1] Moscow Institute of Physics and Technology, 141700, Dolgoprudnii, Russia [2] LLC RUSNANO Metrology Center, 117036, Moscow, Russia
pp01.008	**Control of Incorporated Nano Particles by Pulsed Plasma CVD In $Si_{1-x}Ge_x$ Thin Films** [1] Ayana Bhaduri, [2] Partha Chaudhuri [1] Amity School of Applied Sciences, Amity University Haryana, Gurgaon, NCR -122413 India [2] Energty Research Unit, Indian Association for the cultivation of Science, Jadavpur, Kolkata- 700032 India
pp01.009	**Cu@Ni Core-Shell Nanoparticle Applied to Conductive Paste** [1] Ching-Chang Lin, [1] Yuan-Che Lin, [2] Wen-Hsien Sun, [1] Ya-Lin Lin, [2] Jing-Wen Tang, [2] Jing-Heng Tien, [1] Fu-Hsiang Ko [1] Graduate Program for Nanotechnology, Department of Materials Science and Engineering, National Chiao Tung University, Taiwan, EF324, 1001 University Road, Hsinchu, Taiwan 300, ROC [2] Material and Chemical Research Laboratories, Industrial technology Research Institute, Hsinchu, Taiwan, 195, Sec. 4, Chung Hsing Rd., Chutung, Hsinchu, Taiwan 31040, ROC
pp01.010	**Development of Aerosol-Based Technique for Deposition of SiO_2 Nanoparticles with a Narrow Size Distribution on a Silicon Substrate** [1,2] Alexey A. Efimov, [1,2] Anna A. Lizunova, [1] Stepan V. Lisovsky, [1,2] Ivan A. Volkov, [1,2] Victor V. Ivanov [1] Moscow Institute of Physics and Technology, 9 Institutskiy per., Dolgoprudny, Russia [2] RUSNANO Metrology Center, 10A Prospekt 60-letiya Oktyabrya, Moscow, Russia
pp01.011	**Dichroic Reflectance and Transmittance of Glass-Metal Nanocomposite Modified by Femtosecond Laser Irradiation** [1,2] Semen Chervinskii, [3] Rokas Drevinskas, [3] Martynas Beresna, [2,4] Andrey A. Lipovskii, [3] Peter G. Kazansky [1] Institute of Photonics, University of Eastern Finland, P.O.Box 111 FI-80101 Joensuu, Finland [2] Institute of Physics, Nanotechnology and Telecommunications, St.Petersburg State Polytechnical University, 29 Polytechnicheskaya, 195251 St.-Petersburg, Russia [3] Optoelectronics Research Centre, University of Southampton, SO17 1BJ Southampton, UK [4] Department of Physics and Technology of Nanostructures, St.-Petersburg Academic University, 8/3 Khlopina Str, 194021 St.-Petersburg, Russia

pp01.012	**Effects of Mechanical Treatment on Phase Transformation of γ-Fe_2O_3 Powder** [1] Roman V. Lukashev, [1] Anastasia F. Alekova, [1] Svetlana K. Korchagina, [1] Fatima Kh. Chibirova [1] Karpov Institute of Physical Chemistry, 105064, pereulok Obuha, 3-1/12, 6, Moscow, Russia
pp01.013	**Fe_3O_4 Nanocolloids with High Heating Efficiency in Magnetic Hyperthermia** [1] Yury V. Kolen'ko, [1] Manuel Bañobre-López, [1] Dmitri Y. Petrovykh, [1] José Rivas [1] International Iberian Nanotechnology Laboratory, Av. Mestre José Veiga, 4715-330 Braga, Portugal
pp01.014	**Formation and Environmental Significance of PuO_{2+x}•nH_2O Nanoparticles** [1] Anna Romanchuk, [1] Alexander Egorov, [2] Yan Zubavichus, [1] Stepan Kalmykov [1] Lomonosov Moscow State University, Leninskie gory, 1 bld.3, Moscow, Russia [2] National Research Centre «Kurchatov Institute», Akademika Kurchatova pl. 1., Moscow, Russia
pp01.015	**Multifunctionality of the Super Thin Rare-Earth-Doped $GdVO_4$ Nanoparticles** [1] Dragana J. Jovanovic, [1] Tamara V. Gavrilovic, [1] Miroslav D. Dramicanin [1] Vinča Institute of Nuclear Sciences, University of Belgrade, P.O. Box 522, 11001 Belgrade, Serbia
pp01.016	**Nanoparticles Formation During Combustion of Biogas** [1] Mikhail V. Dutka, [2] Anatoliy A. Turkin, [1] David I. Vainchtein, [1] Jeff T. De Hosson [1] Department of Applied Physics, Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 4, 9747AG Groningen, The Netherlands [2] National Science Center, "Kharkiv Institute of Physics & Technology", Akademichna str. 1, UA-61108 Kharkiv, Ukraine
pp01.017	**Preparation and Characterization of a New Clustered Unmodified $\{C_{70}\}_n$ Fullerene Material** [1] Ivan V. Mikheev, [1] Ekaterina S. Khimich, [1] Dmitry S. Volkov, [1] Natalya V. Avramenko, [1] Mikhail A. Proskurnin, [1] Mikhail V. Korobov [1] Lomonosov Moscow State University, Leninskie gory 1-3, Russia
pp01.018	**Production of Carbide and Hard-Alloy Mixture Nanopowders with Low-Temperature Plasma** [1] Nataliya V. Isaeva, [1] Yuri V. Blagoveshchensky, [1] Nina V. Blagoveshchenskaya, [1] Yuri I. Melnik, [1] Andrey V. Samokhin, [1] Nikolay V. Alekseyev, [1] Aleksey G. Astashov, [1] Inessa Pakhilo-Dar'yal [1] Baykov Institute of Metallurgy and Material Science, Leninskiy pr. 49, Russia
pp01.019	**Simple Hydrothermal Preparation of Porous Materials from a Natural Leucoxene Mineral** [1] Roman V. Lukashev, [1] Alexander N. Maslennikov, [1] Konstantin L. Zanaveskin, [1] Svetlana M. Zanaveskina [1] Karpov Institute of Physical Chemistry, 105064, pereulok Obuha, 3-1/12, 6, Moscow, Russia

pp01.020	**Solution Combustion Synthesis of Highly Porous Nickel: Study of Reaction Mechanism** [1] Sergei Rosliakov, [2] Alexander Rogachev, [3] Alexander Mukasyan [1] National University of Science and Technology "MISIS", Leninskiy prospekt 4, Russia [2] Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences (ISMAN), Chernogolovka, Moscow Region, Acad. Osipyan street 8, Russia [3] Department of Chemical and Biomolecular Engineering, University of Notre Dame, Notre Dame, IN, USA
pp01.021	**Synthesis and Characterization of Aluminum Nanoparticles with Customized Coatings Manufactured via the Flow-Levitation Method** [1] Nadezda G. Berezkina, [1] Alexey N. Zhigach, [1] Ilya O. Leipunsky, [1] Mikhail L. Kuskov, [1] Elena S. Afanasenkova, [1] Boris V. Kudrov, [2] Guido W. Lopez [1] Talrose Institute for Energy Problems of Chemical Physics, Leninsky prosp., 38, bld.2., Moscow, 119334 Russia [2] College of Professional Studies, Northeastern University, U.S.A, Boston, MA 02115, U.S.A
pp01.022	**Synthesis and Study of Zn Ultrafine Particles, Manufactured via the Flow-Levitation Method** [1] Nadezda G. Berezkina, [2] Dmitriy N. Khmelenin, [2] Victoria G. Zhigalina, [2] Olga M. Zhigalina, [1] Sergey A. Gorbatov, [1] Elena S. Afanasenkova, [1] Mikhail L. Kuskov, [1] Ilya O. Leipunsky, [1] Alexey N. Zhigach, [3] Guido W. Lopez [1] Talrose Institute for Energy Problems of Chemical Physics, Leninsky prosp., 38, bld.2., Moscow, 119334 Russia [2] Shubnikov Institute of Crystallography, Leninsky prosp., 59, Moscow, 119333 Russia [3] College of Professional Studies, Northeastern University, Boston, MA 02115, U.S.A
pp01.023	**Synthesis of Mg,Al-Layered Double Hydroxides and Their Application in Chemical Analysis** [1] E. V. Bulatova, [1] M. S. Mahanova, [1] E. V. Sevastyanova, [1] Yu. Yu. Petrova [1] Surgut State University, 1 Lenina St., 628400 Surgut, Russia
pp01.024	**The Integrated Approach in Characterization of Dispersity of Nanopowders Produced in Plasma-Chemical Reactor** [1] Mikhail A. Sinaiskiy, [1] Andrey V. Samokhin, [1] Nikolay V. Alexeev, [1] Yury V. TSvetkov [1] Baikov IMET RAS, 119991, Leninskiy prospect, 49, Russia
pp01.025	**The Restructure of PrF_3 and LaF_3 Nanoparticles by Microwave Irradiation** [1] Egor Alakshin, [1] Alexander Klochkov, [1] Stella Korableva, [1] Timur Safin, [1] Kajum Safiullin, [1] Murat Tagirov [1] Kazan Federal University, Kremlyovskaya 18, Russia
pp01.026	**Properties of Hydrosols TiO_2** [1] Marina Soderginova, [1] Dzemma Tarasova, [1] Fatima Chibirova [1] Karpov Institute of Physical Chemistry, 105064, Obukha lane, 3-1/12, Russia

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

12:00 PM – 2:00 PM	Poster session
pp02.001	**Influence of Thermal Annealing on the Properties of Zinc Nitride Thin Films Deposited by RF-Magnetron Sputtering** [1] Ronaldo D. Mansano, [1] Larissa R. Damiani [1] University of Sao Paulo, Av. Prof. Luciano Gualberto, 158 - Sao Paulo, Brazil
pp02.002	**Physics and Applications of Nanostructures and Nanomaterials** [1] M.S. Ramachandra Rao [1] Nano Functional Materials Technology Centre, MSRC and Department of Physics, Indian Institute of Technology Madras, Chennai 600036, India
pp02.003	**A New Nanotech Computational Experiment: Data Mining for Modeling, Creation of Knowledge Base, and Presentation** [1] Victor S. Abrukov, [1] Valery D. Kochakov, [1] Sergey V. Abrukov, [1] Alexander V. Smirnov [1] Chuvash State University, Moscovsky pr., 15 Cheboksary, 428015, Russia
pp02.004	**A Novel Dual Action Tunable Antimicrobial Silver-Containing Biocomposite** [1] Tatiana S. Priamushko, [1] Anna Ivanova, [2] Kateryna Loza, [2] Oleg Prymak, [2] Matthias Epple, [1] Maria A. Surmeneva, [1] Timur Mukhametkaliyev, [1] Roman A. Surmenev [1] National Research Tomsk Polytechnic University, 634034 Tomsk, Lenine prospect, 30, Russia [2] Inorganic Chemistry and Center for Nanointegration Duisburg-Essen (CeNIDE), University of Duisburg-Essen, 45117 Essen, Germany
pp02.005	**Application of Fractal Analysis for Estimation of Morphological and Physical Properties of Nanostructured Materials** [1] Anton N. Boyko, [2] Dahir S. Gaev, [1] Sergei P. Timoshenkov [1] National Research University of Electronic Technology, Bld. 5, Pas. 4806, Zelenograd, Moscow, 124498 Russia [2] Kabardino-Balkarian State University, KBSU, 173 Chernyshevskogo St., Nalchik, Kabardino-Balkarian Republic, 360004 Russia
pp02.006	**Comparative Analysis of Oxidation Rate of Amorphous Alloys Based on Iron and Cobalt with Different Crystallization Ratio** [1] Aleksandr V. Stryukov, [1] Pavel A. Gamov, [1] Yekaterina V. Sharlay, [1] Anton V. Roshchin [1] South Ural State University (National Research University), 76, Lenin prospekt, Chelyabinsk, 454080 Russia
pp02.007	**Current Flow Imaging in Nanoscale Range by Use of Magnetic Force Microscopy** [1] Maxim A. Osipov, [1] Igor A. Rudnev, [1] Alexey P. Menushenkov, [1] Alexey I. Podlivaev, [1] Sergey V. Pokrovskiy, [1] Arseniy O. Baskakov [1] National Research Nuclear University MEPhI, Kashirskoe shosse 31, Moscow 115409 Russia

pp02.008	**Design of Nanostructured Pd-Containing Membranes for H_2 Purification by MOCVD Technique** [1] Evgeniia S. Vikulova, [1] Tatyana P. Koretskaya, [1] Boris M. Kuchumov, [1] Yuri V. Shevtsov, [1] Nataliya B. Morozova, [1] Igor K. Igumenov [1] Nikolaev Institute of Inorganic Chemistry, Siberian Branch of the Russian Academy of Sciences, Acad. Lavrentiev Ave., 3, Novosibirsk, 630090, Russian Federation
pp02.009	**Nanoengineering of the High Biocompatible Surface Layers for Cardiac and Vascular Implants with Use of the Ion-Plasma Technologies** [1] Ludmila L. Meisner, [1] Alexander I. Lotkov, [1] Stanislav N. Meisner, [1] Assolya V. Tverdochlebova [1] Institute of Strength Physics and Materials Science SB RAS, pr. Akademichesky 2/4, Tomsk, Russia [2] Tomsk state university, pr. Lenina 36, Tomsk, Russia
pp02.010	**Investigation of Nanolayers by Glow Discharge Optical Emission Spectroscopy** [1] Philipp V. Kiryukhantsev-Korneev [1] National University of Science and Technology «MISIS», Leninsky pr, 4, Russia
pp02.011	**Local Modification of the GaAs Surface Potential and Profile with AFM Tip** [1] Pavel N. Brunkov, [1] Alexander V. Baklanov, [1] Andrei A. Gutkin, [1] Nikolay A. Kalyuzhnyy, [2] Elena V. Vaschenko [1] Ioffe Physical-Technical institute, 194021, Saint Petersburg, Russia [2] University ITMO, 197101, Saint Petersburg, Russia
pp02.012	**Monte Carlo Simulation of Heteroepitaxy in Stranski-Krastanow Growth Mode** [1] Sergey A. Rudin, [1] Alexey V. Nenashev, [1] Vladimir A. Zinov'ev, [1] Artem Y. Polyakov, [1] Zhanna V. Smagina, [1] Anatoly V. Dvurechenskii [1] Rzhanov Institute of Semiconductor Physics, Siberian Branch, Russian Academy of Sciences, pr. Akademika Lavrent'eva 13, Novosibirsk, 630090, Russia
pp02.013	**Photon Annealing Impact on the Surface Properties of the Nanostructured Porous Aluminium Oxide Films** [1] Nikolai E. Shubin, [1] Eugeny N. Kozyrev, [1] Igor N. Goncharov, [1] Roman O. Fskerov [1] The North Caucasian Institute of Mining and Metallurgy (The State Technological University), 362021, RSO-Alania, t. Vladikavkaz, st. Nikolaev 44, SKGMI (GTU) «Sustainable development of mountain regions», Russia

pp02.014	**RF-Magnetron Sputtering Setup for the Formation of Nanostructured Bio-compatible Coatings on Ceramic and Metal Medical Implants** [1] Ksenia S. Kulyashova, [1] Sharkeev P. Yurii, [2] Rau G. Alexander, [1] Glushko A. Yurii, [2] Romanov Ya. Vasilii, [1] Belyavskaya A. Olga, [3] Salimi G. Konstantin [1] Institute of Strength Physics and Materials Science of the Siberian Branch of the Russian Academy of Sciences (ISPMS SB RAS), 634021, Tomsk, pr. Akademicheskii, 2/4, Russia [2] TETA Ltd, 634526, Tomsk, Loskutovo, st. Sovetskaya, 1/2, Russia [3] BMTechnology, 115201, Moscow, 2-nd Kotyakovskii pereulok, 18 of. 224, Russia
pp02.015	**Synthesis of Co/Pd and Fe/Pd Multilayered Nanorods and Antidots Arrays on Anodic Aluminium Oxide Templates** [1] Alexey A. Maximenko, [1] Yevhen A. Zabila, [1] Arkadiusz Zarzycki, [1] Marcin Perzanowski, [1] Michal Krupinski, [1] Malgorzata Kac, [1] Marta Marszalek, [2] Julia A. Fedotova, [3] Momir Milosavljevic [1] The Henryk Niewodniczanski Institute of Nuclear Physics Polish Academy of Sciences, 31-342 Cracow, Poland [2] National Centre for Particle and High Energy Physics of Belarusian State University, 220030 Minsk, Republic of Belarus [3] VINCA Institute of Nuclear Sciences, P.O. Box 522 11001 Belgrade, Serbia
pp02.016	**$Ti_{1-x}Ag_x$ Electrodes Deposited on Polymer Based Sensors for Biomedical Applications** [1] Sandra Carvalho, [1] Sandra M. Marques, [2] Noora Manninen, [1] Senentxu Lanceros-Mendez, [2] Albano Cavaleiro [1] University of Minho, Campus de Azurem, 4800-058 Guimaraes, Portugal [2] University of Coimbra, 3030-788 Coimbra, Portugal
pp02.017	**The Mass Transfer Methods of Determination the Properties of Nanohetero-structural Formations** [1] Arystan Sarsenov, [1] Sataeva Gulzipa, [1] Aganina Gulnur, [1] Orynbasar Zhakan, [1] Alzhanov Marden, [1] Kuralbayeva Galiya [1] Eurasian national university, Astana, Kazhymukhan street, 13, Kazakhstan

Section 03 – Nanoceramics

12:00 PM – 2:00 PM	Poster session
pp03.001	**Nanostructuring and Strengthening Ceramic TiN Coatings by Adding in Their Contents Ni** [1] Igor V. Blinkov, [1] Dmitry S. Belov, [1] Alexey O. Volhonskiy, [1] Tatyana F. Petrova, [1] Alena M. Sergacheva, [1] Dmitry I. Arhipov [1] National University of Science and Technology «MISIS», Moscow, Leninskiy prospect, 4, Russia
pp03.002	**About the Use of Metallic Nanoparticles to Produce Optical Iridescent Effects on Ceramics at Renaissance** [1] Giuseppina Padeletti, [2] Paola Fermo [1] Institute of Nanomaterials Research of the Italian National Research Counci, 1-PO Box 10, 00016 Monterotondo Staz., Rome, Italy [2] Dipartimento di Chimica, Via Venezian, 21, 20133 Milano, Italy
pp03.003	**Nanostructured Materials Based on $Y(Ba_{1-x}Be_x)_2Cu_3O_{7-\delta}$** [1] Dair K. Palchaev, [1] Sultanahmed H. Gadjimagomedov, [1] Murtazali H. Rabadanov, [1] Jariyat H. Murlieva, [1] Mislimat P. Faradzheva [1] Dagestan state university, Gadjieva street, 43a, Russia
pp03.004	**Nanostructuring Effects in Perovskite-Related MIEC Oxides Based on $Sr(Co,Fe)O_{3-d}$** [1] Irina V. Belenkaya, [1] Alexander P. Nemudry [1] Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Kutateladze street, 18, Russia
pp03.005	**Raman Scattering Study of $Bi_{1-x}M_xFeO_{3-\delta}$ (M=Ca, Sr, Pb) Solid Solutions** [1] Vasiliy G. Trotsenko [1] Southern Federal University, 105/42 Bolshaya Sadovaya Str., Rostov-on-Don, 344006, Russia
pp03.006	**Sol-Gel Synthesis of Porous Powder $Y_3Al_5O_{12}$** [1] Nikolay P. Simonenko, [1] Elizaveta P. Simonenko, [1] Vladimir G. Sevastyanov, [1] Nikolay T. Kuznetsov [1] Kurnakov Institute of General and Inorganic Chemistry of the Russian Academy of Sciences, 31 Leninsky prospect, Moscow 119991, Russia

Section 04 – Bulk Metallic Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp04.001	**High Strength Nanostructured Ti Based Low Alloys Containing Inexpensive Alloying Elements** [1] Vladislav Yu. Zadorozhnyy, [2] Dmitri V. Louzguine-Luzgin, [1] Daria V. Strugova [1] National University of Science and Technology (MISIS), 119049, Moscow, Leninskiy prospekt 4, MISiS, Russia [2] WPI Advanced Institute for Materials Research, Tohoku University, Katahira 2-1-1, Aoba-Ku, Sendai 980-8577, Japan
pp04.002	**Evolution of Grain and Second Phase Structures in Mg-6Zn-0.6Zr Alloy Under Multistep Isothermal Forging** [1] Oksana E. Mukhametdinova, [1] Dayan R. Nugmanov, [1] Oleg Sh. Sitdikov, [1] Michail V. Markushev [1] Institute for metals superplasticity problems of Russian academy of sciences (IMSP RAS), Ufa, Khalturin str., 39, Russia
pp04.003	**Formation of Ultrafine-Grained Structure During Abc-Pressing of TiNi-Based Alloy** [1] Oleg A. Kashin, [1] Alexandr I. Lotkov, [1] Viktor N. Grishkov [1] Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences; (ISPMS SB RAS), 2/4 Academicheskii pr., Tomsk, 634021, Russia
pp04.004	**A Novel Nanostructured Aluminium Alloy with High Carbon Content** [1] Roman V. Muradymov, [1] Ludmila A. Yolshina, [1] Sergei V. Plaksin, [1] Vyacheslav B. Malkov [1] Institute of High-Temperature Electrochemistry Urals Branch of Russian Academy of Sciences, Akademicheskaya str., 20, Ekaterinburg, 620990 Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp05.001	**Sinter Ageing of Nanocrystalline Equiatomic Al-Co-Ni-Cu Zn High Entropy Alloy** [1] Sutanuka Mohanty, [1] Nilesh P. Gurao, [1] Krishanu Biswas [1] Indian Institute of Technology Kanpur, Western Lab - 210, Solidification and nanomaterials Lab, Department of Material Science and Engineering, IIT Kanpur, Kanpur - 208016, Uttar Pradesh, India
pp05.002	**ZnO Nanorods-CuO Composite Nanostructures** [1] Khabibula A. Abdullin, [1] Daniyar V. Ismailov, [1] Janar K. Kalkozova, [2] Serik E. Kumekov, [1] Timur E. Nurmamytov, [2] Lesya V. Podrezova [1] National Nanotechnological Laboratory Open Type Al-Farabi KazNU, Almaty, Kazakhstan [2] Satpaev Kazakh National Technical University, Almaty, Kazakhstan
pp05.003	**Hybrid Structures Based on Multilayer Graphene and CdSe-ZnS Quantum Dots for Ammonia Vapor Detection** [1, 2] Andrei V. Alaferdov, [3] Yulia A. Gromova, [1] Victor A. Ermakov, [3] Anatoly V. Fedorov, [3] Alexander V. Baranov, [3] Anna O. Orlova, [1] Alfredo R. Vaz, [1] Mara A. Canesqui, [1] Stanislav A. Moshkalev [1] Center for Semiconductor Components - State University of Campinas, State University of Campinas, Campinas, Sao Paulo 13083-870, Brazil [2] Lobachevsky State University of Nizhni Novgorod, Nizhni Novgorod, Gagarine Av. 23/3, 603950, Russia [3] Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint Petersburg, 197101, Russia
pp05.004	**A Chemical Route for Synthesis of Pb-In Alloy Nanoparticles** [1] Manolata Devi Mayanglambam, [1] Krishanu Biswas [1] Indian Institute of Technology, Department of Materials Science and Engineering, Kanpur, India
pp05.005	**Nanocomposites Based on Co, Ni, Mo and W Oxides Obtained by Wet Methods** [1] Klara V. Kotsareva, [1] Elena A. Trusova [1] A.A. Baikov Institute of Metallurgy and Materials Science, RAS, 119991, Leninsky pr. 49, Moscow, Russia
pp05.006	**Growth of CdS Nanoparticles in Silicate Glass** [1] Yulia V. Kuznetsova, [1] Andrey A. Rempel, [2] Andreas Magerl [1] Institute of Solid State Chemistry, Ural Branch of the Russian Academy of Sciences, Pervomaiskaya 91, 620990 Ekaterinburg, Russia [2] Crystallography and Structural Physics, University of Erlangen-Nuremberg, Staudtstrasse 3, D-91058 Erlangen, Germany

pp05.007	**Microwave-Assisted Hydrothermal Synthesis of Layered $Y_2(OH)_5(NO_3)\cdot XH_2O$** [1] Alexey Yapryntsev, [2] Alexander Baranchikov, [1] Olga Boytsova, [2] Vladimir Ivanov [1] Lomonosov Moscow State Univesity, Moscow 119991, Russia [2] Institute of General and Inorganic Chemistry, Moscow 119991, Russia
pp05.008	**Obtaining and Optical Properties of Lamellar GaSe-ZnSe Nanocomposites** [1] Dumitru Untila, [2] Valeriu Cantser, [1] Silvia Evtodiev, [3] Iuliana Caraman, [4] Liviu Leontie [1] Moldova State University, A. Mateevici, 60, MD-2009 Kishinev, Republic of Moldova [2] Academy of Sciences of Moldova, Academiei, 3/3, MD-2028, Kishinev, Republic of Moldova [3] Vasile Alecsandri University of Bacau, Calea Marasesti 157, Bacau, 600115, Romania [4] Alexandru Ioan Cuza University of Iasi, Bul. Carol I, Nr. 11, 700506 Iasi, Romania
pp05.009	**Bionanocomposites of Cellulose with Silica Prepared through Solubilization and Sol-Gel Transition** [1] Oleg N. Khlebnikov, [1] Yury A. Shchipunov [1] Institute of Chemystry Far East Branch Russian Academy of Science, pr.100 let Vladivostoku, 159, Russia
pp05.010	**The Preparation of Nano Fe_3O_4/Bentonite Composite and Its Adsorptive Study** [1] Xiaodan Hu, [1] Zhiwei Zhou, [1] Haiqian Zhang, [1] Xiaohong Zhang [1] College of Material Science and Technology, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, P.R. China
pp05.011	**Self-Assembly of Nanocomposite Free-Standing Planar Nanostructures in Colloidal Solution of Magnetite Nanoparticles and Biogenic Polyamines** [1] Gennady B. Khomutov, [1] Kirill V. Potapenkov, [1] Yury A. Koksharov [1] Lomonosov Moscow State University, Faculty of Physics, Lenin Gory 1-2, Moscow, Russia
pp05.012	**Properties of PMMA-MWNT and PMMA-C_{60} Composites as Revealed by NEXAFS Spectroscopy, MS and Quantum Chemistry** [1] Maria Brzhezinskaya, [2] Eugen Baitinger, [3] Alexander Pushkarchuk, [4] Alexei Pozdnyakov [1] Helmholtz-Zentrum Berlin, 12489 Berlin, Germany [2] Bundesanstalt für Materialforschung und -prüfung, Berlin, Germany [3] Institute of Physical Organic Chemistry NASB, Minsk, Belarus [4] Ioffe Physico-Technical Institute RAS, St. Petersburg, Russia
pp05.013	**New Hybrid Materials Prepared by MVS** [1] Edgar E. Kamitov, [2] Margarita S. Rubina, [2] Dmitrii A. Aparshov, [2] Alexander V. Naumkin, [2] Yan V. Zubavichus, [1] Albina A. Gallyamova, [2] Alexander Y. Vasil'kov [1] M.V. Lomonosov Moskow State University, 119992 Moscow, Russian Federation [2] A.N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, 119991 Moscow, Russian Federation

pp05.014	**Nanocomposite Films Based on Chitosan and Chitin Nanofibrils** [1] Galina Tishchenko, [1] Libor Kobera, [1] Michal Pekarek, [1] Jana Mikesova, [1] Jana Kovarova, [1] Libuse Brozova, [1] Ludmila Kapralkova, [2] Jindrich Hasek, [1] Ewa Pavlova, [3] Francesco Carezzi, [3] Pierfrancesco Morganti, [1] Ivan Kelnar, [4] Zdenek Bastl [1] Institute of Macromolecular Chemistry AS CR, v.v.i, Heyrovsky Sq. 2, 16206 Prague 6, Czech Republic [2] MAVI SUD S.r.l, Viale del Industria 1, 04011 Aprilia (LT), Italy [3] J. Heyrovský Institute of Physical Chemistry AS CR, v.v.i, 18223 Prague, Czech Republic [4] Institute of Biotechnology AS CR, v.v.i, Prague, Czech Rerpublic
pp05.015	**Composite Systems Based on Cellulose as Carbon Fiber Precursors** [1] Igor S. Makarov, [1] Ludmila K. Golova, [1] Ivan Yu. Skvortsov, [1] Valery G. Kulichikhin [1] A.V.Topchiev Institute of Petrochemical Synthesis, RAS, 119991, Moscow, Leninsky prospekt, 29, Russia
pp05.016	**Composite Capsules with Nanosized Crystalline Particles Doped by Er^{3+}, Yb^{3+} Ions for Biomedical Applications** [1] Svetlana A. Antoshkina, [1] Polina A. Ryabochkina, [2] Alexander S. Vanetsev, [3] Sergey N. Ushakov, [4] Gleb B. Sukhorukov, [5] Natalie Yu. Tabachkova [1] Ogarev Mordovia State University, 68 Bolshevistskaya Str., Saransk 430005, Republic of Mordovia, Russia [2] Institute of Physics, University of Tartu, Riia 142, Tartu, Estonia [3] Prokhorov Institute of General Physics RAS, Vavilov Street 38, Moscow, Russia [4] School of Engineering and Materials Science, Queen Mary, University of London, London, E1 4NS, UK [5] National University of Science and Technology MISiS, Lenin Avenue 4, Moscow, Russia
pp05.017	**Chitosan-Clay Bionanocomposite Films Formed Through Self-Organization** [1] Sergey A. Sarin, [2] Sophia A. Kolesnikova, [3] Irina V. Postnova, [1] Yury A. Shchipunov [1] Institute of Chemistry of Far Eastern- Branch of Russian Academy of Sciences, 690022, 159, Prosp. 100-letya Vladivostoka, Vladivostok, Russia [2] G.B. Elyakov Pacific Institute of Bioorganic Chemistry, Far East Department, RAS, 690022, 159, Prosp. 100-letya Vladivostoka, Vladivostok, Russia [3] Far Eastern Federal University, the School of Natural Sciences, Vladivostok, Russia
pp05.018	**Surface Characteristics of Contemporary Dental Restorative Resin-Based Nanofilled and Microhybrid Composites – AFM and SEM Study** [1] Tijana Lainović, [1] Larisa Blažić, [2] Marko Vilotić, [2] Dragan Kukuruzović, [2] Damir Kakaš [1] Faculty of Medicine, School of Dentistry, University of Novi Sad, Hajduk Veljkova 3, 21000 Novi Sad, Serbia [2] Faculty of Technical Sciences, University of Novi Sad, Trg Dositeja Obradovića 6, 21000 Novi Sad, Serbia

Section 06 – Polymer, Organic and Other Soft Matter Materials

12:00 PM – 2:00 PM	Poster session
pp06.001	**Collapse of Polyelectrolyte Microgel Induced by Oppositely Charged Surfactants** [1] Artem M. Rumyantsev, [1] Elena Yu. Kramarenko [1] Lomonosov Moscow State University, Leninskie Gory, 1, Russia
pp06.002	**Investigation of Dynamic Modulus and Normal Force of Magnetorheological Elastomers with Soft and Hard Magnetic Fillers** [1] Vladislav V. Sorokin, [2] Gennady V. Stepanov, [3] Viktor G. Vasiliev, [1, 3] Elena Yu. Kramarenko, [4] Matthias Mayer, [4] Mikhail Shamonin, [4] Gareth J. Monkman [1] Lomonosov Moscow State University, Physics Department, 119992, Moscow, Russia [2] State Institute for Chemistry and Technology of Organoelement Compounds, 105118, Moscow, Russia [3] A.N. Nesmeyanov Institute for Organoelement Compounds RAS, 119991, Moscow, Russia [4] East Bavarian Centre for Intelligent Materials (EBACIM), OTH-Regensburg, Germany
pp06.003	**Monte Carlo Computer Simulation of Multiblock-Copolymers Consisting of Flexible and Semiflexible Blocks** [1] Viktor A. Ivanov, [1] Julia A. Martemyanova, [1] Sergey V. Zablotsky, [2] Wolfgang Paul [1] Lomonosov Moscow State University, Moscow, 119991 Russia [2] Martin-Luther-University Halle Wittenberg, Halle (Saale), 06099 Germany
pp06.004	**Functionalized Carbon Nanotubes for Removal of Dissolved Organic Content from Drinking Water Supplies** [1] Andy Nguyen, [1] William N. Payne, [1] James E. Amburgey, [1] Jordan C. Poler [1] University of North Carolina at Charlotte, 9201 University City Blvd. Charlotte NC 28223 USA
pp06.005	**Nanoscale Structural Characterization and Functional Modeling of Damaged Myelin Sheaths in Human Brain Caused by Neurological Diseases** [1] Pavel R. Kazanskiy, [2] Natalia Uranova, [1] Vladimir Shklover [1] LLC Systems for Microscopy and Analysis, Moscow region, Skolkovo, st. Novaya, d.100, building "Ural", Russia [2] Mental Health Research Center, Mental Health Research Center, Zagorodnoe shosse 2, Moscow 117152, Russia
pp06.006	**Synthesis and Characterization of a Novel Carborane Based Polymeric Material** [1] Baris Karabay, [1] Atilla Cihaner [1] Atilim University, Ankara, Turkey

pp06.007	**The Synthesis and Characterization of Well Defined Soluble Branched Polymers** [1] Cansel Tuncer, [1] Vural Butun [1] Eskisehir Osmangazi University, Eskisehir, Department of Chemistry, Faculty of Arts and Science, 26480, Eskisehir, Turkey

Section 07 – Nanomaterials for Energy

12:00 PM – 2:00 PM	Poster session
pp07.001	**Piezoelectric Properties of ZnO Nanowires for Mechanical Energy Harvesting: An Ab-Initio Study** [1] Giancarlo Cicero, [2] Korir K. Kipronoh, [3] Alessandra Catellani [1] Politecnico di Torino - DISAT, I-10129 Torino, Italy [2] CNR-IMEM, 1-431100 Parma, Italy [3] CNR-NANO, Istituto Nanoscienze, Centro S3, I-41125 Modena, Italy
pp07.002	**Tunable Pore Volume in Pillared Solids** [1] Ana A. Lemus, [2] Leslie Reguera, [1] Osiry Hernandez, [1] Edilso Reguera [1] Instituto Politecnico Nacional, Calzada Legaria Num. 694. Col. Irrigacion Delegacion Miguel Hidalgo D.F. Mexico [2] Facultad de Quimica. Universidad de la Habana, Vedado 10400 La Habana, Cuba
pp07.003	**The Fabrication of Integrated Micro Power Fuel Cells on Silicon Nanochips** [1] Nicolay A. Yashtulov, [2] Lev N. Patrikeev, [3] Alexandra A. Revina [1] National Research University "Moscow Power Engineering Institute", Krasnokazarmennaya, 14, Russia [2] National Research Nuclear University "MEPhI", Kashirskoye shosse, 31, Russia [3] A.N. Frumkin Institute of Physical Chemistry and Electrochemistry RAS, Leninsky prosp., 31, Russia
pp07.004	**The Effect of Polybenzimidazoles on Dissolution of Pt Nanoparticles in a Fuel Cell Environment** [1] Mikhail S. Kondratenko, [1] Marat O. Gallyamov, [1] Galina A. Tsirlina [1] Lomonosov Moscow State University, Moscow, Leninskie gori, 1 119991 Russia
pp07.005	**Polyacrylonitrile-Based Electrospun Carbon Nanofibers as Electrodes for Polymer-Electrolyte Membrane Fuel Cells** [1] Kirill Skupov, [1] Dmitry Y. Razorenov, [1] Ivan I. Ponomarev, [2] Viktoriya G. Zhigalina, [2] Nikolay A. Kiselev, [1] Igor I. Ponomarev [1] Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences, 28 Vavilova St., Moscow, 119991, Russia [2] Shubnikov Institute of Crystallography of Russian Academy of Sciences, 59 Leninsky Av., Moscow, 119333, Russia
pp07.006	**Potential-Deposition Controlled Microstructure of Pd Electrodeposits on Various Gold Supports** [1] Eduard E. Levin [1] Lomonosov Moscow State University, Leninskie Gory 1-3, Russia

pp07.007	**Nanosized Pt-Nb-CMK3 Composite Systems as High Durability Electrocatalysts for Oxygen Reduction Reaction in PEM Fuel Cells** [1] Elisabetta Masolo, [1] Valentina Guccini, [1] Sebastiano Garroni, [1] Gabriele Mulas, [1] Francesca Piras, [2] Marialaura Lucariello, [3] Irene Gatto, [4] Eva Pellicer, [4] Dolors Barò [1] University of Sassari, Via Vienna 2 , 07100 Sassari, Italy [2] Sardegna Ricerche, Laboratorio Tecnologie Solari a Concentrazione e Idrogeno da FER VI Strada Ovest Z.I. Macchiareddu 09010 Uta (CA), Italy [3] Universitat Autònoma de Barcelona, Departament de Física, E-08193 Bellaterra, Spain [4] CNR-ITAE, Via S.Lucia sopra Contesse 5, 98126 Messina, Italy
pp07.008	**In-Situ XAS and XRD Study of Thermal Decomposition of $Mn(BH_4)_2$** [1] Ilya A. Pankin, [1] Alexander A. Guda, [1] Kirill A. Lomachenko, [1] Aram L. Bugaev, [2] Vladimir P. Dmitriev, [1] Alexander V. Soldatov [1] Southern Federal University, Rostov-on-Don, 344090 Russia [2] ESRF/SNBL, Grenoble, Cedex 9, France
pp07.009	**Activated Aluminium as Nanostructured Material for Hydrogen Cartridges** [1,2] Alexandr I. Nizovskii, [1] V. I. Bukhtiyarov, [2] R. A. Senin, [2] A. S. Khlebnikov, [2] A. A. Chernyshov, [3] M. V. Trenikhin, [2] A. A. Veligzhanin, [4] V. V. Novikov, [1] A. V. Kalinkin, [2] Yan V. Zubavichus [1] Boreskov Institute of Catalysis, Siberian Branch of RAS, pr. Lavrentieva 5, Novosibirsk, 630090, Russia [2] National Research Center "Kurchatov Institute", Akademika Kurchatova pl. 1, Moscow, 123182, Russia [3] Omsk State Technical University, Omsk, Russia [4] Institute of the Problems of Hydrocarbon Processing, Siberian Branch of RAS, Omsk, Russia
pp07.010	**A Facile Route to Monodisperse Copper-Silver (CuAg) Alloy Nanoparticles and Their Catalysis in Hydrogen Generation from the Hydrolysis of Ammonia-Borane** [1] Kübra Güngörmez, [1] Melike Sevim, [1] Önder Metin [1] Atatürk University, Department of Chemistry, Faculty of Science, Atatürk University, 25240 Erzurum, Turkey

Section 08 – Biological and Biomedical Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp08.001	**Folate-Targeted Liposomal Delivery of Nucleic Acids: Structure-Activity Relationships** [1] Michael A. Maslov, [1] Elena V. Shmendel, [1] Nina G. Morozova, [2] Marina A. Zenkova [1] Lomonosov Moscow State University of Fine Chemical Technology, Vernadskogo ave. 86, Moscow 119571, Russia [2] Institute of Chemical Biology and Fundamental Medicine SB RAS, Lavrentieva ave. 8, Novosibirsk 630090, Russia
pp08.002	**A Potential Nanocarrier Based on Gold Nanoparticle and Dopamine** [1] Dong-an Wang, [1] Changjiang Fan [1] Nanyang Technological University, 70 Nanyang Drive N1.3-B2-13 637457 Singapore
pp08.003	**Immunogenicity of a Trivalent Human Papillomavirus L1 DNA-Encapsidated, Non-Replicable Baculovirus Nanovaccine** [1] Young Bong Kim, [1] Hansam Cho, [1] Hee-Jung Lee, [1] Yoon-Ki Heo, [1] Yeondong Cho, [2] Jae Sung Lee, [3] Yu-Kyoung Oh [1] Konkuk University, 120 Neungdong-ro, Kwangjin-gu, Seou, Republic of Korea [2] Seoul National University, College of Pharmacy, Republic of Korea [3] Kolon Life Science, Seoul 153-786, Republic of Korea
pp08.004	**In Vivo Evaluation of Doxorubicin Loaded in Graphene Oxide in Bladder Cancer Model** [1] Nelson Duran, [2] Renata A. Villela, [3] Priscyla D. Marcato, [2] Pagrick V. Garcia, [4] Helder J. Ceragioli, [2] Wagner J. Favaro [1] Institute of Chemistry, Universidade Estadual de Campinas, Campinas, Brazil, Institute of Chemistry, UNICAMP, Campinas, SP., Brazil [2] Depart. Struct. Funct. Biol., UNICAMP, Institute Biology, UNICAMP, SP., Brazil [3] NANOBIOLAB, FCFRP, USP, Ribeirão Preto-SP, Brazil, Faculdade de Farmacia,RP, SP, Brazil
pp08.005	**Inadequate Changes of the Level And Activity of Extracellular NADPH Oxidase, Isolated from Fluid's Nanoparticles of Ascetic Human Lung Carcinoma Depending on the Duration of the Disease** [1] Maxim Simonyan, [1] Gegham Simonyan, [2] Samvel Alexanyan, [1] Ruzan Simonyan, [3] Sergey Shirinyan, [1] Gor Chailyan [1] H. Buniatyan Institute of Biochemistry NAS RA, P. Sevag str.5/1, Yerevan, 0014, Armenia [2] Gyumri Oncological Dispensary, 25a Vazgen, Sargsyan St Gyumri, Armenia [3] M. Nalbandyan Gyumri Pedagogic University, P.Sevak st. 4, 3126, Gyumri, Armenia

pp08.006	**Liposomal Nanocontainers for Cisplatin Delivery into Tumors** [1] Ilya Kuznetsov, [2] Sergey Shein, [1] Dmitry Bychkov, [2] Nadezhda Grinenko, [1] Natalia Nukolova, [2] Vladimir Chekhonin, [3] Alexander Kabanov [1] Lomonosow Moscow State University, Leninskie Gory, 1/3, Moscow 119991, Russia [2] Serbsky National Research Center for Social and Forensic Psychiatry, Kropotkinskiy 23, Moscow, 119991, Russia [3] Center for Nanotechnology in Drug Delivery and Division of Molecular Therapeutics, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7362 USA
pp08.007	**Liposomal Transport Systems Based on Alkylresorcinols with Antioxidant Action** [1] Olga K. Davydova, [1] Hike N. Nikiyan, [1] Irina A. Gavrish [1] Orenburg State University, Pobedy, 13, Russia
pp08.008	**Modification of Biodegradable Polyelectrolyte Shells of Hollow Microcapsules by In Situ Synthesis of Maghemite Nanoparticles** [1] Sergey S. Starchikov, [1] Igor S. Lyubutin, [1] Tatyana V. Bukreeva, [2] Ivan A. Lysenko, [1] Sergey N. Sulyanov, [1] Nikolay Yu. Korotkov, [1] Svetlana S. Rumyantseva, [1] Irina V. Marchenko, [1] Konstantin O. Funtov, [2] Alexander L. Vasiliev [1] A.V. Shubnikov Institute of Crystallography RAS, Moscow 119333, Russia [2] NRC "Kurchatov Institute", Moscow 123182, Russia
pp08.009	**Multifunctional Zeolite-L Nanocontainers for PNA, DNA and Drug Delivery into Living Cells** [1] Alessandro Bertucci, [2] Henning Luelf, [2] Dedy Septiadi, [1] Alex Manicardi, [1] Roberto Corradini, [2] Luisa De Cola [1] Department of Chemistry, University of Parma, Italy, Parco Area delle Scienze 17/A, 43124, Parma, Italy [2] Institut de science et d'ingenierie supramoleculaires, University of Strasbourg, France, 8 Allee Gaspard Monge, 67000, Strasbourg, Italy
pp08.010	**Nanozymes of Antistaphylococcal Endolysins** [1] Lyubov Y. Filatova, [1] Dmitry N. Lebedev, [1] Anastasia D. Priyma, [2] David M. Donovan, [2] Juli Foster Frey, [1] Alexander V. Kabanov, [1] Natalia L. Klyachko [1] Lomonosov Moscow State University, Moscow, Leninskie gory, 1, Russia [2] ARS-USDA Beltsville Agricultural Research Center, USA, Beltsville, USA
pp08.011	**Novel Antioxidant Nanozymes for Biomedical Applications** [1] Anton D. Aleksashkin, [1] Natalia V. Nukolova, [2] Vladimir P. Chehonin, [1] Natalia L. Klyachko, [3] Alexander V. Kabanov [1] Lomonosov Moscow State University, Moscow, Lenin Hills 1, Russia [2] The Serbsky State Scientific Center for Social and Forensic Psychiatry, Moscow, Kropotkinskiy per. 23, Russia [3] Pirogov Russian National Research Medical University, Moscow, Ostrovitianov str. 1, Russia [4] University of North Carolina at Chapel Hill, Chapel Hill, 120 Mason Farm Road, USA
pp08.012	**Standardization of Gold Nanoparticles for Drug Delivery** [1] Fernanda Leve, [1] Renata Carvalho, [1] Giselle Fontes [1] National Institute of Metrology Quality and Technology, Av Nossa Senhora das Gracas, 50, Brazil

pp08.013	**Synthesis and Antiviral Activity of Water-Soluble Polycarboxylic Derivatives of [60]Fullerene** [1] Ilya I. Voronov, [1] Vyacheslav M. Martynenko, [1] Alexander V. C herniak, [2] Jan Balzarini, [1] Pavel A. Troshin [1] IPCP RAS, Semenov Prospect 1, Chernogolovka, 141432, Russia [2] Rega Institute for Medical Research, Minderbroedersstraat 10, B-3000, Leuven, Belgium
pp08.014	**Synthesis, Characterization and Antibacterial Activities of Nitric Oxide-Releasing Polymeric Nanoparticles Against Staphylococcus aureus From Bovine Mastitis** [1] Amedea B. Seabra, [1] Adelia M. Narciso, [1] Elaine CS. Valereto, [2] Viviane F. Cardozo, [2] Cesar AC. Lancheros, [2] Renata KT. Kobayashi, [2] Gerson Nakazato [1] Universidade Federal de Sao Paulo, Exact and Earth Sciences Department, Rua Sao Nicolau 210, 09913-030, Diadema, SP, Brazil [2] Universidade Estadual de Londrina, Department of Microbiology, Campus Universitário, Londrina, PR, Brazil
pp08.015	**"API-Carrier" Composite Balls for Pulmonary Drug Delivery** [1] Ekaterina G. Bogdanova, [2] Svetlana A. Myz, [3] Anna A. Ogienko, [4] Yuliya E. Kovalenko, [4] Nikolay A. Trofimov, [5] Valery A. Drebushchak, [5] Vladimir V. Boldyrev, [1] Andrey G. Ogienko, [5] Elena V. Boldyreva [1] Institute of Inorganic Chemistry SB RAS, Lavrenteva 3, Novosibirsk, Russia [2] REC-008 "Molecular Design and Ecologically Safe Technologies", Novosibirsk State University, Piragova 2, Novosibirsk, Russia [3] Institute of Solid State Chemistry and Mechanochemistry SB RAS, Kutateladze 18, Novosibirsk, Russia [4] Institute of Cytology and Genetics SB RAS, Lavrenteva 10, Novosibirsk, Russia [5] JSC "Nativa", Ermolaevsky Lane, 25, Moscow, Russia
pp08.016	**Biogenic Silver Nanoparticles as s Potential Antitumor Against Prostate Cancer** [1] Nelson Duran, [2] Luis AB. Ferreira, [3] Piscyla D. Marcato, [2] Patrick V. Garcia, [2] Wagner J. Favaro, [4] Marcelo Bispo de Jesus [1] Institute of Chemistry, Universidade Estadual de Campinas, Campinas, Brazil, IQ-UNICAMP-SP, Brazil [2] FCF-USP-Riberão Preto, Brazil, USP-RP-SP, Brazil [3] Depart. Struct. Funct. Biol. UNICAMP-SP, Brazil, IB-UNICAMP, SP, Brazil [4] Department of Biochemistry, IB-UNICAMP, SP, Brazil
pp08.017	**Comparison of Immunoliposomal Anticancer Drug Delivery Systems for Leukemia and Lymphoma Diseases** [1] Ali Deniz Dalgic, [1, 2] Aysen Tezcaner, [3] Pinar Elci, [3] Meral Sarper, [4] Fikret Arpaci, [3, 4] Ferit Avcu, [1, 2] Dilek Keskin [1] Middle East Tecnical University, Department of Engineering Sciences, Middle East Technical University, Ankara, 06800, Turkey [2] Center of Excellence in Biomaterials and Tissue Engineering, Middle East Technical University, Üniversiteler Mahallesi, Dumlupınar Bulvarı, No:1, 06800 Çankaya Ankara, Turkey [3] Gulhane Medical Faculty, Cancer and Stemcell Research Center, Turkey [4] Gulhane Medical Faculty, Department of Hematology, Turkey

pp08.018	**Hyaluronic Acid-Coated Reduced Graphene Nanosheet for CD44-Mediated Drug Delivery** [1] Yu-Kyoung Oh, [1] Wenjun Miao, [1] Gayong Shim, [1] Soondong Lee, [2] Choong Mo Kang, [2] Yearn Seong Choe [1] Seoul National University, Daehak-dong, Kwanak-gu, Seoul 151-742, Republic of Korea [2] Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea
pp08.019	**The Fullerene C_{60} Aqueous Dispersion Suppresses Allergic Inflammation in Mouse Models of Atopic Dermatitis and Delayed-Type Hypersensitivity Reaction** [1] Daria D. Purgina, [1] Elena N. Bashkatova, [1] Nadezhda N. Shershakova, [1] Sergey M. Andreev, [1] Musa R. Khaitov [1] NRC Institute of Immunology FMBA, Moscow, Kashirskoe shosse 24/2, Russia

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

12:00 PM – 2:00 PM	Poster session
pp09.001	**Polymer Composites as Prepared by Low-Temperature Post-Irradiation Polymerization of C_2F_4 in the Presence of 3D Graphene Material: Synthesis and Characterization** [1] Yury M. Shulga, [2] Victor N. Vasilets, [1] Dmitry P. Kiryukhin [1] Institute of Problems of Chemical Physics, Russian Academy of Sciences, Chernogolovka, Moscow region, 142432 Russia [2] Institute for Energy Problems in Chemical Physics, Russian Academy of Sciences, Chernogolovka, Moscow region, 142432 Russia
pp09.002	**Current-Voltage Characteristics of Graphene-Based Nanostructures** [1] Dmitry G. Kvashnin, [1] Leonid A. Chernozatonskii [1] Emanuel Institute of Biochemicasl Physics RAS, 119334, Moscow, 4 Kosigina st., Russia
pp09.003	**Effect of Alkali and Alkali Earth Element Borates on BN Nanostructures Growth** [1] Konstantin Firestein, [1] Andrey Matveev, [1] Dmitry Shtansky, [2] Dmitrii Golberg [1] National University of Science and Technology "MISiS", Leninsky prospect 4, 119991, Moscow, Russia [2] National Institute for Materials Science (NIMS), Namiki 1-1, Tsukuba, Ibaraki 3050044, Japan
pp09.004	**Effect of Colloidal Nanosilica on the Rheological and Mechanical Properties of Cement Pastes Containing Metakaolin** [1] Abdelbaki Benmounah, [1] Madjid Samar, [1] Khaled Benyounes, [1] Rabia Kheribet [1] Research Unit, Materials, Processes and Environment (UR/MPE).University M'Hamed Bougara of Boumerdes. Algeria, Cite Frantz Fanon,Faculty of Engineering,Boumerdes,35000, Algeria
pp09.005	**Features of Sublimation and Condensation of Materials with Fractal Surface Topology** [1] Andrey L. Kusov, [1] Yuriy V. Brylkin [1] Central Research Institute of Machine Building, Moscow region, Koroliov, Pionerskay St., h.4, Russia
pp09.006	**Formation of Nanosize Structure Phase States in Technically Pure Ti During Electroexplosive Carboborating** [1] Victor E. Gromov, [1] Sergei V. Raikov, [1] Evgeniy A. Budovskikh, [2] Yurii F. Ivanov, [1] Krestina V. Alsaraeva [1] Departament Physics Siberian State Industrial University, 654007, Novokuznetsk, Kirov Street 42, Russia [2] Institute of High Current Electronics, SB, RAS, 634055, Tomsk, Akademicheskii 2/3, Russia
pp09.007	**Influence of Nanosilica and a Polycarboxylate Superplasticizer on the Rheological and Electrokinetical Properties of Cement Pastes** [1] Abdelbaki Benmounah, [1] Madjid Samar, [1] Rabia Kheribet, [1] Khaled Benyounes, [1] Chahrazad Oubraham [1] Research Unit, Materials, Processes and Environment (UR/MPE), Faculty of Engineering/ University M'Hamed Bougara Boumerdes, Algeria

pp09.008	**Mechanical Properties Peculiarities of Nanostructured Materials and Coatings Obtained by Nanoindentation** [1] Yuriy V. Kornev, [1] Oleg V. Boiko, [1] Svetlana V. Chirkunova [1] Institute of Applied Mechanics of the Russian Academy of Sciences, 125040, Moscow, Leningradskiy prospect 7, Russia
pp09.009	**On the Elastic & Plastic Deformation of Graphene Walls in Hydrogenated Graphite Nanofibers** [1] Yuriy S. Nechaev, [1] Varvara P. Filippova, [2] Alp Yürüm, [3] Yuda Yürüm, [4] Nejat T. Veziroglu [1] Bardin Institute for Ferrous Metallurgy, 2nd Baumanskaya St., 9/23, Moscow 105005, Russia [2] Nanotechnology Research and Application Center, Sabanci University, Istanbul 34956, Turkey [3] Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul 34956, Turkey [4] Intern. Association for Hydrogen Energy, 5794 SW 40 St. #303, Miami, FL 33155, USA
pp09.010	**Physical Simulation of Metal Forming Processes by Torsional Deformation Combined with Backward Extrusion of Specimen Heads** [1] Anastasia Kublikova, [1] Alexander Botkin, [1] Samarukov Gregory [1] Ufa State Aviation Technical University, K. Marx str. 12, 450000, Ufa, Russia
pp09.011	**Plasma-Assisted Vapor Deposition Technology, Structure and Tribological Behavior of Alloyed DLC Nanocomposite Coatings** [1] Mikhail Khrushchov, [1] Elena Marchenko, [2] Mikhail Atamanov, [3] Ivan Levin, [1] Anna Dubravina, [3] Sergei Shalnov [1] Blagonravov Institute of Machine Studies RAS, 101990, Moscow, Maly Kharitonievskyi lane, 4, Russia [2] INACOTEC Innovative Nano & Coating Technologies, CJSC, 117325, Moscow, Bardin str., 4, Russia [3] Lomonosov Moscow State University, 119991, Moscow, Lenin Hills, 1, Russia
pp09.012	**Interactions of TCAMC Solvent System on Bamboo, Cotton and Their Blends: The Effect on Tensile Properties** [1] Muhammet Uzun, [1] Erhan Sancak, [1] Mehmet Akalin, [1] Ismail Usta [1] Marmara University, Technology Faculty, Department of Textile Engineering, Department of Textile Education, Marmara University, 34722, Goztepe, Istanbul, Turkey
pp09.013	**On the Physics of Intercalation of Hydrogen into Surface Graphane-Like Nanoblisters in Pyrolytic Graphite & Epitaxial Graphene** [1] Yuriy S. Nechaev, [1] Varvara P. Filippova, [2] Alp Yürüm, [3] Nilgün K. Yavuz, [4] Yuda Yürüm, [5] Nejat T. Veziroglu [1] Bardin Institute for Ferrous Metallurgy, 2-nd Baumanskaya St., 9/23, Moscow 105005, Russia [2] Nanotechnology Research and Application Center, Sabanci University, Istanbul 34956, Turkey [3] Energy Institute, Istanbul Technical University, Istanbul 34469, Turkey [4] Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul 34956, Turkey [5] International Association for Hydrogen Energy, 5794 SW 40 St. #303, Miami, FL 33155, USA

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

12:00 PM – 2:00 PM	Poster session
pp10.001	**Study of Core–Shell SHTC/Polycarbonate Covered with Ultrafine Particles Fabricated by Laser Assisted Sintering** [1] Igor V. Shishkovsky, [1] V. Scherbakov, [2] M. Kuznetsov [1] Lebedev Physical Institute of Russsian Academy of Sciences, Samara branch, Novo-Sadovaja st. 221, 443011 Samara, Russia [2] Institute of Structural Macrokinetics and Materials Science (ISMMS), RAS, Chernogolovka 142432, Russia
pp10.002	**A Low-Temperature Solvent-Free Chemical Strategy for the Direct Synthesis of $L1_0$ FePt Nanoparticles from Layered Precursor** [1] Elisabetta Agostinelli, [1] Aldo Capobianchi, [2] Xiao C. Hu, [2] George Hadjipanayis, [2] C. Ni [1] ISM - CNR, Area ROMA 1 Via Salaria km 29.300 - Monterotondo Scalo (RM), Italy [2] Department of Materials Science and Engineering, University of Delaware, DE, USA
pp10.003	**Morphology and Electrophysical Properties of Nanostructures Based on Platinum and Nickel Silicides Formed on Amorphous and Nanocrystalline Silicon** [1] Kirill V. Chizh, [2] Andrey G. Novikov, [3] Arkady S. Turtsevich, [3] Oleg Y. Nalivayko, [1] Vladimir A. Yuryev, [1] Vladimir P. Dubkov, [1] Victor P. Kalinushkin, [1] Valery A. Chapnin, [1] Larisa V. Arapkina, [1] Sergey A. Mironov, [1] Mikhail S. Storozhevykh, [1] Vladimir Y. Resnik, [1] Oleg V. Uvarov, [2] Peter I. Gaiduk [1] Prokhorov General Physics Institute, RAS, 38, Vavilov Str., Moscow, 119991, Russia [2] JSC "INTEGRAL", 121 A, Kazintsa Str., Minsk, 220108, Belarus [3] Belarusian State University, 4, Nezavisimosti avenue, Minsk, 220030, Belarus
pp10.004	**2 Micrometer in Diameter Quantum Dots Microdisc/Microring Lasers** [1] Denis Karpov, [1] Janne Laukkanen, [2] Juha Tommila, [1] Yuri Svirko, [3] Natalia Kryzhanovskaya, [3] Aleksey Zhukov, [3] Mikhail Maximov, [3] Andrey Lipovskii [1] University of Eastern Finland, Joensuu, Finland [2] Tampere University of Technology, Tampere, Finland [3] St Petersburg Academic University, St Petersburg, Russia
pp10.005	**Analysis of Quasielastic Light Scattering in Nanodomain Crystal Near Phase Transitions** [1] Svetlana V. Ivanova [1] P.N. Lebedev Physical Institute of RAS, Leninskii pr., 53, Moscow, 119991, Russia
pp10.006	**Angular Correlation and Independent Particle Model in Two-Dimensional Quantum Dots** [1] Tokuei Sako [1] Nihon University, 7-24-1, Narashinodai, Funabashi 247-8501 Japan

July 14 (Monday)

pp10.007	**Effect of Light Polarization on the Optical Limiting and Nonlinear Light Scattering in Suspensions of Detonation Nanodiamond Clusters** [1] Viatcheslav V. Vanyukov, [2] Gennagy M. Mikheev, [2] Tatyana N. Mogileva, [3] Alexey P. Puzyr, [3] Vladimir V. Bondar, [1] Yuri P. Svirko [1] Institute of Photonics University of Eastern Finland, 80101 Joensuu, Finland [2] Institute of Mechanics Ural Branch of Russian Academy of Sciences, 426067 Izhevsk, Russia [3] Institute of Biophysics Siberian Branch Russian Academy of Sciences, 660036 Krasnoyarsk, Russia
pp10.008	**Eigenmodes of Chiral Sphere and Their Excitation with Radiation of Chiral Molecule** [1, 2] Ilya V. Zabkov, [2, 3] Vasily V. Klimov, [4] Dmitry V. Guzatov, [2, 3] Andrey A. Pavlov [1] Moscow Institute of Physics and Technology, Institutskiy Pereulok 9, 141700 Dolgoprudny, Moscow Region, Russia [2] Lebedev Physical Institute, Leninsky Prospect 53, 119991 Moscow, Russia [3] Yanka Kupala State University of Grodno, Ozheshko Street 22, 230023 Grodno, Belarus [4] All-Russia Research Institute of Automatics (VNIIA), Sushhevskaja Street 22, 127055 Moscow, Russia
pp10.009	**First-Principles Calculations of the Atomic and Electronic Structure of Switchable Molecules on Metal Surfaces** [1] Victoria L. Mazalova [1] Southern Federal University, Sorge str.5, Russia
pp10.010	**Luminescent Characteristics of Ge and GaAs Nanostructures Formed in Porous Aluminum Oxide Matrices** [1] Rishat Valeev, [1] Artemi Beltyukov, [1] Dmitry Surnin, [2] Raushania Zakirova, [2] Vladimir Kobziev, [1] Vladimir Vetoshkin [1] Physical-Technical Institute of UB RAS, Kirova str. 132, Izhevsk, 426000 Russia [2] Udmurt State University, Universitetskaya str. 1, Izhevsk, 426034 Russia
pp10.011	**Luminescent Nanostructures ZnS_xSe_{1-x} in a Matrix of Porous Al_2O_3** [1] Andrew Chukavin, [1] Rishat Valeev, [1] Artemii Beltikov [1] Physical-Technical Institute of the Ural Branch of the Russian Academy of Sciences, 426000, Izhevsk, Kirova st., 132, Russia
pp10.012	**Nanoengineering at Education, Science and Industry** [1] Yury V. Panfilov [1] Bauman Moscow State Technical University, Russia

Section 11 – Nanomaterials and Catalysis

12:00 PM – 2:00 PM	Poster session
pp11.001	**Catalytically Active Copper Based Nanomaterials with Developed Surface Area** [1] Maksim V. Dorogov, [1] Alyona G. Denisova, [1] Natalia N. Gryzunova, [1] Olga A. Dovzhenko, [1] Anatoly A. Vikarchuk, [1,2,3] Alexey E. Romanov [1] Togliatti State University, 14, Belorusskaya St., Togliatti, 445667 Russian Federation [2] Ioffe Physical-Technical Institute, 26, Polytekhnicheskaya, St Petersburg, 194021 Russian Federation [3] University ITMO, 49, Kronverkskiy pr., St Petersburg, 197101 Russian Federation
pp11.002	**Change of Composition of Neodymium-Calcium Cobaltate in a Course of Reaction of Partial Oxidation of Methane into Synthesis Gas** [1] Alexey S. Loktev, [1] Alexey G. Dedov, [1] Dmitriy A. Komissarenko, [2] Galina N. Mazo, [2] Oleg A. Shlyakhtin, [1] Ilya I. Moiseev [1] Gubkin Russian State Oil and Gas University, Leninskiy prosp. 65 corp. 1, Russia [2] Department of Chemistry, Moscow State University, Vorobyovy Gory, 1, bld.3, Russia
pp11.003	**CuI Nanoparticles Promoted Green Approach for the Synthesis of Tetrahydrochromenediones and Dihydropyrano[3,2-c]chromenediones Under Grinding** [1] Shahrzad Abdolmohammadi, [2] Maryam Afsharpour, [3] Akram Hosseinian [1] East Tehran Branch, Islamic Azad University, Department of Chemistry, Faculty of Science, East Tehran Branch, Islamic Azad University, P.O. Box 33955-163, Tehran, Iran [2] Chemistry& Chemical Engineering Research Center of Iran, Chemistry& Chemical Engineering Research Center of Iran, PO Box 14335-186, Tehran, Iran [3] University of Tehran, Department of Engineering Science, College of Engineering, University of Tehran, P.O. Box 11365-4563, Tehran, Iran
pp11.004	**DFT-Modeling of the Water Oxidation Reaction Pathway Catalyzed by Ru-Coordinated Complexes** [1] Igor Alperovich [1] Southern Federal University, 5 Zorge St., Russia
pp11.005	**Hydrocracking of Heavy Petroleum Residues in the Presence of a Nanostructural Halloysite** [1] Gulbeniz Mukhtarova, [1] Mirze Abdullayev, [1] Farida Babayeva, [1] Zaira Kasimova, [1] Hikmet Ibrahimov, [1] Vagif Abbasov [1] Institute of petrochemical processes, Baku, Khodjali 30, Baku, Az 1027 Azerbaijan
pp11.006	**Natural Nanotube of Clay for Obtaining of Low Molecular Weight Olefins** [1] Tarana Mammadova, [1] Nadira Hasankhanova, [1] Khasmamed Teyubov, [1] Vagif Abbasov, [1] Aysel Aliyeva, [1] Zulfiya Aliyeva [1] Institute of Petrochemical Processes NAS of Azerbaijan, Az1025, Baku Ave Khojaly 30, Azerbaijan
pp11.007	**Oxygen Storage Capacity of Ceria Nanoparticles: Soft XAS and Theoretical Studies** [1,2] Luca Braglia, [1] Alexander Guda, [1] Mikhail Soldatov, [1] Kirill Lomachenko, [1] Aram Bugaev, [1] Alexander V. Soldatov, [1,2] Carlo Lamberti, [3] Olga V. Safonova [1] Southern Federal University, Sorge 5, Rostov-na-Donu 344090 Russia [2] University of Torino, Via P. Giuria 7, 10125 Torino, Italy [3] Paul Scherrer Institute, Villigen, 5232, Switzerland

pp11.008	**Particularities of Ab Initio Cluster X α-Discrete Variation Method (X α-DVM)** [1] Elmira I. Yuryeva [1] The Ural State College named after Ivan I. Polzunov, Lenina ave. 28, 620014, Ekaterinburg, Russia [2] Ural Technical Institute of Communications and Information Technology (Branch) SEI HPE Siberian State University of Telecommunications and Information Sciences, Repina st., 15, 620000, Ekaterinburg, Russia
pp11.009	**Reacting Ammonia with Organoboron Nanoparticles** [1] Maksim V. Grishin, [1] Nikolay N. Kolchenko, [1] Vladislav G. Slutskiy, [1] Boris R. Shub, [1] Vasiliy A. Kharitonov [1] Semenov Institute of Chemical Physics Russian Academy of Sciences, 119991 Moscow, Kosygin str.4, Russia
pp11.010	**Reactivity of Al_nBi (n=2–15) Clusters towards H_2O: Density-Functional Theory Investigations** [1] Xue-Hai Ju, [1] Jian-Ying Zhao, [2] Yu Zhang [1] Nanjing University of Science and Technology, 200 Xiaolingwei St. Nanjing University of Science and Technology, Nanjing, 210094, China [2] Huaiyin Normal University, Haiyin Normal University, Huaian 223300, China
pp11.011	**Structure and Photocatalytic Properties of the Alkali Titanate – Transition Metal Oxides Nanocomposite Systems** [1] Mariya Vikulova, [1] Elena Tretyachenko, [1] Aleksandr Gorokhovsky, [1] Diana Kovaleva, [1] Aleksandr Shindrov, [1] Tatiana Kolbasina [1] Yuri Gagarin State Technical University of Saratov, Saratov, Polytekhnicheskaya str., 77, Russia
pp11.012	**Study of Silicon Etching Using Platinum Thin Films as Catalyst** [1] Olga Pyatilova [1] National Research University of Electronic Technology, Moscow, Zelenograd, passage 4806, building 5, Russia
pp11.013	**Synthesis of Nanoporous Silica using Gums as Versatile Biopolymer** [1] Maryam Afsharpour, [1] Erfan Khomand [1] chemistry and chemical engineering research center of iran, Danesh Ave., Pajohesh Blv., 17 Km Tehran-Karaj Highway, Iran
pp11.014	**Titanate Nanofibers Decorated with Nanocrystalline Bismuth Sulphide Sheets: New Materials for Sensor Applications** [1] Olinda C. Monteiro, [1] Joana F. Cabrita, [1] Virginia C. Ferreira [1] DQB-FCUL, University of Lisbon, Portugal, Campo Grande, 1749-016 Lisbon Portugal
pp11.015	**Vertical Chanel Multidimensional Nanomemrane (VCMN) for Fraction Separation, Photocatalytic, and Thermocatalytic Applications** [1] Andrei V. Pakoulev, [2] Igor Yaroslavsky, [3] Vladimir Burtman [1] University of Wisconsin-Madison, 1101 University Avenue, Madison, Wisconsin, 53705, USA [2] Clymene Petroleum, P.O. Box 902172 Sandy, UT, 84090, USA [3] University of Utah, 115 South 1460 East Room 383 Salt Lake City, Utah 84112, USA

July 15 (Tuesday)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp01.027	**Influence of Acetylacetone on the Morphology of MoO_3 Rods Obtained by Modified Sol-Gel Synthesis** [1] Klara V. Kotsareva, [1] Elena A. Trusova, [2] Galina N. Bondarenko [1] A.A. Baikov Institute of Metallurgy and Materials Science, RAS, 119991, Leninsky pr. 49, Moscow, Russia [2] A.V. Topchiev Institute of Petrochemical Synthesis of RAS, 119991, Leninsky pr. 29, Moscow, Russia
pp01.028	**Synthesis and PM6 Semiempirical Studies of Self-Assembled Ni, Pd And Pt Supramolecular Polygons** [1] Alvaro Duarte-Ruiz, [1] Paulo Torres, [1] Felix Moncada [1] Universidad Nacional de Colombia, Kr 30 No 45-03, Colombia
pp01.029	**Application of Ionene-Stabilized Silver Nanoparticles for the Determination of Anions** [1] Ekaterina A. Terenteva, [1] Victoriya V. Arkhipova, [1] Vladimir V. Apyari, [1] Stanislava G. Dmitrienko [1] Lomonosov Moscow State University, Leninskie gori, 1, Russia
pp01.030	**Fine Tuning the Electronic Properties of Single-Walled Carbon Nanotubes by Filling Their Channels** [1] Marianna V. Kharlamova [1] University of Vienna, Faculty of Physics, 1090 Strudlhofgasse 4, Vienna, Austria
pp01.031	**High Resolution XANES Spectroscopy for Studying U-magnetite Nanoparticles** [1] Yulia Podkovyrina, [2] Ivan Pidchenko, [2] Tonya Vitova, [1] Alexander Soldatov [1] Southern Federal University, 344090,Sorge,5,Rostov-on-Don, Russia [2] Karlsruhe Institute of Technology, Hermann-von-Helmholtz-Platz 1 D-76344 Eggenstein-Leopoldshafen,Karlsruhe, Germany
pp01.032	**High-Frequency EPR and ENDOR as Powerful Tools for Characterization of Nano-Hydroxyapatites** [1] Sergei B. Orlinskii, [1] Marat R. Gafurov, [1] Georgy V. Mamin, [1] Timur B. Biktagirov, [1] Boris V. Yavkin [1] Kazan Federal University, Kremlevskaya 18, 420008 Kazan, Russia

pp01.033	**Interaction Between Defects in the Spherical Hexagonal Order** [1] Darya Roshal [1] Southern Federal University, Physics Department, 5 Zorge str., Rostov-on-Don, 344090 Russia
pp01.034	**Intermolecular Fullerene C_{60} Interaction and Fullerite Structures** [1] Yulia V. Novakovskaya, [1] Alexander V. Vorontsov, [1] Elizaveta A. Shilyaeva [1] Lomonosov Moscow State University, Department of Chemistry, Leninskie gory 1/3, Moscow, 119991 Russia
pp01.035	**Inverse Opal-Based Three-Dimensional Periodic Nanostructures** [1] Gennadi A. Emelchenko, [1] Vladimir M. Masalov, [1] Andrey A. Zhokhov, [1] Nadezhda S. Sukhinina, [2] Igor I. Khodos [1] Institute of Solid State Physics RAS, Chernogolovka, Moscow district, ac. Ossipyan,2, 142432 Russia [2] Institut of Microelectronics Technology and High Purity Materials RAS, Chernogolovka, Moscow district, ac. Ossipyan,6, 142432 Russia
pp01.036	**Ionene-Stabilized Gold Nanoparticles: Preparation, Characterization and Prospects of the Analytical Application** [1] Victoriya V. Arkhipova, [1] Vladimir V. Apyari, [1] Stanislava G. Dmitrienko [1] Lomonosov Moscow State University, Leninskie gori, 1, Russia
pp01.037	**Iron-Containing Nanoparticles within Carbon Nanotubes: Mössbauer spectroscopy approach** [1] Alexey V. Sobolev [1] Moscow State University, 119991, Moscow, Leninskie Gory, b.1-10
pp01.038	**Local Structure of Nanocrystalline & Far-From-Equilibrium Complex Oxides** [1] Vladimir Sepelak [1] Institute of Nanotechnology, Karlsruhe Institute of Technology, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany [2] Slovak Academy of Sciences, Watsonova 45, 04001 Kosice, Slovakia
pp01.039	**Maskless and Patternable Silver Nanowire Networks by Spray-Printing** [1] Ching-Chang Lin, [1] Ya-Lin Lin, [2] Wen-Hsien Sun, [1] Yuan-Che Lin, [2] Jing-Wen Tang, [2] Jing-Heng Tien, [1] Fu-Hsiang Ko [1] Graduate Program for Nanotechnology, Department of Materials Science and Engineering, National Chiao Tung University, Taiwan, EF324, 1001 University Road, Hsinchu, Taiwan 300, ROC [2] Material and Chemical Research Laboratories, Industrial technology Research Institute, Hsinchu, Taiwan, 195, Sec. 4, Chung Hsing Rd., Chutung, Hsinchu, Taiwan 31040, ROC
pp01.040	**Molecular Imprinting of Symazine and Luteolin Glucoside into Titanium Dioxide Nanospheres** [1] E. V. Bulatova, [1] E. Yu. Byrina, [1] A. S. Popkov, [1] O. Yu. Vetrova, [1] E. V. Romanova, [1] Yu. Yu. Petrova [1] Surgut State University, 1 Lenina St., 628400 Surgut, Russia

pp01.041	**Morphology and Luminescent Properties of Oleic Capped CdSe Nanocrystals Heavily Ag-Doped During the Synthesis** [1] Sergey G. Dorofeev, [1] Sergei S. Bubenov, [1] Pavel A. Kotin, [1] Tatiana A. Kuznetsova [1] Lomonosov Moscow State University, Chemistry Department, Moscow, Russia
pp01.042	**NMR of Water Colloidal Solutions of Nanosized Crystalline Particles LaF_3:Gd^{3+}** [1] Egor Alakshin, [1] Vladimir Skirda, [1] Alexander Klochkov, [1] Stella Korableva, [1] Bulat Munavirov, [1] Timur Safin, [1] Kajum Safiullin, [1] Murat Tagirov [1] Kazan Federal University, Kremlyovskaya 18, Russia
pp01.043	**Phase Transitions in Nano-Structured Fullerite at Termobaric Effects** [1] Polina A. Borisova, [2] Mihail S. Blanter, [3] Vadim V. Brazhkin, [1] Viktor P. Glazkov, [1] Viktor A. Somenkov, [3] Vladimir P. Filonenko [1] National Research Centre "Kurchatov Institute"of Instrumental Engineering and Information Science, 20 Strominka st1, Akademika Kurchatova pl., Moscow, 123182, n/a, Russiar.,Moscow,107996, n/a, Russia [2] Moscow State University of Instrumental Engineering and Information Science, 20 Strominka str.,Moscow,107996, n/a, Russia [3] Institute for High Pressure Physics, 142190 Troitsk, Moscow region, Russia
pp01.044	**Photovoltaic Effects Enhanced by Self-Assembled Co Nanoparticles in Co-Doped Amorphous Carbon/Silicon Heterostructures** [1] Yucheng Jiang, [1] Ju Gao [1] The University of Hong Kong, Pokfulam Road, Hong Kong
pp01.045	**Positive Magnetoresistance Enhanced by the Self-Assembled Co-Rich Nano-Layer in Co Doped Amorphous Carbon/Silicon Heterostructures** [1] Yucheng Jiang, [1] Ju Gao [1] The University of Hong Kong, Pokfulam Road, Hong Kong
pp01.046	**Preparation and Assembly of Monodisperse Core-Shell-Shell Metallodielectric Particles for the Fabrication of Perfect Absorbers** [1] Alexey Petrov, [2] Pavel N. Dyachenko, [1] Tim Hadler, [2] Alexander Yu. Petrov, [2] Manfred Eich, [1] Horst Weller, [1] Tobias Vossmeyer [1] University of Hamburg, Institute of Physical Chemistry, Grindelallee 117; D-20146 Hamburg, Germany [2] Institute of Optical and Electronic Materials, Hamburg University of Technology, Eißendorfer Straße 38; D-21073 Hamburg, Germany
pp01.047	**Spectroscopic Investigations on CdSe/CdS Nanoparticles** [1] Alexey V. Lukashin, [1] Tatiana Yu. Sachkova, [1] Andrei A. Eliseev, [2] Tobias Yochum [1] Lomonosov Moscow State Univesity, Moscow, Leninskie Gory, 1, Russia [2] CAN GmbH, Hamburg, Grindelallee 117, Germany
pp01.048	**Structure Features and Energetic Peculiarities of Diverse Carbon-Based Particles: Nonempirical Insight** [1] Yulia V. Novakovskaya [1] Lomonosov Moscow State University, Department of Chemistry, Leninskie gory 1/3, Moscow, 119991 Russia

pp01.049	**Structure, Composition and Optical Properties of the Fullerene Based Thin Film Before and After Gamma Ray and X-Ray Radiation** [1] Nikolai Romanov, [2] Marina Elistratova, [3] Erkki Lahderanta, [2] Irina Zakharova [1] "Svetlana-Semiconductors", 27 Engels Av., Saint-Petersburg 194156 Russia [2] St. Petersburg State Polytechnic University, 195251, St. Petersburg, Russia [3] Lappeenranta University of Technology, 53850, Lappeenranta, Finland
pp01.050	**Study of Aging the $La_2Zr_2O_3$ Hydrosols, Obtained by the Ion-Exchange Method** [1] Elena A. Bovina, [1] Djemma V. Tarasova, [1] Fatima Kh. Chibirova [1] Karpov Institute of Physical Chemistry, Obukha lane, 3-1/12, Russia
pp01.051	**Synthesis of Silver and Gold Nanoparticles in Reverse Micelles: The Growth Kinetics and Mechanism, Particle Characterization** [1] Anastasiya Sergievskaya, [1] Vladimir Tatarchuk [1] Nikolaev Institute of Inorganic Chemistry Russian Academy of Sciences Siberian Branch, 630090 Ac. Lavrentyev pr., 3, Novosibirsk, Russia
pp01.052	**Tunneling Resonant Electron-Vibration Spectroscopy of Polyoxometalates** [1] Dalidchik Feodor, [1] Boris Budanov, [1] Sergey Kovalevskiy, [1] Evgeniy Balashov [1] Institute of Chemical Physics, Russian Academy of Sciences, Moscow, Kosygin st., 4, Moscow, Russia
pp01.053	**Unusual Metallic Nanoclusters in Ordered Spinels** [1] Valery M. Talanov, [2] Vladimir B. Shirokov, [3] Mikhail V. Talanov [1] Platov South-Russian State Polytechnic University, Prosvescheniya 132, Novocherkassk, Russia [2] South Scientific Center, Russian Academy of Sciences, Rostov-on-Don, Russia [3] Research Institute of Physics, Southern Federal University, Rostov-on-Don, Russia
pp01.054	**Reciprocal Space Reconstruction for Structural Analysis of Organized Mesoscopic Systems** [1] Artem A. Eliseev, [1] Kirill S. Napolskii, [2] Dmitry Chernyshov, [1] Alexei V. Lukashin, [1] Andrei A. Eliseev [1] Department of materials Science, Lomonosov Moscow State University, 119992, Moscow, Lenin Hills, Russia [2] SNBL ESRF, Grenoble France
pp01.055	**Detonation Synthesis Control as a Means of Formation of Nanodiamonds with Predictable Colloid and Chemical Characteristics** [1] Aleksandr P. Voznyakovskii, [2, 4] Aleksei O. Pozdnyakov, [3] Valerii Yu. Dolmatov, [2] Demid A. Kirilenko, [2] A V. Baklanov, [2] Samuil G. Konnikov [1] Federal State Unitary Enterprise Scientific Research Institute for Synthetic Rubber, St. Petersburg, Gapsalskaya Street, 1, 198035 Russia [2] A.F. Ioffe Physico-Technical Institute, S-Petersburg, Polytechnical str, 26, 194021 Russia [3] Institute of Problems of Mechanical Engineering, S-Petersburg, Bolshoi pr. V/O, 61, 199178 Russia [4] St. Petersburg State Technological Institute (technical university), S-Petersburg, Moskovskii pr, 26, 190013 Russi

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

12:00 PM – 2:00 PM	Poster session
pp02.018	**Bilayer Composite with High Conductivity Based on Thin Film of Polyaniline and Films of Metals** [1] Victor Fe. Ivanov, [1] Oxana L. Gribkova, [1] Anatoly V. Vannikov [1] A.N. Frumkin Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Leninskii pr., 31, Russia
pp02.019	**Characterization of CdS-Doped Glass Films Obtained by Pulsed Laser Deposition Method (PLD)** [1] Ionut D. Feraru, [1] Raluca C. Iordanescu, [1] Mihai Elisa, [1] Cristina Vasiliu, [2] Stefania Stoleriu, [2] Adrian Volceanov, [3] Mihaela Filipescu, [4] Alexandru Peretz [1] National R&D Institute for Optoelectronics – INOE 2000, 409 Atomistilor Str., Magurele RO-077125, Romania [2] Faculty of Applied Chemistry and Materials Science, 1 Polizu Str., Bucharest, Romania [3] Laser Department, National Institute of Laser, Plasma and Radiation Physics, 409 Atomistilor Str., Magurele RO-077125, Romania [4] Institute of Physical Chemistry "I. Murgulescu", Romanian Academy, Department of Colloids, 202 Spl. Independentei, Bucharest, Romania
pp02.020	**Condition of the NiTi Surface Layer Structure Formed After Its Electron-Beam Melting** [1] Alexey A. Neiman, [1] Ludmila L. Meisner, [2] Victor O. Semin [1] Institute of Strength Physics and Materials Science SB RAS, pr. Akademichesky 2/4, Tomsk, Russia [2] National Research Tomsk State University, pr. Lenina 36, Tomsk, Russia
pp02.021	**Controlled Thermal Processing and In Situ Characterization of Single Phase CZTS Thin Films** [1] Nicos C. Angastiniotis, [1] Kyriakos N. Christoforou, [2] Vasilios Palekis, [2] Chris S. Ferekides [1] Cyprus University of Technology, Department of Mechanical Engineering and Materials Science and Engineering, 30 Archbishop Kyprianou Str., 3036 Limassol, Cyprus [2] University of South Florida, Department of Electrical Engineering, Mail Point: ENB118 4202 East Fowler Ave Tampa, FL 33620, USA
pp02.022	**Deposition of Silicon Carbonitride (SiC_xN_y) Films Using Phenyl-Containing Organosilicon Precursor by PECVD Technique** [1] Evgeniya Ermakova, [1] Yuri Rumyantsev, [1] Marina Kosinova [1] Nikolaev Institute of Inorganic Chemistry SB RAS, 3, Acad. Lavrentiev Ave., Novosibirsk, 630090 Russia

pp02.023	**Design of Nanostructured Oxide Films for 3D Electron Multipliers by MOCVD** [1] Evgeniia S. Vikulova, [1] Kseniya V. Zherikova, [1] Sergey V. Zabuslaev, [1] Igor P. Igumenov [1] Nikolaev Institute of Inorganic Chemistry, Siberian Branch of the Russian Academy of Sciences, Nikolaev Institute of Inorganic Chemistry SB RAS, Acad. Lavrentiev Ave., 3, Novosibirsk, 630090, Russia
pp02.024	**Doping Influnce on Photoelectronic Properties of Titanium Dioxide** [1] Anton A. Minnekhanov, [2] German V. Trusov, [3] Alexey B. Tarasov, [1] Elizaveta A. Konstantinova [1] Department of Physics, Lomonosov Moscow State University, 119991, Moscow, Russia [2] Department of Chemistry, Lomonosov Moscow State University, 119991, Moscow, Russia [3] Institute of Problems of Chemical Physics RAS, 142432, Chernogolovka, Russia
pp02.025	**Formation Features of Nanostructural Multicomponent Al-Cr-Si-Ti-Cu-N Coatings** [1] Valeriya R. Berezovskaya, [2] Alexandr D. Korotaev, [3] Ivan A. Ditenberg, [3] Konstantin I. Denisov, [3] Yuri P. Pinjin, [2] Dmitri P. Borisov, [2] Alexander N. Tyumentsev [1] National Research Tomsk State University, Tomsk, Russia [2] Siberian Physical-Technical Institute, Tomsk, Russia [3] Institute of Strength Physics and Material Science SB RAS, Tomsk, Russia
pp02.026	**Growth of Thin Nanostructured Zinc Oxide Films by Chemical Displacement of Aluminium** [1] Eugene Chubenko, [1] Vitaly Bondarenko, [2] Alexey Klyshko, [2] Marco Balucani [1] Belarusian State University of Informatics and Radioelectronics, 220013 P.Brovka str. 6, Minsk, Belarus [2] Rome University "La Sapienza", 00184 via Eudossiana 18, Rome, Italy
pp02.027	**Molecular Dynamic Simulation of Interface Formation in Ag/Cu Bilayers** [1] Anton M. Igoshkin, [1] Igor F. Golovnev, [1] Vasiliy M. Fomin [1] Khristianovich Institute of Theoretical and Applied Mechanics, Novosibirsk, institutskaya ulitsa, 4/1, Russia
pp02.028	**Morphology, Structure and Element Composition of Nitrides of High-Entropy (TiZrAlYNb)N and (TiZrHfVNbTa)N Alloys** [1] Alexander D. Pogrebnjak, [2] Oleg V. Sobol, [3] Vyacheslav M. Beresnev, [4] Anatoly A. Andreyev, [5] Yoshihiko Takeda, [6] Gregory Abadias, [1] Oleksandr V. Bondar, [1] Ivan A. Yakushchenko [1] National Nechnical University "Kharkiv polytechnical institute", 21 Frunze Str., 61002, Kharkiv, Ukraine [2] Sumy State University, 2, Rymsky Korsakov Str., 40007 Sumy, Ukraine [3] Kharkiv National University of Karazin, Svobody Sq., 4, 61022 Kharkiv, Ukraine [4] National Science Center "Kharkiv Institute of Physics & Technology", Akademicheskaya St., 61108 Kharkiv, Ukraine [5] Institut P', University of Poitiers, Chasseneuil-Futuroscope, F86961, France [6] National Institute for Material Science, Ibaraki 305-0047, Tsukuba, Japan

pp02.029	**Nanocrystalline Smooth Yttria and Alumina Thin Films on Metal Substrates as Alternative to Electrochemical Polishing Process** [1] Irina Martynova, [1] Dmitry Tsymbarenko, [2] Vadim Amelichev, [2] Anton Kamenev, [2] Alexander Molodyk, [2] Sergey Samoilenkov, [3] Sergey Lee, [3] Valery Petrykin, [1] Natalia Kuzmina, [1] Andrey Kaul [1] Lomonosov Moscow State University, Leninskie Gory, Moscow, 119991 Russian Federation [2] SuperOx, 20-2, Nauchnyi proezd, Moscow, 117246 Russian Federation [3] SuperOx Japan LLC, Sagamihara Incubation Center (SIC-3), 1880-2 Kamimizo, Sagamihara, Kanagawa, 252-0243 Japan
pp02.030	**Performances of Gas Sensor Based on Low-Temperature Co-Fired Ceramics and SnO_2 Nano Film** [1] Akhil Chandran Mukkattu Kuniyil, [2] Vladimir V. Srdic, [2] Branimir Bajac, [1] Goran M. Stojanovic [1] Department for Microelectronic, Faculty of Technical Sciences, University of Novi Sad, Trg Dositeja Obradovica 5, Serbia [2] Department of Materials Engineering, Faculty of Technology, University of Novi Sad, Trg Dositeja Obradovica 5, Serbia
pp02.031	**Research Tribology Properties Nanostructure Diffusion Layers of Metal Coverings** [1] Margarita A. Skotnikova, [1] Svetlana A. Shasherina, [1] Nikolay A. Krylov, [1] Galina V. Tsvetkova, [1] Nikolay V. Bezenkin [1] St. Petersburg State Polytechnical University, 195251 St. Petersburg Politekhnicheskaya St., 29, Russia
pp02.032	**Study of Multiferroic $GdMnO_3$ Thin Film: An Exciting Magnetic Behavior** [1] Puneet Negi, [1] H. M. Agrawal, [1] Hemaunt Kumar, [1] R. C. Srivastava [1] Department of Physics, G. B. Pant University of Ag. & Tech. Pantnagar, Uttarakhand, Pin- 263145 India
pp02.033	**Synthesis and Investigation of DNG/AM Nanocomposite Coatings on Basis of Amorphous Carbon** [1] Alexander V. Andreev, [2] Igor Y. Litovchenko, [1] Alexander D. Korotaev, [1] Dmitry P. Borisov [1] Tomsk State University, Lenina Street 36, Russia [2] Institute of strength physics and material science, Academic Avenue 2/4, Russia

Section 03 – Nanoceramics

12:00 PM – 2:00 PM	Poster session
pp03.007	**Particle Size Dependent Properties of Cobalt Ferrite Nanoparticles Synthesized by Starch Assisted Sol-Gel Combustion Method** [1] Raghvendra S. Yadav, [1] Jaromir Havlica [1] Materials Research Centre, Brno University of Technology, Purkyňova 464/118, CZ-612 00 Brno, Czech Republic
pp03.008	**Ultrafine Hexagonal Cobalt and Nickel Hydroxide Nanoplates Synthesized by Hydrothermal Method and Its Topotatic Conversion to Nickel Cobalt Oxide** [1] Italo O. Mazali, [1] Nathlia M. Carneiro [1] Institute of Chemistry, Campinas State University, P.O.Box 6154, Sao Paulo, Brazil
pp03.009	**Direct Synthesis of Hematite Microspheres by Solution Combustion in Ultrasonic-Generated Aqueous Aerosols** [1] Alexey Tarasov, [2] German Trusov, [2] Eugeny Goodilin, [3] Alexandr Mukasyan [1] Institute of Problems of Chemical Physics RAS, Academician Semenov avenue 1, Chernogolovka, 142432, Russia [2] National University of Science and Technology, Leninsky av. 4, Moscow, 117049, Russia [3] Department of Chemistry, Lomonosov Moscow State University, Lenin Hills, Moscow, 119992, Russia
pp03.010	**Synthesis of Nanocrystalline Tin Oxide by Flame Spray Pyrolysis Using Sulphate precursors** [1] Rahul L. Dcunha, [1] Silvister MJ. Raju, [1] Subramshu S. Bhattacharya [1] Indian Institute of Technology Madras, Nano Functional Materials Technology Centre (NFMTC) Department of Metallurgical & Materials Engineering, IIT Madras, Chennai - 600036, India
pp03.011	**Fragmentation of Coarse Grained Nonstoichiometric Transition Metal Monoxides MO_y Down to Nanoparticles** [1,2] Albina A. Valeeva, [1] Andrey A. Rempel, [3] Hartmuth Schroettner [1] Institute of Solid State Chemistry, Ural Branch of the Russian Academy of Sciences, Pervomaiskaya 91, Ekaterinburg 620990, Russia [2] Ural Federal University named after First President of Russia B.N. Yeltsin, Mira 19, Ekaterinburg 620002, Russia [3] Institute for Electron Microscopy and Nanoanalysis, Graz University of Technology, Steyrergasse 17/III, Graz A-8010, Austria
pp03.012	**Local Atomic and Electronic Structure of Nanostructured Relaxor Ferroelectric Ceramics** [1] Galina Sukharina, [1] Alexander Guda, [1] Nikolay Smolentsev, [1] Kamaludin Abdulvakhidov, [1] Alexander Soldatov [1] Southern Federal University, 344000, Rostov on Don, Sorge,5, Russia

pp03.013	**Transport Properties of Anodic Alumina Membranes in Liquid Media** [1] Dmitrii I. Petukhov, [1] Dmitrii A. Buldakov, [1] Alexey A. Tishkin, [1] Andrey A. Eliseev [1] Lomonosov Moscow State University, Moscow, Leninskie hills, Russia
pp03.014	**Radiation-Thermal Synthesis of Ferrite Ceramics with an Intense Beam of Relativistic Electrons from Nano-Precursors** [1] Uliana V. Ancharova, [1] Mikhail A. Mikhailenko, [1] Boris P. Tolochko, [1] Nikolai Z. Lyakhov, [2] Eugeny A. Shtarklev, [2] Alexey Yu. Vlasov, [2] Mikhail V. Korobeinikov [1] Institute of Solid State Chemistry and Mechanochemistry SB RAS, Kutateladze 18, 630128 Novosibirsk, Russia [2] Budker Institute of Nuclear Physics, Lavrentiev ave. 11, 630090 Novosibirsk, Russia

Section 04 – Bulk Metallic Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp04.005	**Microwaves Assisted Synthesis and Structural Characterization of Bimetallic Fe-Au Nanostructures** [1] Nancy Castillo, [2] Amado F. García-Ruiz, [3] Rodrigo Esparza [1] UPIICSA-COFAA, Instituto Politécnico Nacional (IPN), Te 950, Col. Granjas-México, Iztacalco, C. P.08400 México, D. F. Mexico [2] Física, Centro de Investigación y Estudios Avanzados del IPN (CINVESTAV-IPN), C. P. 07360 México D. F, Mexico [3] Centro de Física Aplicada y Tecnología Avanzada, Universidad Nacional Autónoma de México, Boulevard Juriquilla 3001, Santiago de Querétaro, Qro., 76230, Mexico
pp04.006	**Behavior of Symmetrical Tilt Grain Boundaries in BCC And FCC Metals Under Shear Loading** [1] Anton Nikonov, [1] Andrey Dmitriev [1] Institute of Strength Physics and Materials Science SB RAS, pr. Akademicheskii 2/4, Tomsk, 634055 Russia
pp04.007	**Hysteresis Properties Rapidly Quenched Nd-Fe-B Alloys Under Severe Plastic Deformation** [1] Irina S. Tereshina, [2] Ivan A. Pelevin, [1] Evgeniya A. Tereshina, [2] Gennady S. Burkhanov, [3] Andrzej Zaleski, [2] Sergey V. Dobatkin [1] Lomonosov Moscow State University, 119991 Moscow, Russia [2] Baikov Institute of Metallurgy and Material Science RAS, 119991 Moscow, Russia [3] Institute of Physics ASCR, 18221 Prague, Czech Republic [4] Institute of Low Temperature and Structure Research PAS, 50-950 Wroclaw, Poland
pp04.008	**Mechanical Behavior of Ultrafine-Grained (UFG) Ti-Based Alloy with Protective Coating** [1] Roman Valiev, [1] Konstantin Selivanov [1] Ufa State Aviation Technical University, K. Marx Street 12, Ufa, The Republic of Bashkortostan 450000 Russian Federation
pp04.009	**Revisiting the Magnetic Properties of fcc-Fe Nanoparticles in Cu-Al Matrices** [1] Waldemar A. Macedo, [1] Luis E. Fernandez-Outon, [1] Jose D. Ardisson [1] Centro de Desenvolvimento da Tecnologia Nuclear, 31270 Belo Horizonte, MG, Brazil
pp04.010	**Microstructure and Mechanisms of Hardening of UFG Al-Mg-Si Alloys Prepared by Severe Plastic Deformation** [1] Aydar M. Mavlyutov, [1] Maksim Yu. Murashkin, [1] Nariman A. Enikeev, [1] Vil D. Sitdikov [1] Institute of Physics of Advanced Materials, Ufa State Aviation Technical University, K. Marx st., 12, 450000 Ufa, Russia

pp04.011	**Modeling of Nanofragmentation of fcc Crystallite Surface Under Shear Deformation** [1] Anton Nikonov, [1] Andrey Dmitriev, [2] Viktor Kuznetsov [1] Institute of Strength Physics and Materials Science SB RAS, pr. Akademicheskii 2/4, Tomsk, 634055 Russia [2] Kurgan State University, st. Gogol 25, Kurgan, 640669 Russia
pp04.012	**The Estimation of the Energy Dissipation Effect and the Kinetic of Structure Changing into the Bulk Nanostructures Alloys Based on "In Situ" Testing Results** [1] Boris Barakhtin, [1] Anatoliy Nemetz, [1] Marina Smirnova, [1] Elena Khlusova [1] CRISM «Prometey», 191015, Saint Petersburg, Shpalernaya St., 49, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp05.019	**Probing the SERS Performance of Gold Nanoparticles-Chitosan Composite for Analytical Applications** [1] Italo O. Mazali, [1] Elias B. Santos, [1] Fernando A. Sigoli [1] Institute of Chemistry - Campinas State University - UNICAMP, Brazil, P.O. Box 6154, Zip Code: 13083-970, Campinas, So Paulo, Brazil
pp05.020	**Laser Stimulation of Electrical Conductivity of Composite Nanomaterials Based on Carbon Nanotubes** [1] Levan P. Ichkitidze, [1] Vitaly M. Podgaetsky, [1] Sergey V. Selishchev, [1] Alexander Yu. Gerasimenko, [2] Eugenie V. Blagov, [2] Alexander A. Pavlov, [3] Viacheslav A. Galperin, [3] Yury P. Shaman
pp05.021	**Metal Coordination Complex Intercalation into SWCNTs for Supercapacitor Applications** [1] Ilya V. Pankov, [1] Stanislav S. Beloborodov, [1] Igor N. Shcherbakov, [2] Jordan C. Poler, [1] Victor A. Kogan [1] University of North Carolina at Charlotte, 9201 University City Blvd. Charlotte NC 28223 USA [2] Southern Federal University, Department of Chemistry, Southern Federal University, 7, Zorge Str., Rostov-on-Don, 344090 Russia
pp05.022	**Structure and Optical Properties of GaSe-CdSe Nanocomposites** [1] Liliana Dmitroglo, [2] Iuliana Caraman, [1] Dumitru Untila, [1] Igor Evtodiev, [2] Marius Stamate, [3] Liviu Leontie [1] Moldova State University, A. Mateevici, 60, MD-2009, Kishinev, Republic of Moldova [2] Vasile Alecsandri University of Bacau, Calea Marasesti, 157, 600115, Bacau, Romania [3] Alexandru Ioan Cuza University of Iasi, Carol I, 11, 700506 Iasi, Romania
pp05.023	**Mass-Spectrometric and UV-Vis Studies of Polymer-Fullerene Nanocomposites Subjected to Thermal and UV Influence** [1] Aleksei O. Pozdnyakov, [1] Alexandr A. Bogdanov, [2] Alexandr P. Voznyakovskii [1] A.F. Ioffe Physico Technical Institute, Polytechnicheskaya 26, 194021 Russia [2] Federal State Unitary Enterprise Scientific Research Institute for Synthetic Rubber, Gappsalskaya 1, 198035 Russia
pp05.024	**The Influence of Local Charges on the Fractal Aggregation of Carbon Nanotubes** [1] Andrei V. Tuchin, [1] Dmitry A. Zhukalin, [1] Sviatoslav V. Avilov [1] Voronezh State University, 394046, Voronezh, Universitetskaya pl.1, Russia
pp05.025	**The Influence of the Different Carbon Nanotubes on the Operational Properties of Antifriction Coatings** [1] Nikolay N. Kobernik, [1] Roman S. Mikheev, [2] Viktor Y. Vaganov, [3] Anatoliy M. Obiedkov [1] Bauman Moscow State Technical University, 1005005, Moscow, 2-ya Baumanskaya, 5, Russia [2] Stoletov's Vladimir State University, 600000, Vladimir, Gorky Street, 87, Russia [3] G. A. Razuvaev Institute of Organometallic Chemistry of Russian Academy of Sciences, 603950, Nizhnii Novgorod, Tropinina, 49, Russia

pp05.026	**Production of Antifriction Composite Coatings Reinforced with Carbon Nanotubes** [1] Roman S. Mikheev, [1] Nikolay V. Kobernik [1] Bauman Moscow State Technical University, 1005005, Moscow, 2-ya Baumanskaya, 5, Russia
pp05.027	**Silver Nanoparticles Decorated Polyoxometalate Nanocomposite as an Ultra-high Capacity Anode Material for Lithium Ion Battery** [1] Asim Olgun, [2] Mehmet L. Yola, [1] Tanju Eren, [1] Alper T. Colak, [1] Necip Atar [1] Dumlupinar University, Dumlupınar University, Faculty of Arts and Sciences, Department of Chemistry, Kutahya, Turkey [2] Sinop University, Sinop University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Sinop,Turkey
pp05.028	**Preparation, Structure and Tribological Properties of Composite Material on the Basis of Ultra-High-Molecular-Weight Polyethylene (UHMWPE) and Quasicrystalline Al-Cu-Fe Filler** [1] Mikhail B. Tsetlin, [1] Alexey A. Teplov, [1] Eugeniy K. Golubev, [1] Sergey I. Belousov, [1] Sergey N. Chvalun, [1] Sergey V. Krasheninnikov, [1] Alexandr L. Vasiliev, [1] Mikhail Yu. Presniakov [1] National research centre «Kurchatov institute», Akademika Kurchatova pl.,1 Moscow, 123182 Russia
pp05.029	**Polyethylene-Based Nanocomposites with Carbon Reinforcements: Atomistic and Coarse-Grained Approaches** [1] Nikita Orekhov, [2] Vladimir Stegailov [1] Moscow Institute of Physics and Technology, 9 Institutskiy per., Dolgoprudny, Moscow Region, Russia [2] Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS), Izhorskaya st. 13 Bd.2, Moscow, Russia
pp05.030	**Nanofiller's Influence on Spinning Process and Kinetics of PAN-Fibers Cyclization** [1] Ivan Yu. Skvortsov, [1] Igor S. Makarov, [1] Pavel V. Zatonskikh, [1] Galina N. Bondarenko, [2] Anna K. Berkovich, [2] Galina S. Chebotaeva [1] A.V.Topchiev Institute of Petrochemical Synthesis, RAS, 29, Leninsky prospekt, Moscow, 119991 Russia [2] Chemistry department, Lomonosov Moscow State University University, Moscow, 119991 Russia
pp05.031	**Modification of Conductivity, Superhydrophilicity and Photocatalytic Activity of TiO_2 Thin Films Through Carbon Nanotubes Doping** [1] Geraldine LM. Leonard, [1] Simon Remy, [1] Charline M. Malengreaux, [1] Benoit Heinrichs [1] University of Liege, Laboratoire de Génie Chimique, B6a, alle du six aout, B-4000 Liège, Belgium
pp05.032	**Heterophasic Synthesis of Fe_3O_4 Organosol for Nanocomposites Promising in Optoelectronics** [1] Anton I. Nechaev, [1] Viktor A. Valtsifer, [1] Vladimir N. Strelnikov, [2] Valentine A. Milichko, [2] Vladimir P. Dzyuba, [2] Yurii N. Kulchi [1] Institute of Technical Chemistry Ural Branch RAS, 3, Academician Korolev street, Perm, Russia [2] Institute of Automation and Control Processes Far Easter Branch RAS, 5, Radio street, Vladivostok, Russia

pp05.033	**Enhanced Reactivity of Micro Boron through Adding Aluminum and Magnesium** [1] Yi Cheng, [1] Hongtao Yang, [1] Yanchun Li, [1] Baoyun Zhang [1] Nanjing University of Science and Technology, Nanjing, 210094, P.R.China
pp05.034	**A High Performance Nanostructured Concretes. A New Point of View** [1] Andrey N. Ponomarev [1] St.Petersburg State Polytechnical University, Vice-President of Russian Nanotechnology Siciety, 190020,St.Petersburg, Ciolkovskogo, 11, Russia
pp05.035	**Synthesis and Investigation in Magnetic Characteristics of Mesoporous Silicate Structures NiO-MCM-41 and Fe_2O_3-MCM-41** [1] Anton I. Nechaev, [1] Natalia B. Kondrashova, [1] Viktor A. Valtsifer, [2] V Y. Mitrofanov, [2] S A. Uporov [1] Institute of Technical Chemistry Ural Branch RAS, 3, Academician Korolev street, Perm, Russia [2] Institute of Metallurgy Ural Branch RAS, 18,S. Kovalevskoi street, Yekaterinburg, Russia
pp05.036	**Synthesis and Magnetic Properties of Magnetic Polymer Spheres and Film** [1] Chun-Rong Lin, [2] Cheng-Feng Yang, [2] Mei-Li Chen, [3] I. S. Edelman, [3] S. G. Ovchinnikov, [2] Cheng-Chien Wang, [2] Yu-Jhan Siao, [1] Yaw-Teng Tseng, [4] I. S. Lyubutin, [2] Chung-Chun Wu [1] National Pingtung University of Education, Pingtung County 90003, Taiwan [2] Russian Academy of Sciences, Moscow 119333, Russia [3] Southern Taiwan University, Tainan 71005, Taiwan [4] Siberian Branch of Russian Academy of Sciences, Krasnoyarsk 660036, Russia
pp05.037	**The Formation of Bimetallic Nanoparticles in the Irradiated IPEC Complexes Containing Au-Cu and Ag-Cu Ions** [1] Dmitriy Klimov, [2] Sergey Belopushkin, [2] Sergey Zezin, [2] Elena Zezina [1] Lomonosov Moscow State University of Fine Chemical Technologies, 119571 Moscow, prospect Vernadskogo 86, Russia [2] The Institute of Synthetic Polymeric Materials, Profsoyuznaya st. 70 117393 Moscow, Russia [3] Moscow State University, Faculty of Chemistry, 119991,Moscow 1, GSP-1, 1-3 Leninskiye Gory, Russia
pp05.038	**The Structure and Magnetic Properties of Nanocomposites Fe-Co/C Based on IR Pyrolized Polyacrylonitrile** [1] Mikhail I. Ivantsov, [1] Mikhail N. Efimov, [1] Dmitriy G. Muratov, [1] Lev M. Zemtsov, [2] Ella L. Dzidziguri, [1] Galina P. Karpacheva [1] A.V.Topchiev Institute of Petrochemical Synthesis, RAS, 119991, Moscow, Leninskiy pr. 29, Russia [2] National University of Science and Technology «MISIS», 119991, Moscow, Leninskiy pr. 4, Russia
pp05.039	**Multifunctional Nanoporous Composite Material** [1] Andrey Yu. Kozlov, [1] Inna I. Rastegaeva, [1] Maksim V. Dorogov, [1] Maksim N. Tyurkov, [1] Ilya M. Sosnin, [1] Anatoly A. Vikarchuk [1] Togliatty State University, 14, Belorusskaya St., Togliatti, 445667 Russian Federation

Section 06 – Polymer, Organic and Other Soft Matter Materials

12:00 PM – 2:00 PM	Poster session
pp06.008	**Nanostructure and Geometry-Optimization Study of a New 4, 4'-Bithiazole Compounds** [1] Akram Hosseinian, [1] Amin Ghodousian, [1] Hamid Reza Rahimipour [1] Department of Engineering Science, College of Engineering, University of Tehran, P.O. Box 11155-4463 Iran
pp06.009	**Electro-Optical Properties of New Electrochromic Copolymers Based on 3,4-etylenedioxythiophene and Spiro Bipropylenedioxythiophene** [1] Lutfiye Canan Pekel, [1] Baris Karabay, [1] Atilla Cihaner [1] Atilim University, Ankara, Turkey
pp06.010	**Langmuir and Langmuir-Blodgett Monolayers of Linear Dicyanovinyl Derivatives of Oligothiophene Disiloxanes** [1] D.S. Anisimov, [2] A.S. Sizov, [2] Yu.N. Luponosov, [1] V.V. Bruevich, [2] E.V. Agina, [1] D.Yu. Paraschuk, [2] S.A. Ponomarenko [1] Faculty of Physics and International Laser Center, M. V. Lomonosov Moscow State University, 119991 Moscow, 1-2 Leninskiye Gory, Russia [2] ISPM RAS, 117393 Moscow, Profsoyuznaya st. 70, Russia
pp06.011	**Large-Area Molecularly-Smooth Vapor and Solution Grown Oragnic Semiconducting Crystals** [1] Vladimir V. Sobornov, [1] Dmitry Yu. Paraschuk, [1] Vladimir V. Bruevich [1] Lomonosov Moscow State University, Lomonosov Moscow State University,GSP-1, Leninskie Gory, Moscow, 119991, Russian Federation
pp06.012	**New Reactive Nanostructured Luminophores for Functional Organosiloxane Polymers** [1] Maxim S. Skorotetsky, [1] Oleg V. Borshchev, [1] Nikolay M. Surin, [1] Yelena A. Tatarinova, [1] Sergey A. Ponomarenko [1] Enikolopov Institute of Synthetic Polymeric Materials (ISPM RAS), Profsoyuznaya st. 70 117393 Moscow, Russia
pp06.013	**Optoelectronic Properties of Ambipolar Poly(2,5-dithienylpyrrole) Derivatives** [1] Pinar Camurlu, [1] Nese Karagoren Guven [1] Akdeniz University Department of Chemistry, 07058 Antalya, Turkey
pp06.014	**Poly(pyridinium triflate) / Poly(styrene sulfonate) Complex: Preparation, Characterization and Electrochromic Properties** [1] Mikhail M. Petrov, [1] Roman D. Pichugov, [1] Elena E. Makhaeva [1] Department of Physics, Lomonosov Moscow State University, Leninskiye Gory 1, 119991 Moscow, Russia

pp06.015	**Self-Assembly Method of Surface Modification for Deposition of Active Layer of Organic Field Effect Transistors** [1] Anastasia V. Glushkova, [2] Oleg V. Borschev, [3] Valeriy A. Postnikov, [1] Vladimir V. Sobornov, [1] Vladimir V. Bruevich, [2] Sergey A. Ponomarenko, [1] Dmitriy Yu. Paraschuk [1] Lomonosov Moscow State University, Leninskie Gory, 1, Moscow, 119991, Russia [2] Enikolopov Institute of Synthetic Polymeric Materials, a foundation of the Russian Academy of Sciences (ISPM RAS), Profsoyuznaya st., 70, 117393, Moscow, Russia [3] Donbas National Academy of Engineering and Architecture, 86123, Donetsk region, Makeyevka, Derzhavin str., 2, Ukraine
pp06.016	**Towards Air-Stable n-Chanel OFETs via Chemical Design of Indigo-Based Semiconductors** [1] Irina V. Klimovich, [1] Lidiya I. Leshanskaya, [1] Denis V. Anokhin, [1] Dmitry V. Novikov, [2] Sergey I. Troyanov, [1] Nadezhda N. Dremova, [1] Pavel A. Troshin [1] Institute of Problems of Chemical Physics, Chernogolovka, Semenov Prospect 1, Russia [2] M.V.Lomonosov Moscow State University, Moscow, Leninskie gory, Russia
pp06.017	**Towards Understanding the Behavior of Indigo Thin Films in Organic Field-Effect Transistors: A Template Effect of the Aliphatic Hydrocarbon Dielectric on the Crystal Structure and Electrical Performance of the Semiconductor** [1] Lidiya I. Leshanskaya, [1] Denis V. Anokhin, [1] Evgeniy V. Sheglov, [1] Nadezhda N. Dremova, [1] Diana K. Susarova, [1] Pavel A. Troshin [1] IPCP RAS, Academician Semenov av. 1, Chernogolovka, Moscow region, 142432, Russia

Section 07 – Nanomaterials for Energy

12:00 PM – 2:00 PM	Poster session
pp07.011	**Hydrothermally Crystallized Anodic Titania as s Photoelectrochemical Cell Photoanode** [1] Anton Gavrilov, [1] Dmitrii Petukhov, [1] Bulat Churagulov [1] Lomonosov Moscow State University, GSP-1, Leninskie Gory, Moscow, 119991, Russian Federation
pp07.012	**Fluorine-Modified Titanium Dioxide Nanomaterials for Molecular Photovoltaics** [1] Alexey Sadovnikov, [1] Alexander Baranchikov, [1] Olga Boytsova, [1] Vladimir Ivanov, [1] Sergey Kozyukhin, [2] Vitaly Grinberg, [2] Victor Emets [1] Institute of General and Inorganic Chemistry, Moscow 119991, Russia [2] Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow 119991, Russia
pp07.013	**A Precise Technique for Estimation of the Open Circuit Voltage of Organic Bulk Heterojunction Solar Cells** [1] Dmitry V. Novikov, [2] Alexander V. Mumyatov, [2] Alexander V. Akkuratov, [2] Diana K. Susarova, [2] Olga A. Mukhacheva, [2] Pavel A. Troshin [1] IPCP RAS, Academician Semenov avenue 1, Chernogolovka, Moscow region, 142432 Russian Federation [2] INEPCP (Branch) RAS, Academician Semenov avenue 1, Chernogolovka, Moscow region, 142432 Russian Federation
pp07.014	**Bandgap Engineering by Decoration of ZnO Nanoparticles** [1] Kirill V. Vokhmintcev, [1] Elena A. Trusova, [2] Alexey N. Kirichenko [1] A.A. Baikov Institute of Metallurgy and Materials Science, RAS, 119991, Leninsky pr. 49, Moscow, Russia [2] Technological Institute for Superhard and Novel Carbon Materials, 7**a** Centralnaya street, Troitsk, Moscow, 142190 Russia
pp07.015	**Characterization and Photochemical Performance of the SnO_2 Nanocomposite Photoanode for Dye-Sensitized Solar Cell** [1] I-Ming Hung, [1] Ripon Bhattacharjee [1] Department of Chemical Engineering and Materials Science, Yuan Ze University, No. 135, Yuan-Tung Road, Chungli, Taoyuan 320, Taiwan
pp07.016	**Dicyanovinyl-Substituted Oligothiophene Acceptors for Organic Solar Cells** [1] Vasily A. Trukhanov, [1] Marina M. Koroleva, [1] Arthur L. Mannanov, [1] Ilya V. Golovnin, [2] Aleksandr N. Solodukhin, [2] Yuriy N. Luponosov, [2] Sergey A. Ponomarenko, [1] Dmitriy Y. Paraschuk [1] Lomonosov Moscow State University, Leninskie Gory 1, 119991 Moscow, Russia [2] N.S. Enikolopov Institute of Synthetic Polymer Materials of RAS, Profsoyuznaya st. 70, 117393 Moscow, Russia

pp07.017	**Dye-Sensitized Solar Cells Incorporating Plasmonic Core-Shell Nanoparticles: Requirements for Chemical and Thermal Stability** [1] Bjorn Torngren, [2] Kenta Akitsu, [3] Anne Ylinen, [3] Simon Sanden, [2] Takaya Kubo, [2] Hiroshi Segawa, [3] Ronald Osterbacka, [1] Jan-Henrik Smatt [1] Laboratory of Physical Chemistry and Center of Excellence for Functional Materials, Abo Akademi University, Porthansgatan 3-5, 20500 Turku, Finland [2] Research Center for Advanced Science and Technology, The University of Tokyo, 4-6-1, Komaba, Meguro-ku, Tokyo 153-8904, Japan [3] Physics and Center of Excellence for Functional Materials, Abo Akademi University, Porthansgatan 3-5, 20500 Turku, Finland
pp07.018	**Effect of the Fullerene Component on the Performance of Bulk Heterojunction Organic Solar Cells Based on the PPV-PPE Copolymers** [1] Olga A. Mukhacheva, [1] Andrey E. Goryachev, [2] Daniel A M. Egbe, [2] Niyazy Serdar Sariciftci, [1] Pavel A. Troshin [1] IPCP RAS, Semenov Prospect 1, Chernogolovka, Moscow region, 142432, Russia [2] LIOS, Johannes Kepler University, Altenbergerstrasse 69, A-4040 Linz, Austria
pp07.019	**Efficient Organic Solar Cells Based on Novel Statistical Copolymers Comprising Carbazole, Fluorene, Thiophene and Benzothiadiazole Units** [1] Diana K. Susarova, [1] Alexander V. Akkuratov, [1] Dmitriy V. Novikov, [1] Pavel A. Troshin [1] IPCP RAS, Institute for Problems of Chemical Physics of Russian Academy of Sciences, Semenov Prospect 1, Chernogolovka, Moscow region, 142432, Russia
pp07.020	**Efficient Standard and Inverted Photovoltaic Cells Using Novel Charge-Sel e ctive Buffer Layer Materials** [1] Diana K. Susarova, [1] Olga A. Mukhacheva, [1] Lubov' A. Frolova, [1] Dmitriy V. Novikov, [1] Ekaterina A. Khakina, [1] Pavel A. Troshin [1] Institute for Problems of Chemical Physics of Russian Academy of Sciences, Semenov Prospect 1, Chernogolovka, Moscow region, 142432 Russia
pp07.021	**Hierarchically Assembled Microspheres Consisting of Nanosheets of Highly Exposed (001)-Facets TiO_2 for Dye-Sensitized Solar Cells** [1] Jia-De Peng, [1] Chi-Ta Lee, [1] Hsi-Hsin Lin, [1] Pei-Chieh Shih, [2] Chuan-Ming Tseng, [1] Kuo-Chuan Ho [1] National Taiwan University, Department of Chemical Engineering, National Taiwan University, Taipei 10617, Taiwan [2] Academia Sinica, Institute of Physics, Academia Sinica, Taipei 11529, Taiwan
pp07.022	**High LUMO Level Fullerene Monocycloadducts as Electron-Acceptors for Organic Solar Cells** [1] Alexander V. Mumyatov, [1] Dmitriy V. Novikov, [1] Olga A. Mukhacheva, [1] Diana K. Susarova, [1] Fedor A. Prudnov, [1] Andrey E. Goryachev, [1] Pavel A. Troshin [1] The Institute of Problems of Chemical Physics of the Russian Academy of Sciences, Academician Semenov avenue 1, Chernogolovka, Moscow region, 142432 Russian Federation

pp07.023	**Influence of a Co-Doping on a Phosphorus and Gallium Diffusion in Germanium in $In_{0,01}Ga_{0,99}As/In_{0,56}Ga_{0,44}P/Ge$ Heterostructures** [1] Svetlana P. Kobeleva, [1] Ilya M. Anfimov, [1] Sergey Y. Yurchuk, [1] Andrey V. Turutin [1] National University of Science and Technology MISiS, Moscow, Leninsky Prospekt 4, Russia
pp07.024	**New Donor-Acceptor Conjugated Copolymers for Solar Cells** [1] Vitaliy S. Kochurov, [2] Mukhamed L. Keshtov, [3] Ganesh-Datt Sharma, [4] Fang-Chung Chen, [2] Alexei R. Khokhlov [1] Faculty of Physics, M.V.Lomonosov Moscow State University, Leninskie Gory, Moscow, 119991 Russia [2] INEOS RAS, Vavilova st., 28, Moscow, 119991 Russia [3] R&D Center for Engineering and Science, JEC Group of Colleges, Jaipur Engineering College, Kukas, Delhi-Jaipur Express highway, Jaipur 303101 India [4] National Chiao Tung University, 1000 University Road, Hsinchu, Taipei, 30010 Taiwan
pp07.025	**Novel Star-Shaped Oligomer for Organic Photovoltaics** [1] A. N. Solodukhin, [1] Y. N. Luponosov, [2] J. Min, [2] T. Ameri, [3] N. Kausch-Busies, [2] C. J. Brabec, [1] S. A. Ponomarenko [1] N. S. Enikolopov Institute of Synthetic Polymer Materials of the RAS, Profsoyuznaya st. 70, Moscow, Russia [2] I-MEET, Friedrich-Alexander-University Erlangen-Nuremberg, Martensstraße 7, 91058 Erlangen, Germany [3] Heraeus Precious Metals GmbH & Co. KG, Conductive Polymers Division (Clevios), Chempark Leverkusen Build. B202, D-51368 Leverkusen, Germany
pp07.026	**Phosphotungstic Acid Modified TiO_2 Nanosheets as a Semiconductor Film for Enhanced Performance of Dye-Sensitized Solar Cells** [1] Jia-De Peng, [1] Hsi-Hsin Lin, [1] Chi-Ta Lee, [2] Chuan-Ming Tseng, [1] Kuo-Chuan Ho [1] National Taiwan University, Department of Chemical Engineering, National Taiwan University, Taipei 10617, Taiwan [2] Academia Sinica, Institute of Physics, Academia Sinica, Taipei 11529, Taiwan
pp07.027	**Photoelectrochemical Solar Cells with the Nano Polymer Binder Based on Titanium Dioxide** [1] Dmitry Yu. Godovsky, [2] Yulianna E. Roginskaya, [2] Natalia V. Golubko, [3] Anastasia E. Ozimova, [3] Dmitri Yu. Paraschuk [1] INEOS RAS, Vavilova, 28, Moscow, Russia [2] Karpov Institute of Physicsl Chemistry, Vorontsovo pole str.5, Moscow, Russia [3] Moscow State University, Vorobievy Gory, 1, Russia
pp07.028	**Raman Probe of Molecular Order Dynamics in Organic Photovoltaic Cells** [1] Elizaveta Feldman, [1] Vladimir Bruevich, [1] Artur Mannanov, [1] Vasily Trukhanov, [1] Dmitry Paraschuk [1] Faculty of Physics & International Laser Center, M.V. Lomonosov Moscow State University, Leninskie Gory 1, Moscow, Russia

pp07.029	**Solar Cells Based on Layered Particulate Structures of Active Layer: Theoretical Study of the Light Efficiency Increasing** [1] Valery A. Loiko, [1] Alexander A. Miskevich [1] B.I.Stepanov Institute of Physics of the National Academy of Sciences of Belarus, 68, Nezaleznastsi prospect, Minsk, 220072, Belarus
pp07.030	**Suppressed Degradation of P3HT Films on Conducting Substrates** [1] Yichen Zhao, [1] Abhilash Sugunan, [1] Torsten Schmidt, [2] Andrea Fornara, [1] Muhammet S. Toprak, [1] Mamoun Muhammed [1] Royal Institute of Technology, Isafjordsgatan 22, Kista, SE-164 40, Sweden [2] SP Technical Research Institute of Sweden, Stockholm, Box 5607, SE-114 86, Sweden
pp07.031	**Synthesis, Electrochemical and Photovoltaic Properties of the Double-Caged Fullerene Esters** [1] Victor A. Brotsman, [1] Vitaliy A. Ioutsi, [1] Oleg M. Nikitin, [1] Nikita M. Belov, [1] Alexey A. Goryunkov, [1] Marina E. Maksimova, [2] Vitaliy A. Trukhanov, [2] Galina K. Galimova, [2] Dmitriy Yu. Paraschuk [1] Lomonosov Moscow State University, Chemistry Department, 119991, Moscow, 1-3 Leninskiye Gory, Russia [2] Lomonosov Moscow State University, Faculty of Physics and International Laser Center, 119991, Moscow, 1-3 Leninskiye Gory, Russia
pp07.032	**Template Formation of Thin Plate Particles of $LiFe_{1-x}Mn_xPO_4$ Solid Solutions** [1] Egor A. Pleshakov, [1] Pavel P. Yakovlev, [1] Vladimir A. Alyoshin [1] Lomonosov Moscow State University, Leninskie Gory 1, Russia
pp07.033	**Unusual Behavior of p-Type and n-Type Semiconductors Applied as Charge-Selective Buffer Layers in Organic Solar Cells** [1] Fedor Prudnov, [1] Diana Susarova, [1] Lyubov Frolova, [1,2] Dmitry Novikov, [2] Sergey Babenko, [1] Pavel Troshin [1] Institute for Problems of Chemical Physics, Semenov Prospect 1, Chernogolovka, Moscow region, Russia [2] Institute of Energy Problems for Chemical Physics (Branch) of the Russian Academy of Sciences, Semenov Prospect 1, Chernogolovka, Moscow region, Russia

Section 08 – Biological and Biomedical Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp08.020	**Nanocomposites of Polyetherketone / Fe_xO_y Nano Oxides Processed by Selective Laser Sintering** [1] Igor V. Shishkovsky, [1] Vladimir Scherbakov, [2] Yuri G. Morozov [1] Lebedev Physical Institute of Russsian Academy of Sciences, Novo-Sadovaja st. 221, 443011 Samara, Russia [2] Institute of Structural Macrokinetics and Materials Science (ISMMS), RAS, Chernogolovka 142432, Russia
pp08.021	**The Study of Physic-Chemical Properties of the Nanodiamond Materials and Their Interaction with Different Viruses** [1] Alexandra Isakova, [2] Marina Ivanova, [2] Elena Burtseva, [2] Nikolay Nosik, [1] Boris Spitsyn, [2] Valeriya Ivanova [1] A.N.Frumkin Institute of physical chemistry and electrochemistry RAS, 119071 Moscow, Lenisky prospect, 31, Russia [2] D.I. Ivanovsky Institute of Virology, of Ministry of Health of the Russian Federation, 123098 Moscow, Gamaley st., 16, Russia
pp08.022	**Synthesis and Toxicological Study of Copper Nanoparticles** [1] Alexey N. Zhigach, [1] Ilya o. Leipunsky, [1] Mikhail L. Kuskov, [1] Elena S. Afanasenkova, [1] Nadezda G. Berezkina, [1] Olga A. Bogoslovskaja, [1] Alla A. Rakhmetova, [1] Irina P. Olkhovskaya, [1] Natalya N. Gluschenko [1] Talrose Institute for Energy Problems of Chemical Physics, 119334 Moscow, Leninsky prosp., 38, bld.2, Russia
pp08.023	**A Comparative Evaluation of Antibacterial Property of Silver Nanoparticles and Silver Embedded Composites** [1] Ilgim Gokturk, [2] Kadir Erol, [3] Mustafa Kocakulak, [4] Abdullah Ceylan, [2] Lokman Uzun [1] Division of Nanotechnology and Nanomedicine, Hacettepe University, 06800 Beytepe, Ankara, Turkey [2] Department of Chemistry, Hacettepe University, 06800 Beytepe, Ankara, Turkey [3] Department of Biomedical Engineering, Baskent University, 06810, Ankara, Turkey [4] Department of Physics Engineering, Hacettepe University, 06800 Beytepe, Ankara, Turkey
pp08.024	**Anti-Inflammatory Effect of Some New Biomaterials Based on Gold Nanoparticles and Polyphenols from Cornus Sanguinea L. fruits** [1] Bianca E. Moldovan, [1] Luminita C. David, [2] Liliana Olenic, [2] Adriana Vulcu, [3] Adriana G. Filip [1] Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca, Romania, Arany Janos11, Cluj-Napoca, Romania [2] National Institute for Research and Development for Isotopic and Molecular Technologies, Cluj-Napoca, Romania [3] Faculty of Medicine, 'Iuliu Hatieganu» University of Medicine and Pharmacy, Cluj-napoca, Romania

pp08.025	**Biofabrication of Silver Sulfide Nanoparticles by the Metal-Reducing Bacterium Shewanella Oneidensis MR-1** [1] Anastasia S. Shebanova, [2] Tatyana A. Voeikova, [1] Alexander V. Egorov, [2] Lidiya K. Emelyanova, [2] Irina N. Krestyanova, [2] Lyudmila M. Novikova, [3] Konstantin V. Shaytan, [1] Mikhail P. Kirpichnikov, [2] Vladimir G. Debabov [1] Lomonosov Moscow State University, 119234, Leninskie Gori, 1, Moscow, Russia [2] State Research Institute of Genetics & Selection of Microorganisms, 117545, 1 First Dorozhny proezd, 1, Moscow, Russia [3] N.N.Semenov Institute of chemical physics of the Russian Academy of Sciences, 119991, Ul. Kosygina, 4, Moscow, Russia
pp08.026	**Carbon Nanomaterials as Anti-Oxidizing Agents: Optical Spectroscopy and DFT Study** [1] Mikhail A. Soldatov, [1] Igor G. Alperovich, [2] Eugenia V. Prazdnova, [3] Yuliana O. Smirnova, [1] Alexander V. Soldatov [1] Southern Federal University, Research Center for Nanoscale Structure of Matter, Zorge str. 5, Rostov-on-Don, Russia [2] Southern Federal University, Research Institute of Biology, Stachki av. 194/1, Rostov-on-Don, Russia [3] Purdue University, Department of Physics, 525 Northwestern Avenue, West Lafayette, Indiana, 47907, Unites States
pp08.027	**Carbon Quantum Dots as Imaging Agent in the Study of Cells** [1] Artem S. Minin, [2] Anatoly E. Yermakov, [2] Ilya V. Byzov, [2] Mikhail A. Uimin, [1] Artem A. Minin, [1] Maria V. Ulitko, [3] Leonid T. Smoluk [1] Ural Federal University named after the first President of Russia B.N.Yeltsin, 620002, Ekaterinburg, Mira street 19, Russia [2] Institute of Metal Physics, Ural Division of the Russian Academy of Sciences, 620219, Ekaterinburg, Sofia Kovalevskaya st., 18, Russia [3] institute of Immunology and Physiology, Ural Division of the Russian Academy of Sciences, 620219, Ekaterinburg, Pervomayskaya 106, Russia
pp08.028	**Cyto-Genotoxical Evaluations of S-nitrosated Superaramagnetic Iron Oxide Nanoparticles: A Promising Anti-Cancer Agent** [1] Amedea B. Seabra, [1] Ana Carolina F. Ferrarini, [1] Paula S. Haddad, [2] Leandro O. Feitosa, [2] Renata de. Lima
pp08.029	**Innovative Biocompatible and Antibacterial Fabrics with Healing Properties** [1] Daniela Ferro, [1] Gabriella Di Carlo, [2] Sergey M. Barinov, [2] Vladimir Komlev, [1] Gabriel M. Ingo, [1] Giuseppina Padeletti, [3] Cristina Failla [1] CNR-ISMN, Via dei taurini 19, 00185 Roma, Italy [2] RAS Baikov Inst, Leninsky prospect 49, 119991, Moscow, Russia [3] Experimental Immunology Laboratory, IDI-IRCCS, via Monti di Creta 104, 00167, Rome, Italy
pp08.030	**Investigation of Phase Transitions Associated with Shape Instabilities of Tubular Lipid Membranes** [1] Ivan Y. Golushko [1] South Federal University, Zorge 5, Rostov-on-Don, 344090, Russia
pp08.031	**New Approach to Visualization of Fluorescent Carbon Biomarkers Using Artificial Neural Networks** [1] Alexey M. Vervald, [1] Sergey A. Burikov, [1] Sergey A. Dolenko, [1] Kirill A. Laptinskiy, [2] Igor I. Vlasov, [1] Tatiana A. Dolenko [1] Lomonosov Moscow State University, GSP-1, Leninskie Gory, Moscow, 119991, Russian Federation [2] Prokhorov General Physics Institute, Russian Academy of Sciences, 119991, Moscow, Vavilov Str., 38, Russian Federation

pp08.032	**Self-Dependent Antitumor Effects of Biogenic Nanoparticles** [1] Oleg E. Polozhentsev, [1] Alexander A. Guda, [1] Alexander V. Soldatov, [2] Irina A. Goroshinskaya, [2] Polina S. Kachesova, [2] Galina V. Zhukova, [2] Elena Yu. Zlatnik, [2] Alexey Yu. Maximov [1] Southern Federal University, Rostov-on-Don, Russia [2] Rostov Scientific and Research Oncology Institute, Rostov-on-Don, Russia
pp08.033	**Synthesis, Characterization and Magnetic Properties of Iron Oxides Nanoparticles** [1] Sergey V. Salikhov, [1] Alexander G. Savchenko, [1] Igor V. Shchetinin [1] National University of Science and Technology "MISiS", Leninsky prospect 4, 119049 Moscow, Russian Federation
pp08.034	**Synthesis and Surface Modification of Multifunctional Mesoporous Eu:GdF_3 Nanoparticles for Biomedical Applications** [1] Sonia Rodriguez-Liviano, [1] Nuria O. Nuñez, [2] Sara Rivera, [2] Jesus M. de la Fuente, [1] Manuel Ocana [1] Instituto de Ciencia de Materiales de Sevilla, CSIC-US, Americo Vespucio, 49, 41092-Sevilla, Spain [2] Instituto de Nanociencia de Aragon, Universidad de Zaragoza, Mariano Esquillor s/n, Zaragoza, 50018-Zaragoza, Spain
pp08.035	**Synthesis and Characterization of CdTe/ZnS Quantum Dots and Their In Vitro Toxicity Assessment** [1] Jana Chomoucka, [1] Jana Drbohlavova, [1] Ondrej Svoboda, [1] Petra Majzlikova, [1] Jan Prasek, [1] Jan Pekarek, [1] Jaromir Hubalek [1] Brno Universtity of Technology, Central European Institute of Science and Technology, Technicka 3058/10, 61600, Brno, Czech Republic
pp08.036	**Synthesis and Characterisation of Uranium Imprinted Nanoparticle Embedded Cryogel System** [1] Duygu Cimen, [1] Nilay Bereli, [1] Adil Denizli [1] Hacettepe University, Beytepe Campus, Department of Chemistry, 06800, Ankara, Turkey
pp08.037	**Synthesis of Magnetic Nanoparticles for Human Interferon-α Purification** [1] Semra Akgonullu, [1] Yeseren Saylan, [1] Handan Yavuz, [1] Adil Denizli [1] Hacettepe University, Department of Chemistry, 06800, Ankara, Turkey
pp08.038	**Targeted Delivery of MRI Contrast Agent for Visualization of Glioma C6** [1] Tatiana O. Abakumova, [1] Dmitrii A. Bychkov, [2] Sergey A. Shein, [3] Maksim A. Abakumov, [1] Alexander V. Kabanov, [1] Nataliya V. Nukolova, [2] Vladimir P. Chekhonin [1] The Lomonosov Moscow State University, 1, Leninskie gory street, Moscow, Russia [2] The Pirogov Russian National Research Medical Unviersity, 1, Ostrovityanova, Moscow, Russia [3] The Serbsky National Research Center of Forensic and Social Psychiatry, 23, Kropotkinskuii lane, Moscow, Russia
pp08.039	**The Magnetite and Magnetite-Gold Nanoparticles Functionalization by Organic Ligands** [1] Aleksandr V. Barulin [1] Laboratory chemical design of bionanomaterials, Deparment of chemical enzymology, Lomonosov Moscow State University, Leninskie gory, 1, Russia

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

12:00 PM – 2:00 PM	Poster session
pp09.014	**Nanoindentation Properties of Heat Treated 7075 Aluminum Alloy Disc** [1] Yunche Wang, [2] Sergei Alexandrov, [3] Sergey Aizikovich [1] National Cheng Kung University, 1 University Road, Tainan, 70101 Taiwan [2] A.Yu. Ishlinskii Institute for Problems in Mechanics, Russian Academy of Sciences, 119526 Moscow, Russia [3] Scientific Educational Center "Materials", Don State Technical University, 344000 Rostov-on-Don, Russia
pp09.015	**Development of Metal Matrix Composites with Non-Agglomerated Nanodiamond Reinforcing Particles for Different Applications** [1] Vladimir A. Popov [1] NUST «MISIS», Leninsky prospect, 4, Moscow, 119049, Russia
pp09.016	**Graded Nano- and Micro-Crystalline Composite CVD Diamond Coatings for Tribological and Machining Applications** [1] Ravikumar Dumpala, [1] Ramamoorthy B, [2] M.S. Ramachandra Rao [1] Manufacturing Engineering Section, Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai 600036, India [2] Nano Functional Materials Technology Centre, MSRC and Department of Physics, Indian Institute of Technology Madras, Chennai 600036, India
pp09.017	**Preparation of Optical Quality Films from Graphene-Carboxymethylcellulose Polymer Composite and Application for Erbium Doped Fiber Laser Mode Locking** [1] Anatoly S. Lobach, [1] Dmitry V. Khudyakov, [1] Nataliya G. Spitsina, [2] Valery A. Kazakov, [2] Sergei K. Sigalaev, [3] Chengbo Mou, [3] Raz Arif, [3] Sergei K. Turitsyn, [3] Aleksey G. Rozhin [1] Institute of Problems of Chemical Physics RAS, Ac. Semenov Av. 1, Chernogolovka, Moscow Region 142432, Russia [2] Keldysh Research Center, Onezhskaya 8, Moscow 125438, Russia [3] Aston Institute of Photonic Technologies, Aston University, Aston Triangle, Birmingham, B4 7ET United Kingdom
pp09.018	**Prismatic Misfit Dislocation Loops in Hollow Core-Shell Nanopaticles** [1] M.Y. Gutkin, [2] A.E. Romanov, [3] A.L. Kolesnikova, [4] S.A. Krasnitsky [1] Institute of Problems of Mechanical Engineering, Russian Academy of Sciences, Bolshoj 61, Vasil. Ostrov, St. Petersburg, 199178, Russia [2] Department of Mechanics and Control Processes, St. Petersburg State Polytechnical University, Polytekhnicheskaya 29, St. Petersburg, 195251, Russia [3] Department of LED Technologies, ITMO University, Kronverkskiy pr. 49, St. Petersburg, 197101, Russia [4] Ioffe Physical Technical Institute, Russian Academy of Sciences, Polytekhnicheskaya 26, St. Petersburg, 194021, Russia [5] Togliatti State University, Belorusskaya 14, Togliatti, 445667, Russia

pp09.019	**Novel Approaches to the Analysis of Thermal and Mechanical Decomposition of Polymer-Nanocarbon Composite Systems** [1,2] Aleksei O. Pozdnyakov, [2] Boris B. Ginzburg, [3] Andrei A. Konchits, [4] Alexander L. Pushkarchuk [1] A.F. Ioffe Physico Technical Institute, S-Petersburg, Polytechnicheskaya 26, 194021, Russia [2] Institute of the Problems of Mechanical Engineering, S-Petersburg, Bol'shoi pr. 61, 199178, Russia [3] Institute of Physical and Organic Chemistry, 220072, Minsk, Belarus [4] Institute of Semiconductor Physics of the NAS of Ukraine, Kyiv, Nauky ave. 45, 03028, Ukraine
pp09.020	**Structure and Strength of Nanostructured Partially Stabilized Zirconia Crystals** [1] Alexey V. Kulebyakin, [1] M A. Borik, [2] V T. Bublik, [1] E E. Lomonova, [1] V A. Mizina, [2] F O. Milovich, [1] V V. Osiko, [2] N Yu. Tabachkova [1] Prokhorov General Physics Institute of the Russian Academy of Sciences (GPI RAS), Moscow, Russia [2] National University of Science and Technology "MISIS", Moscow, Russia
pp09.021	**Structure and Spectral-Luminescent Properties of Nanostructured Crystals Partially Stabilized Zirconia Doped with Rare-Earth Ions (Nd, Ce, Er)** [1] Svetlana Antoshkina, [1] Polina Ryabochkina, [1] Aleksey Chabushkin, [1] Nataliya Sidorova, [2] Sergey Ushakov, [2] Elena Lomonova, [3] Natalia Tabachkova, [3] Filipp Milovich, [2] Michael Borik [1] Ogarev Mordovia State University, Saransk, Bolshevistskaya St, 68, Russia [2] A.M. Prohkorov General Physics Institute Russian Academy of Sciences, Moscow, Vavilova St, 38, Russia [3] University of Technology "MISIS", Moscow, Leninskiy prospekt, 4, Russia
pp09.022	**The Comparison of Thin Film Micro- and Nanoindentation** [1] Maria V. Bulygina [1] Bauman Moscow State Technical University, MT-11, 5, 2-d Baumanskay St., Moscow, 105005 Russia

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

12:00 PM – 2:00 PM	Poster session
pp10.013	**Strains in Ge/Si Heterostructures with Ge Quantum Dots: An Investigation by Means of High Resolution TEM** [1] Mikhail S. Storozhevykh, [1] Larisa V. Arapkina, [1] Vladimir A. Yuryev [1] A. M. Prokhorov General Physics Institute, RAS, 119991, Moscow, Vavilov Str., 38, Russia
pp10.014	**A Study on Si and P Doped h-BN Sheet** [1] Hatice Kokten, [1] Sakir Erkoc [1] Department of Physics, Middle East Technical University, 06531 Ankara, Turkey
pp10.015	**Application of Asymptotic Methods in Modeling of the Wave Functions of the Carriers in Si/SiGe Heterostructures** [1] Andrey O. Orlov, [1] Natalia T. Levashova [1] Lomonosov Moscow State University, MSU, Faculty of Physics, 119991, Moscow, GSP-1, 1-2 Leninskiye Gory, Russia
pp10.016	**Determination of the 3D Local Atomic and Electronic Structure of Nanostructured Materials by Combining X-Ray Absorption and Emission Spectroscopies and Computer Modelling** [1] Alexander V. Soldatov [1] Southern federal university of Russia, 5 Sorge, Rostov-on-Don, 344090 Russia
pp10.017	**Development of Superconducting Quantum Arrays** [1] Nikolay V. Kolotinskiy, [1] Victor K. Kornev, [2] Alexey V. Sharafiev, [3] Oleg A. Mukhanov [1] Department of Physics, Lomonosov Moscow State University, Leninskie Gory 1, Moscow, 119991, Russia [2] Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Leninskie Gory 1, Moscow, 119991, Russia [3] Hypres, Inc, 175 Clearbrook Road, Elmsford, NY, 10523, USA
pp10.018	**Electron Microscopy Study of Supercritical Fluids Electrodeposition of Mesoporous Silica Templates** [1] Reza J. Kashtiban, [1] Richard Beanland, [1] Jeremy Sloan, [2] Charlie Cummings, [2] Calum Robertson, [2] Pete Richardson, [2] Andrew L. Hector, [2] P N. Bartlett, [2] David C. Smith [1] The University of Warwick, Coventry, UK [2] The University of Southamton, Southamton, UK
pp10.019	**Electrostatically-Formed Nanowires as Gas Sensing Devices** [1] Alex Henning, [1] Nandhini Swaminathan, [1] Andrey Godkin, [1] Iddo Amit, [1] Yossi Rosenwaks [1] Tel Aviv University, School of Electrical Engineering, Ramat Aviv, 69978, Israel

pp10.020	**Enhancement of the Electrical Conductivity of the Solder Alloy According to the Addition of Sulfur** [1] Sangsun Yang, [1] Sang Hoon Kim, [1] Dong-Yeol Yang, [1] Tae-Soo Lim, [1] Yong-Jin Kim [1] Korea Institute of Materials Science, 797 Changwon-daero, Seongsan-gu, Changwon-si, Gyeongsangnam-do 642-831, Republic of Korea
pp10.021	**Formation and Research of Large-Aspect-Ratio Quantum InSb Nanowire Arrays** [1] Ilya A. Obukhov, [2] Gennadii G. Gorokh, [2] Anna I. Zakhlebaeva, [2] Andrey A. Lozovenko [1] System Recourses Ltd, Milkovo 1, Leninsky district, Moscow region, 142717, Russia [2] Belarusian State University of Informatics and Radioelectronic, Brovka Str. 6, Minsk, 220013, Belarus
pp10.022	**Nanoscale Tin Oxide of Different Morphology: Synthesis and Properties** [1] Denis V. Nazarov, [1] Olga M. Osmolowskaya, [1] Vladimir M. Smirnov, [1] Mikhail G. Osmolowsky, [1] Natalia P. Bobrysheva [1] Saint-Petersburg State University, Saint-Petersburg, Petrodvorets, Universitetskii pr. 26, Russia
pp10.023	**Nanostructured Thin Films of Multicomponent Semiconductor Oxides Made by Pulsed Laser Deposition** [1] Ivan E. Demin, [1] Aleksander G. Kozlov, [1] Polina S. Pavlova, [1] Gennadi M. Seropyan [1] Omsk F. M. Dostoevsky State University, Omsk, Prospect Mira, building 55A, Russia
pp10.024	**New Approach to the Fabrication of Highly Fluorescent Planar Materials with Plasmonic Nanostructures** [1] Nikita A. Toropov, [1] Tigran A. Vartanyan [1] St.Petersburg Nat'l Research Univ of IT, Mechanics and Optics, 197101, Saint Petersburg, Kronverkskiy pr., 49, Russia

Section 11 – Nanomaterials and Catalysis

12:00 PM – 2:00 PM	Poster session
pp11.016	**Evaluation of Plasma Technique Deposition Parameters in the Platinum Nanoparticles Obtention** [1] Nelson Ordonez, [1] Adir J. Moreira, [1] Ronaldo D. Mansano [1] University of Sao Paulo, Avenida Professor Luciano Gualberto, 158, Trav. 3, Sao Paulo, SP, Brazil
pp11.017	**Theoretical Investigation of Supported Gold Nanoparticles** [1] Giancarlo Cicero, [2] Federico Raffone [1] Politecnico di Torino - DISAT, I-10129 Torino, Italy [2] CNR-IMEM, I-431100 Parma, Italy
pp11.018	**CuI Nanoparticles Catalyzed Highly Efficient and Reusable Method for the Synthesis of Pyrimido[b]quinolinetriones in Aqueous Media** [1] Shahrzad Abdolmohammadi, [2] Akram Hosseinian, [3] Maryam Afsharpour [1] East Tehran Branch, Islamic Azad University, Department of Chemistry, Faculty of Science, East Tehran Branch, Islamic Azad University, P.O. Box 33955-163, Tehran, Iran [2] University of Tehran, Department of Engineering Science, College of Engineering, University of Tehran, P.O. Box 11365-4563, Tehran, Iran [3] Chemistry& Chemical Engineering Research Center of Iran, Chemistry& Chemical Engineering Research Center of Iran, PO Box 14335-186, Tehran, Iran
pp11.019	**Gold Nanoparticles as Highly Active Catalyst in H_2-D_2 Hydrogen Isotope Exchange Reaction** [1] Alexander A. Odintsov, [1] Mikhail O. Sergeev, [2] Alexandra A. Revina, [1] Olga A. Boeva [1] Mendeleev University of Chemical Technology of Russia, 9, Miusskaya sq., Moscow, Russia [2] Russian academy of sciences A.N. Frumkin Institute of Physical chemistry and Electrochemistry RAS (IPCE RAS), 31, Leninsky prospect, Moscow, 199071 Russia
pp11.020	**Hydride Phase Formation in Palladium Nanoparticles Studied by In Situ XANES, EXAFS and XRD** [1] Aram L. Bugaev, [1] Alexander A. Guda, [1,2] Kirill A. Lomachenko, [1] Vasiliy V. Srabionyan, [1] Lusegen A. Bugaev, [1] Alexander V. Soldatov, [3] Vladimir P. Dmitriev, [1,2] Carlo Lamberti, [4,5] Jeroen A. van Bokhoven [1] Department of Physics, Southern Federal University, Zorge street, 5, 344090, Rostov-on-Don, Russia [2] Department of Chemistry, Turin University, Via P. Giuria 7, 10125 Turin, Italy [3] Institute for Chemical and Bioengineering, ETH Zurich, HCI E127 8093 Zurich, Switzerland [4] Laboratory for Catalysis and Sustainable Chemistry, Paul Scherrer Institute, Villigen, Switzerland [5] Swiss-Norwegian Beamline at European Syncrotron Radiation Facility, Polygone Scientifique Louis Néel, 6 rue Jules Horowitz, 38000 Grenoble, France

pp11.021	**Hydrogenation Reaction Catalysts on the Base of Palladium and Carbon Nanomaterials** [1] Pavel Kalmykov, [1] Natal'ya Magdalinova, [1] Mikhail Klyuev [1] Ivanovo State University, Ivanovo, Ermak str., 39, Russia
pp11.022	**Investigation of Synthesis Conditions, Properties and Functionalization of Metal Organic Framework MOF-5** [1] Vera V. Butova, [1] Aram L. Bugaev, [1] Alexander A. Guda, [1] Alexander V. Soldatov, [1,2] Carlo Lamberti [1] South Federal University, Zorge street, 5, Physical Department, 344090, Rostov-on-Don, Russia [2] Department of Chemistry, Turin University, Via P. Giuria 7, 10125 Turin, Italy
pp11.023	**Local Distortions around Ce^{3+} Ions Formed in CeO_2 Nanoparticles Under CO Atmosphere** [1] Alexander A. Guda, [1] Mikhail A. Soldatov, [1] Nikolay Smolentsev, [2] Grigory Smolentsed, [2,3] Jeroen A. van Bokhoven, [1] Alexander V. Soldatov, [2] Olga V. Safonova [1] Southern Federal University, Rostov-on-Don, 344090, Russia [2] Paul Scherrer Institute, Villigen, 5232, Switzerland [3] ETH Zurich, Zurich, 8093, Switzerland
pp11.024	**Metal-Carbon Nanocomposites as Effective Catalysts of Hydrogenation Reactions** [1] Mikhail A. Uymin, [1] Anatoly Ye. Yermakov, [1] Vladislav V. Maikov, [1] Nina N. Shchegoleva [1] Institute of Metal Physics UD RAS, S.Kovalevskaya st.18, Ekaterinburg 620990 Russia
pp11.025	**Molybdenum Oxide Catalyst Based on Amino Functionalized Carbon Nanotube** [1] Maryam Afsharpour, [1] Zahra Dini [1] chemistry and chemical engineering research center of iran, Dansh Ave., Pajohesh Blv., 17 Km Tehran-Karaj Highway, Iran
pp11.026	**Monodisperse CuPd Alloy Nanoparticles Supported on Graphene as Highly Efficient Catalysts for the Sonogashira Cross-Coupling Reactions** [1] Sümeyra Diyarbakır, [1] Hasan Can, [1] **Önder Metin** [1] Atatürk University, Department of Chemistry, Faculty of Science, Atatürk University, 25240 Erzurum, Turkey
pp11.027	**Nanostructured Pd/$CeSnO_x$ Catalysts of the Low-Temperature CO Oxidation Prepared by Plasma-Arc Synthesis** [1] Andrei I. Boronin, [2] Vasilyi A. Maltsev, [2] Alexei V. Zaikovskii, [1] Elena M. Slavinskaya, [1] Roman V. Gulyaev, [1] Tatyana Yu. Kardash, [3] Dmitryi Yu. Osadchii, [2] Sergei A. Novopasin [1] Boreskov Institute of Catalysis, 5, Prospekt Lavrentieva, Novosibirsk 630090, Russia [2] Novosibrsk State University, 2, Pirogova Street, Novosibirsk 630090, Russia [3] Kutateladze Institute of Thermophysics, 1, Prospekt Lavrentieva, Novosibirsk 630090, Russia
pp11.028	**Quantum-Chemical Investigation of Catalytic Properties of Silver and Gold-Silver Clusters in Propylene Epoxidation** [1] Yulia G. Polynskaya, [1] Daria A. Pichugina, [1] Nikolay E. Kuz'menko [1] Lomosov Moscow State University, Chemistry Department, Leninskie gory 1, building 3, Moscow, Russian Federation

July 15 (Tuesday)

pp11.029	**The Oxidation of Petroleum Hydrocarbons in the Presence of Carbon Nano-Catalysts Containing Inclusions of Transition Metals** [1] Aygun Z. Aliyeva, [1] Vagif M. Abbasov, [1] Hikmet C. Ibrahimov, [1] Eldar B. Zeynalov, [1] Lyatif H. Nuriyev, [1] Bahadur K. Agayev, [1] Konul I. Kasumova [1] The institute of petrochemical processes, Baku, Azerbaijan, Baku, Xocaly.30, Azerbaijan
pp11.030	**Gold and Nitrogen Co-Doped TiO_2 Nanoparticles Synthesized by Laser Pyrolysis, Application in Photocatalysis** [1,2] Sarah Bouhadoun, [2] C. Guillard, [1] Nathalie C. Herlin Boime [1] CEA SACLAY, gif sur yvette, 91191 France [2] IrceLyon, avenue Albert Einstein 69626, Villeurbanne, France

July 16 (Wednesday)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp01.056	**Influence of Shape and Size of Magnetite Nanoparticles on Their Magnetic Properties** [1] Polina G. Rudakovskaya, [2] Sergei V. Salihov, [1] Alexander G. Majouga, [1] Maria V. Efremova, [2] Igor V. Schetinin [1] Lomonosov Moscow State University, 119991, Moscow, Leninskie gori, 1, 3, Russia [2] National University of Science and Technology «MISIS», 119049, Moscow, Leninsky prospect, 4, Russia
pp01.057	**Deposition of Thin Films of Multilayer Graphene by Modified Langmuir-Blodgett Method** [1, 2] Andrei V. Alaferdov, [3] Sergei M. Balashov, [1] Mara A. Canesqui, [1] Sergio Parada, [1] Stanislav A. Moshkalev [1] Center for Semiconductor Components, University of Campinas, 13083-870, Campinas, SP, Brazil [2] Lobachevsky State University of Nizhni Novgorod, Nizhni Novgorod, Gagarine Av. 23/3, 603950, Russia [3] Center for Information Technology Renato Archer, 13069-901, Campinas, SP, Brazil
pp01.058	**Quantum Plexcitons from First-Principles Green's-function Approach in Organic PIC-molecule Adsorbed on Silver Nanoparticle** [1] Evelina Domashevskaya, [2] Oleg Farberovich, [3] Nikolay Matveev [1] Voronezh State University, Voronezh 394087 Russia [2] Raymond and Beverly Sackler Faculty of Exact Sciences, School of Physics and Astronomy,Tel-Aviv University, Tel-Aviv 69978 Israel [3] Voronezh State Academy of Farestry and Technologies, Voronezh 394087 Russia
pp01.059	**Carbon Nanostructures from the Liquid Carbon** [1] Andrey Basharin, [1] Ivan Lysenko [1] Joint Institute for High Temperatures RAS, 125412, Izhorskaya st. 13 Bd.2,Moscow, Russia

pp01.060	**Facile Preparation of Nitrogen-Doped Nanostructured Titania Microspheres by a New Method of Thermally Assisted Reactions in Aqueous Sprays** [1] Alexey Tarasov, [2] German Trusov, [3] Anton Minnekhanov, [4] Dmitry Gil, [3] Elisaveta Konstantinova, [1] Yury Dobrovolsky [1] Institute of Problems of Chemical Physics RAS, Academician Semenov avenue 1, Chernogolovka, 142432, Russia [2] Department of Chemistry, Lomonosov Moscow State University, Lenin Hills, Moscow, 119992, Russia [3] Department of Physics, Lomonosov Moscow State University, Lenin Hills, Moscow,119992, Russia [4] Kurnakov Institute of General and Inorganic Chemistry RAS, Leninskiy prospect 31, Moscow 119991, Russia
pp01.061	**Silver and Gold Nanoparticles in the Optical Methods of Assaying Cationic Polyelectrolytes** [1] Anastasia A. Artemyeva, [1] Andrey V. Sharov, [1] Tatiana O. Samarina, [1] Mikhail K. Beklemishev [1] Department of Chemistry, Lomonosov Moscow State University, Leninskie Gory 1, bldg. 3, Moscow 119991, Russia
pp01.062	**Flow-Levitation Method – A Flexible Mean for Synthesis of Metal-Based Nanoparticles** [1] Alexey N. Zhigach, [1] Ilya O. Leipunsky, [1] Mikhail L. Kuskov, [1] Nadezhda G. Berezkina, [1] Elena S. Afanasenkova [1] Talrose Institute for Energy Problems of Chemical Physics, 119334 Moscow, Leninsky prosp., 38, Bld.2, Russia
pp01.063	**CVD-Grown Monocrystalline Diamond Needles** [1] Feruza T. Tuyakova, [2] Ekaterina A. Obraztsova, [3] Alexander N. Obraztsov [1] Moscow State Technical University of Radio Engineering, Electronics and Automation, Prospekt Vernadskogo 78, Moscow, Russia [2] Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences, Russian Federation, 117997, Moscow, GSP-7, Ul. Miklukho-Maklaya, 16/10, Russia [3] Moscow State University, Physics department, Leninskie Gory, Moscow 119991 Russia
pp01.064	**Dielectrophoretic Self-Assembly of Metal Nanorods** [1] Ching-Chang Lin, [2] Wen-Hsien Sun, [1] Ya-Lin Lin, [1] Yuan-Che Lin, [2] Jing-Wen Tang, [2] Jing-Heng Tien, [1] Fu-Hsiang Ko [1] Graduate Program for Nanotechnology, Department of Materials Science and Engineering, National Chiao Tung University, Taiwan, EF324, 1001 University Road, Hsinchu, Taiwan 300, ROC [2] Material and Chemical Research Laboratories, Industrial technology Research Institute, Hsinchu, Taiwan, 195, Sec. 4, Chung Hsing Rd., Chutung, Hsinchu, Taiwan 31040, ROC

pp01.065	**Diffusion Model of Quantum Rings Self-Assembly by Droplet Epitaxy** [1] Yuriy D. Sibirmovsky, [1] Ivan S. Vasil'evskii, [1] Alexandr N. Vinichenko, [1] Igor S. Eremin, [2] Denis M. Zhigunov, [1] Nickolay I. Kargin, [1] Mikhail N. Strikhanov [1] National Research Nuclear University MEPhI, 115409, Kashirskoe shosse, 31, Moscow, Russia [2] Lomonosov Moscow State University, 119991, Leninskie Gory, 1, bldg. 51, room 252- A , Moscow, Russia
pp01.066	**Formation and Evolution of Nanoclusters in Cluster Aggregation Source** [1] Mikhail V. Dutka, [2] Anatoliy A. Turkin, [1] David I. Vainchtein, [1] Jeff T. De Hosson [1] Department of Applied Physics, Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 4, 9747AG Groningen, The Netherlands [2] National Science Center, «Kharkiv Institute of Physics & Technology», Akademichna str. 1, UA-61108 Kharkiv, Ukraine
pp01.067	**Formation of Multicomponent Nanoparticles by Electrical Explosion of Wires** [1] Aleksander S. Lozhkomoev, [1] Vladimir V. Domashenko, [1] Aleksander V. Pervikov, [1] Marat I. Lerner, [1] Elena A. Glazkova, [1] Natalia V. Svarovskaya, [1] Olga V. Bakina [1] Institute of Strength Physics and Materials Science of the Siberian Branch of the Russian Academy of Sciences, 2/4, pr. Akademicheskii, Tomsk, 634021, Russia
pp01.068	**Formation of Silver Clusters on a Non-Heated Amorphous Carbon Substrate Using Vacuum Evaporation** [1] Andrey Savitskiy, [1] Dmitry Gromov, [1] Lidia Pavlova, [1] Sergey Dubkov, [1] Alexey Trifonov, [1] Egor Lebedev [1] National Research University of Electronic Technology, Bld. 5, Pas. 4806, Zelenograd, Moscow 124498 Russia
pp01.069	**Nanowhiskers: Fabrication Technique, Structural Features and Properties** [1] Andrey Y. Kozlov, [1] Anastasia N. Abramova, [1] Maksim V. Dorogov, [2] Sergey Vlassov, [2] Ilmar Kink, [1] Anatoly A. Vikarchuk, [1, 2, 3] Alexey E. Romanov [1] Togliatty State University, 14, Belorusskaya St., Togliatti, Russian Federation, 445667 [2] Ioffe Physical-Technical Institute, 26, Polytekhnicheskaya, St Petersburg, Russian Federation, 194021 [3] University of Tartu, Ülikooli 18, Tartu, Estonia, 50090
pp01.070	**Functionalized Surfaces of Nanodiamonds Formed in the Presence of Water** [1] Alexander V. Vorontsov, [1] Yulia V. Novakovskaya [1] Lomonosov Moscow State University, Leninskie Gory 1 bld. 3, Russia
pp01.071	**Hot Nanodiamonds: IR Emissivity, Reflectance and Self-Organisation** [1] Andrei A. Shiryaev, [2] Alessandro Maturilli, [3] Inna I. Kulakova, [2] J Helbert [1] Frumkin Institute of physical chemistry and electrochemistry RAS, Leninsky pr. 31, korp. 4, Moscow 119071, Russia [2] Institute for Planetary Research, DLR, Berlin, Germany [3] Moscow State University, Russia

pp01.072	**Infrared Absorption Studies of Dynamic Synthesis Nanodiamonds after Chemical Modification** [1] Nikolai Romanov, [2] Vladimir Osipov, [2] Alexander Vul', [3] Jean Boudou [1] "Svetlana-Semiconductors", 27 Engels Av., Saint-Petersburg 194156 Russia [2] Ioffe Physical-Technical Institute, 195251, St. Petersburg, Russia [3] Lappeenranta University of Technology, 53850, Lappeenranta, Finland [4] Laboratoire Aime Cotton – CNRS UPR 3321, Centre Universitaire Orsay,Orsay Cedex, France
pp01.073	**Monitoring of Aqueous Fullerene and Nanodiamond Dispersions Using Photothermal and Photoacoustic Spectroscopy** [1] Ivan V. Mikheev, [1] Dmitry S. Volkov, [1] Mikhail A. Proskurnin, [1] Mikhail V. Korobov [1] Lomonosov Moscow State University, Leninskie gory 1-3 , Russia
pp01.074	**Self-Assembled Structures in Nanodiamond Layer by Spray Technique** [1] Grazia Cicala, [2] Giuseppe Perna, [3] Domenico Marzulli, [4] Domenico Melisi, [4] Giuseppe De Pascali, [4] Antonio Valentini, [1] Giorgio S. Senesi, [5] Alessandro Massaro, [1] Luciano Velardi, [2] Vito Capozzi [1] CNR-IMIP Bari, Via Amendola 122/D, 70126 Bari, Italy [2] Italian Institute of Technology (IIT), Arnesano (Lecce), Italy [3] Department of Physics, University of Bari "A. Moro", Via Orabona 4, 70126 Bari, Italy [4] CNR-IBBE UOS Bari, Via Orabona 4, 70126 Bari, Italy [5] Dipartimento di Scienze Biomediche, Università degli Studi di Foggia, Viale Pinto, 71100 Foggia, Italy
pp01.075	**Self-Organization Particle on Carbon Nanowalls and Surface-Enhanced Raman Scattering** [1] Stanislav A. Evlashin, [1] Nikolay V. Suetin, [1] Michail Y. Tsvetkov, [1] Kirill V. Mironovich, [1] Andrey A. Pilevsky, [1] Alexander T. Rakhimov [1] Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University, Leninskie Gory, 1/2, 119991 Moscow, Russia [2] Lebedev Physical Institute RAS, Prospekt 53, 119991 Moscow, Russia [3] Institute on laser and information technologies, 2 Pionerskaya St., 142092 Troitsk, Russia
pp01.076	**Simultaneous Deposition of Diamond Like Carbon (DLC) and Nano Crystalline Diamond (NCD) Embedded Polymer Like Carbon (PLC) by Plasma CVD** [1] Ayana Bhaduri, [2] Partha Chaudhuri [1] Amity School of Applied Science, Amity University Haryana, Gurgaon, NCR-122413, India [2] Energy Research Unit, Indian Association for Cultivation of Science, Jadavpur , Kolkata, India
pp01.077	**Single-Crystal Diamond Microneedles Shaped at Growth Stage** [1] Andrey M. Alexeev, [1] Rinat R. Ismagilov, [1] Alexander N. Obraztsov [1] Lomonosov Moscow State University, Department of Physics, Leninskie Gory, Moscow 119991 Russia

pp01.078	**Stable Colloids of Strontium Hexaferrite Hard Magnetic Particles** [1] Evgeny O. Anokhin, [1] Lev A. Trusov, [1] Alexander V. Vasilyev, [1] Pavel E. Kazin [1] Lomonosov Moscow State Univercity, Moscow, Russia
pp01.079	**Study of Interactions Between Nanodiamonds and Biomacromolecules and Ions in Water with Optical Spectroscopy** [1] Kirill A. Laptinskiy, [1] Sergey A. Burikov, [1] Tatiana V. Laptinskaya, [2] Jessica M. Rosenholm, [3] Olga A. Shenderova, [4] Igor I. Vlasov, [1] Tatiana A. Dolenko [1] Lomonosov Moscow State University, Physical Department, 1/2, Leninskie gory, 119991 Moscow, Russia [2] Abo Akadmi University, Center of Functional Materials, Laboratory of Physical Chemistry, Department of Natural Sciences, 20500 Turku, Finland [3] International Technology Center, Raleigh, 27617 North Carolina, United States [4] General Physics Institute, Russian Academy of Sciences, 119991 Moscow, Russia
pp01.080	**Tritium Labeled Detonation Nanodiamonds Uptake by Wheat Seedlings in the Presence of Humic Substances of Different Origin** [1] Ivan Yu. Myasnikov, [1] Maria G. Chernysheva, [1] Viktor I. Korobkov, [1] Natalia A. Kulikova, [1] Gennadii A. Badun [1] Lomonosov Moscow State University, 119991 Moscow Russia
pp01.081	**Tritium Labeling Carbon Based Nanomaterials** [1] Gennadii A. Badun, [1] Maria G. Chernysheva, [2] Vladimir N. Aldobaev, [2] Larisa A. Eremenko [1] Lomonosov Moscow State University, Chemistry Department, Moscow State University, Moscow 119991 Russia [2] Federal State-Financed Institution «Research Center For Toxicology And Hygienic Regulation Of Biopreparations Of Federal Medico-Biological Agency», 102A, Lenin str., Serpukhov, Moscow region 142253 Russia
pp01.082	**Typical Surface Sites of Nanodiamonds** [1] Yulia V. Novakovskaya [1] Lomonosov Moscow State University, Department of Chemistry, Leninskie gory 1/3, Moscow, 119991 Russia
pp01.083	**Nanodiamond for High-Performance Liquid Chromatography** [1] Olga N. Fedyanina, [1] Pavel N. Nesterenko [1] Chemistry Department, Lomonosov Moscow State University, Russia
pp01.084	**Controlled Self-Organisation for Functional Nanomaterials** [1] Andrei A. Eliseev, [1] Alexey V. Lukashin, [1] Kirill S. Napolskiy [1] Lomonosov Moscow State Univesity, Moscow, Russia
pp01.085	**Preparation of Single and Few Layers Graphene by Electrochemical Method** [1] Pitamber Mahanandia [1] National Institute of Technology Rourkela, Department of Physics, India

July 16 (Wednesday)

Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

12:00 PM – 2:00 PM	Poster session
pp02.034	**DHFET with Quantum Well Channel Based on Low Dislocation GaN** [1] Stanislav Petrov, [1] Alexey Alexeev, [1] Victror Mamaev, [2] Dmitry Krasovitsky, [2] Victor Chaly [1] SemiTEq JSC, St-Petersburg, Engelsa av. 27, Russia [2] Svetlana-Rost JSC, St-Petersburg, Engelsa av. 27, Russia
pp02.035	**Effect of Selenic Acid Concentration on the Porous Alumina Oxide Morphology** [1] Yulia Nazarkina, [1] Sergei Gavrilov, [2] Herman Terryn, [2] Jon Ustarroz, [2] Manuela Petrova [1] National Research University of Electronic Technology (MIET), Bld. 5, Pas. 4806, Zelenograd, Moscow, 124498 Russia [2] Vrije Universiteit Brussel, Pleinlaan 2, 1050, Brussels, Belgium
pp02.036	**Electron Beam Micro-, Nanofabrication and Structure of Fine Crystalline Spots in Thin Amorphous Films** [1] V. Y. Kolosov, [1] L. M. Veretennikov, [1] C. L. Schwamm, [1] N. A. Serov [1] Ural Federal University, Ekaterinburg, Russia
pp02.037	**Enhancement of Extraordinary Optical Transmission of Subwavelength Nanogratings by Thin Film Coating** [1] Yulia Draginda, [1] Maxim V. Gorkunov, [1] Sergei P. Palto, [1] Artur R. Geivandov, [1] Vladimir V. Artemov [1] Shubnikov Institute of Crystallography RAS, Leninsky pr.59, Moscow 119333 Russia
pp02.038	**Fabrication of HgTe-Based Rolled-Up Microtubes and Corrugations with 2D Electron-Hole System** [1] Sergey Mutilin, [1] Regina Soots, [1] Alexander Vorob'ev, [1] Danil Ikusov, [1] Nikolay Mikhailov, [1] Victor Prinz [1] Institute of Semiconductor Physics, pr. Lavrentieva 13, Novosibirsk, 630090 Russia
pp02.039	**Fabrication of Self-Assembled Peptide Nanofiber Templated TiO_2 Nanonetworks by ALD and Their Application in DSSCs** [1] Ruslan Garifullin, [1] Hamit Eren, [1] Gamze Ulusoy, [1] Ali K. Okyay, [1] Mustafa O. Guler, [1] Necmi Biyikli [1] Institute of Materials Science and Nanotechnology, National Nanotechnology Research Center (UNAM), Bilkent University, Ankara 06800, Turkey

pp02.040	**Generation of Gas-Metal Plasma in Arc Low-Pressure Discharges for Deposition of Multicomponent Functional Coatings** [1] Olga V. Krysina, [1] Vladimir V. Shugurov, [1] Nikolay N. Koval, [1] Ilya V. Lopatin, [1] Alexander A. Kalushevich, [1] Sergey S. Kovalskyy [1] Institute of high current electronics SB RAS, 634055, Tomsk, Akademicheskyy ave., 2/3, Russia
pp02.041	**Features of Structural-Phase Conditions of TiNi Surface Layers Formed by Electron Beams** [1] Ludmila L. Meisner, [1] Marina G. Ostapenko, [1] Ekaterina Yu. Gudimova, [2] Margarita A. Zakharova [1] Institute of Strength Physics and Materials Science SB RAS, pr-t Akademicheskij, Tomsk, 634021, Russia [2] National Research Tomsk Polytechnic University, pr-t Lenina, Tomsk, 634050, Russia [3] National Research Tomsk State University, pr-t Lenina, Tomsk, 634036, Russia
pp02.042	**Polymer-Protected Planar Nanoelectrodes Creation** [1] Aleksandr A. Parshintsev, [1] Evgeniy S. Soldatov [1] Faculty of Physics, M.V.Lomonosov Moscow State University, Leninskie Gory, Moscow 119991, Russia
pp02.043	**Solid Lubricant Thin Films Based on Heterotribological Materials Compositions and PVD-Technologies** [1] Andrey Iv. Belikov [1] Bauman Moscow State Technical University, 2-nd Baumanskaya str., 5, 105005, Moscow, Russia
pp02.044	**Solution-Deposited Biaxially Textured Oxide Films $La_2Zr_2O_7$ and $La_2Hf_2O_7$ for 2G HTSC Tapes** [1] Andrey Kharchenko, [1] Alexandr Schukin, [1] Vsevolod Chepikov, [1] Andrey Grigoriev, [1] Andrey Kaul [1] Lomonosov Moscow State University, 119991, Leninskiye Gory, Chemistry Department, Russia
pp02.045	**Structural Phase Transition and Spontaneous Interface Reconstruction in $La_{2/3}Ca_{1/3}MnO_3/BaTiO_3$ Superlattices** [1] Oleg I. Lebedev, [2] Stuart Turner, [2] Jo Verbeeck, [3] Vasily Moshnyaga [1] CRISMAT, CNRS-ENSICAEN, 6Bd Marechal Juin, 14050 Caen, France [2] EMAT, University of Antwerp, Groenenborgerlaan 171, 2020 Antwerp, Belgium [3] Erstes Physikalisches Institut, Universit ¨ at G ¨ ottingen, Friedrich-Hund-Platz 1, 37077 G ¨ ottingen, Germany
pp02.046	**Thermal Crystallization and Oxidation of Amorphous Ge Thin Films** [1] Luis De Los Santos Valladares, [1] Justin Llandro, [1] S Holmes, [2] Oswaldo Avalos Quizpe, [1] Crispin HW. Barnes, [2] Angel Bustamante Dominguez [1] University of Cambridge, Cavendish Laboratory, Department of Physics, J.J. Thomson Ave., Cambridge CB3 0HE, UK [2] Universidad Nacional Mayor de San Marcos, Laboratorio de Cermicos y Nanomateriales, Facultad de Ciencias Fisicas, Ap. Postal 14-0149, Lima 1, Peru

Section 03 – Nanoceramics

12:00 PM – 2:00 PM	Poster session
pp03.015	**Electrophysical Properties of B-Site Substituted Oxides and Composites Lanthanum Nickelates** [1] Tatyana Chupakhina, [2] Victor Gavrilyachenko, [2] Yurii Kabirov, [2] Alexander Bogatin, [3] Anatoly Klenushkin, [2] Tatiana Gavrilyachenko [1] Southern Federal university, Chemistry department, 7 Zorge st. Rostov-on-Don, Russia [2] Institute of solid state chemistry, 91 Pervomaiskaya st. Ekaterinburg, Russia [3] Southern Federal university, Faculty of Physics, 5 Zorge st. Rostov-on-Don, Russia
pp03.016	**Synthesis of Nanocrystalline Alpha-Alumina (α-Al_2O_3) Through Pulsed Electric Current Heating** [1] Bobu M. Jolly, [1] Darshan H. Bheda, [1] Subramshu S. Bhattacharya [1] Indian Institute of Technology Madras, Nano Functional Materials Technology Centre (NFMTC) Department of Metallurgical & Materials Engineering, IIT Madras, Chennai - 600036, India
pp03.017	**Baddeleyite-Based Zirconia Nanoceramic Powders** [1] Andrey Zhigachev [1] G.R. Derzhavin Tambov State University, Tambov, Internatsionalnaya str., b. 33, Russia
pp03.018	**Bioresorbable Ceramics Containing Phase of the Magnesium Pyrophosphate** [1] Gilyana Kazakova, [1] Tatyana Safronova, [1] Valery Putlayev [1] Lomonosov Moscow State University, GSP-1, 1-73 Leninskiye Gory, Laboratory Building B, Russia
pp03.019	**Development of Materials and Materials-Based Tissue-Engineering Constructions for Bone and Cartilage Defects Replacement: A View of Biologist** [1] Natalia S. Sergeeva, [2] Sergey M. Barinov, [1] Igor V. Reshetov, [1] Valery V. Teplyakov, [1] Irina K. Sviridova, [2] Vladimir S. Komlev, [3] Vladimir K. Popov [1] FSBI Moscow Hertzen Research Oncological Institute of RF Ministry of Health, 2nd Botkinsky pass., 3, Moscow, 125284 Russia [2] A.A. Bajkov Institute of metallurgy and materials science of RAS, Leninsky av., 49, Moscow, 119991 Russia [3] Institute on laser and information technologies of RAS, Pionerskaya St., 2, Moscow Region,Troitsk, 142092 Russia [4] Pirogov Russian National Research Medical University of RF Ministry of Health, Ostrovitianov str. 1, Moscow, 117997 Russia

pp03.020	**Improvement of Osseointegration of Titanium Dental Implants Using 5×SBF** [1] Elena S. Klimashina, [2] Dmitry K. Udin, [1] Alexey v. Garshev, [1] Valery I. Putlayev, [3] I. L. Tsiklin, [4] V. A. Vaylert [1] M.V. Lomonosov Moscow State University, MSU, Faculty of Chemistry, 119991, Moscow, GSP-3, Leninskiye Gory, Russia [2] M.F. Vladimirsky Moscow Regional Research Clinical Institute, MONIKI, 129110, Moscow, Schepkina street, 61/2, Russia [3] S.P. Botkin City Clinical Hospital, 125284, Moscow, Vtoroy Botkinsky driveway, 5, Rusia [4] Maltese St. Johannes Hospital of Duisburg, 47198, Duisburg, Johannisstrasse, 21, Germany
pp03.021	**Low Temperature Combustion Joining of Carbon/Carbon Composites** [1] Andrey Nepapushev, [2] Ya-Cheng Lin, [3] Alexander Rogachev, [2] Alexander Mukasyan [1] National University of Science and Technology, Moscow, 119049, Russia [2] University of Notre Dame, Notre Dame, IN, 46556, USA [3] Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences, Chernogolovka, Moscow Region, 142432, Russia
pp03.022	**Combination Method for Consolidation of SiC via Spark Plasma Sintering and Self-Propagating High Temperature Synthesis** [1] Dmitry Moskovskikh, [2] Alexander Rogachev, [3] Alexander Mukasyan [1] National University of Science and Technology "MISIS", Moscow 119049, Russia [2] Department of Chemical and Biomolecular Engineering, University of Notre Dame, Notre Dame 46556 Indiana, USA [3] Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences (ISMAN), Chernogolovka 142432 Moscow Region, Russia
pp03.023	**Ultradispersed Powder Mixture for Fine-Grained Ceramics** [1] Elena A. Trusova, [2] Anton S. Kaygorodov, [1] Anastasia A. Khrushcheva [1] A.A. Baikov Institute of Metallurgy and Material Science RAS, 119991 Leninsky pr. 49, Moscow, Russia [2] Institute of Electrophysics, Ural Branch, RAS, 620016 ul. Amundsena, 106, Yekaterinburg, Russia
pp03.024	**Ultrafine Grained Ceramics Based on Nanosized Powders, Synthesized from Calcium Acetate and Ammonium Hydrophosphate** [1] Tatiana V. Safronova, [1] Valery I. Putlayev, [1] Gilyana K. Kazakova, [1] Pavel V. Evdokimov [1] Lomonosov Moscow State University, 119991, Moscow, Leninskie Gory, d.1, Russia
pp03.025	**Functional Thin Oxide Films on the Basalt Fiber** [1] Viacheslav A. Rybin [1] Institute of Solid State Chemistry and Mechanochemistry of the Siberian Branch of the Russian Academy of Sciences, 630128, Novosibirsk, Str. Kutateladze 18, Russia
pp03.026	**Nano-TiCN-Based Cermets for Tool Applications** [1] Julija Zavadakaja, [1] Oleg Semenov, [1] Dimitrii Fedorov [1] Virial.Ltd, Engelsa 27 (Bldg.143A), 194156, P.O.Box 52, Saint-Petersburg, Russia

Section 04 – Bulk Metallic Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp04.013	**Synthesis and Consolidation of Nanocrystalline $Ti_{20}Fe_{20}Co_{20}Ni_{20}Cu_{20}$ High Entropy Alloy** [1] Sutanuka Mohanty, [1] Nilesh P. Gurao, [1] Krishanu Biswas [1] Indian Institute of Technology Kanpur, Western Lab - 210, Solidification and nanomaterials Lab, Department of Material Science and Engineering, IIT Kanpur, Kanpur - 208016, Uttar Pradesh, India
pp04.014	**Synthesis and Structural Characterization of Al-Exfoliated BN Nanosheets Composites Prepared by High Energy Ball Milling** [1] Dmitry Y. Park, [2] Viktor V. Aksenenkov, [2] Rustem H. Bagramov, [2] Vladimir D. Blank, [2] Alex N. Kirichenko, [2] Gennady I. Pivovarov, [2] Evgenii V. Tatyanin [1] Moscow Institute of Physics and Technology, 9 Institutskiy per., Dolgoprudny, Moscow Region, 141700 Russian Federation [2] FSBI TISNCM, 7a Centralnaya street, Troitsk, Moscow, 142190 Russian Federation
pp04.015	**Synthesis, Phase Composition and Magnetic Properties of Iron Nanowires Obtained in Track Pores of the Polymer Membranes** [1] Kirill V. Frolov, [1] Dmitrii L. Zagorskii, [1] Igor S. Lyubutin, [1,2] Victor V. Korotkov, [2,3] Sergey A. Bedin, [1] Vladimir V. Artemov, [1] Boris V. Mchedlishvili [1] Shubnikov Institute of Crystallography Russian Academy of Sciences, 119333, Moscow, Russia [2] D. Mendeleyev University of Chemical Technology, 125047, Moscow, Russia [3] Moscow State Pedagogical University, 119991, Moscow, Russia
pp04.016	**The Elastic Modulus of Nanostructured VT6 (Ti – 6AL – 4V) Titanium Alloy** [1] Evgeniy Trofimov [1] Institute for Metals Superplasticity Problems of Russian Academy of Sciences, 39, Khalturin Str., Ufa, 450001 Russia
pp04.017	**On Methods of Measuring Elastic Moduli in Bulk Nanostructured Materials Produced by Severe Plastic Deformation** [1] Darya K. Magomedova [1] Saint-Petersburg State University, Universitetskiy pr., 28, Russia
pp04.018	**Spatial Inhomogeneity of Crystal-Amorphous Transition Under Severe Plastic Deformation in Bridgman Cell** [1] Alexey A. Veligzhanin, [1] Yan V. Zubavichus, [2] Dmitry I. Frey, [1] Alfred A. Chermyshov, [3] Roman V. Sundeev, [3] Anna V. Shalimova [1] NRC Kurchatov Institute, Kurchatov sq. 1, Moscow, 123182, Russia [2] Moscow Institute of Physics and Technology, 9 Institutskiy per., Dolgoprudny, Moscow Region, 141700, Russia [3] I. P. Bardin Central Research Institute of Ferrous Metallurgy, 2nd Baumanskaya st, 9/23, Moscow, 105005, Russia

pp04.019	**Structure Effect on Fracture Micromechanisms in Structural Steels After Severe Plastic Deformation** [1] Maria Z. Borisova, [1] Sofia P. Yakovleva, [1] Susanna N. Makharova [1] Institute of physical-technical problems of the North, Siberian branch of the RAS, Yakutsk, Oktyabrskaya St. 1, 677980 Russia
pp04.020	**Structure Fragmentation in Aluminum and Copper Alloys Under High-Rate Deformation and Shear** [1] Evgeny V. Shorokhov, [2] Irina V. Khomskaya, [2] Vitaly I. Zeldovich, [2] Irina G. Brodova, [2] Alexey E. Kheifets, [2] Natalya Yu. Frolova, [2] Anastasiia N. Petrova, [2] Vladimir V. Astafiev, [1] Pavel A. Nasonov, [1] Konstantin V. Gaan, [1] Andrey A. Granskii [1] Russian Federal Nuclear Center – Zababakhin All-Russia Research Institute of Technical Physics, Snezhinsk, Russia [2] Institute of Metal Physics, Ural Division of RAS, Ekaterinburg, Russia

Section 05 – Nanocomposites and Hybrid Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp05.040	**Deep-Blue Electroluminescence Assisted by FRET in a Polymer-Layered Silicate Nanocomposite Containing Oligofluorene Side-Chains** [1] Francesco Galeotti, [2] Francesco Meinardi, [1] Wojciech Mróz, [1] Giovanni Ricci, [1] William Porzio, [1] Sajjad Hoseinkhani, [1] Fabio Bertini, [1] Giuseppe Leone, [1] Umberto Giovanella, [1] Chiara Botta [1] ISMAC-CNR, via E. Bassini 15, 20133 Milano, Italy [2] University of Milano Bicocca, via Cozzi 55, 20125 Milano, Italy
pp05.041	**Investigation of the Usability of the Nano Hybrid Coating Nonwovens in the Outdoor Textiles** [1] Nigar N. Merdan, [2] Dilara D. Kocak, [3] Filiz F. Akin, [2] Mehmet M. Akalin, [1] Seyda S. Canbolat [1] Istanbul Commerce University, Kucukyali, Istanbul, Turkey [2] Marmara University, Goztepe, Istanbul, Turkey [3] Abant Izzet Baysal University, Bolu, Turkey
pp05.042	**Experimental Study of Durability of Polymer Nanocomposites to Atomic Oxygen Impact** [1] Lev S. Novikov, [1] Nikolai G. Chechenin, [1] Vladimir N. Chernik, [1] Ekaterina N. Voronina, [1] Ekaterina A. Vorobyeva, [1] Maria S. Samokhina, [1] Natalia P. Chirskaya, [1] Dmitry V. Petrov, [2] Konstantin B. Vernigorov, [3] Alexander Yu. Alent'ev, [4] Aziz M. Muzafarov [1] Lomonosov Moscow State University, Skobeltsyn Institute of Nuclear Physics, Leninskie Gory, Moscow, 119991, Russia [2] Lomonosov Moscow State University, Department of Chemistry, Leninskie Gory, Moscow, 119991, Russia [3] Topchiev Institute of Petrochemical Synthesis, RAS, 29 Leninsky prospect, Moscow, 119991, Russia [4] Enikolopov Institute of Synthetic Polymeric Materials, RAS, 70 Profsoyuznaya st., Moscow, 117393, Russia
pp05.043	**Nanostructured Aluminum-Matrix Composites** [1] Victor N. Gulbin, [1] Nikolay S. Kolpakov, [1] Victor V. Polivkin, [2] Victor V. Tcherdyntsev [1] OJSC "EMC of "Vega" Concern, 125190 Russia [2] National Research & Technology University "MISA", 119049 Russia
pp05.044	**Nanoporous Alumina Film for Humidity Detection** [1] Alexey Klimenko, [1] Alexey Lukashin, [1] Olga Boytsova [1] Lomonosov Moscow State Univesity, Moscow 119991, Russia [2] Institute of General and Inorganic Chemistry, Moscow 119991, Russia

pp05.045	**Possibility of Identification of Non-Agglomerated Nanodiamond Particles Inside Aluminum Matrix by Synchrotron Radiation** [1] Vladimir A. Popov, [2] Daniel M. Többens, [1] Alexey S. Prosviryakov [1] NUST "MISIS", Leninsky prospect, 4, 119049 Moscow, Russia [2] Helmholtz-Zentrum Berlin for Materials and Energy, Albert-Einstein-Str. 15, 12489 Berlin, Germany
pp05.046	**The Analyses of Optical Properties and Structure of GaTe - CdTe Nanocomposite** [1] Iuliana Caraman, [2] Nicolae Spalatu, [2] Dumitru Untila, [2] Igor Evtodiev, [3] Valeriu Cantser, [2] Efimia Luchian [1] Moldova State University, A. Mateevici, 60, MD-2009 Kishinev, Republic of Moldova [2] Vasile Alecsandri University of Bacau, Calea Marasesti 157, Bacau, 600115, Romania [3] Institute of the Electronic Engineering and Nanotechnologies, Academy of Sciences of Moldova, Academiei, 3/3, MD-2028, Kishinev, Republic of Moldova
pp05.047	**SWCNT-Based Nanomodofier for Epoxy Binder: Is Shear Lag Model Enough to Describe Properly Stiff and Strengthening Effect in Nanocomposite?** [1] Anatoly V. Krestinin, [2] Galina I. Zvereva [1] Institute of Problems of Chemical Physics RAS, prospect acad. Semenova, 1, Chernogolovka, Moscow Region, Russia [2] Carbon Chg, Ltd, prospekt acad. Semenova, 1, Chernogolovka, Moscow Region, Russia
pp05.048	**Structure and Magnetic Properties of Multilayered Graphene and 3d-Transition-Metal Nanocomposites** [1] Savva G. Bogdanov, [1] Alexander E. Teplykh, [2] Vladimir E. Fedorov, [2] Nikolay G. Naumov, [1] Evgeny G. Gerasimov, [1] Alexander V. Korolev, [3] Branton J. Cambell, [1] Alexander N. Pirogov [1] Institute of Metal Physics of UD of RAS, 660990 Ekaterinburg, S. Kovalevskaya str. 18, Russia [2] Institute of Inorganic Chemistry of SD of RAS, 630090 Novosibirsk. Lavrenteva Pr. 3, Russia [3] Brigham Young University, Provo, Utah 84602, USA
pp05.049	**Poly(Alkyl Methacrylate) Nanocomposites with Alkyl Ester Functionalized Multiwall Carbon Nanotubes** [1] Fabio Faraguna, [1] Ante Jukic, [1] Elvira Vidovic [1] University of Zagreb, Faculty of Chemical Engineering and Technology, Marulićev trg 19, 10000 Zagreb, Croatia
pp05.050	**Effect of Plasticizers on Behavior of Chitosan/Chitin Nanofibrils Composite** [1] Ivan Kelnar, [2] Pierfrancesco Morganti, [2] Francesco Carezzi, [1] Galina Tishchenko, [1] Jana Kovarova, [1] Ewa Pavlova [1] Institute of Macromalecular Chemistry ASCR, Heyrovsky Sq. 2, 16206 Prague 6, Czech Republic [2] MAVI SUD S.r.l, Viale del Industria 1, 04011 Aprilia (LT) Italy

pp05.051	**Decoration of WS_2 Nanotubes and MoS_2 Nano-Onions with Gold Nanoparticles** [1] Alexander Yu. Polyakov, [2] Lena Yadgarov, [1] Vasiliy A. Lebedev, [1] Eugene A. Goodilin, [2] Reshef Tenne [1] Lomonosov Moscow State University, Leninskie Gory 1-73, Moscow 119991, Russia [2] Weizmann Institute of Sceince, Department of Materials and Interfaces, Rehovot 76100, Israel
pp05.052	**Conductive Fluoropolymer Composites with Ultralow Content of Graphene-Like Fillers** [1] Maksim V. Gudkov, [1] Valery P. Melnikov [1] Semenov Institute of Chemical Physics, Kosygina, 4, Russia
pp05.053	**Tribopolymer Nanocomposites Formation by Using of Coordination Compounds with Transition Metals** [1] Anatoliy G. Ponomarenko, [1] Anatoliy S. Burlov, [2] Boiko V. Mikhail, [1] Tatyana A. Shirayeva, [1] Svetlana B. Zaichenko, [1] Anna G. Kalmykova [1] IPOC SFU, av. Stachky 194/2 Rostov-on-Don, Russia [2] Rostov State Transport University, Narodnogo Opolcheniya sq., Rostov-on-Don, 344038 Russia

Section 06 – Polymer, Organic and Other Soft Matter Materials

12:00 PM – 2:00 PM	Poster session
pp06.018	**Design of Low Bandgap Conjugated Polymers for Bulk Heterojunction Organic Solar Cells** [1] Alexander Akkuratov, [1] Diana Susarova, [1] Dmitry Novikov, [1] Ekaterina Khakina, [1] Pavel Troshin [1] The Institute of Problems of Chemical Physics of the Russian Academy of Sciences (IPCP RAS), Semenov Prospect 1, Chernogolovka, Moscow region, Russia
pp06.019	**Effect of Molecular Architecture of Azobenzene-Containing LC Copolymers on Photoinduced Orientation Processes** [1] Miron Bugakov, [1] Natalia Boiko, [1] Valery Shibaev [1] Lomonosov Moscow State University, Leninskie gory, 119991, Moscow, Russia
pp06.020	**Functionalization of 'Clickable' Electrospun Nanofibers** [1] Ozlem I. Kalaoglu-Altan, [1] Rana Sanyal, [1] Amitav Sanyal [1] Bogazici University, Department of Chemistry, Bebek, Istanbul, Turkey
pp06.021	**Low Bandgap Copolymers Based on Cyclopentadithiophene for Organic Photovoltaics** [1] Fedor V. Drozdov, [1] Surin M. Nikolay, [2] Trukhanov A. Vasiliy, [2] Paraschuk Yu. Dmitriy, [1] Ponomarenko A. Sergey [1] ISPM RAS, Profsoyuznaya str, 70, Russia [2] MSU, Phaculty of physics, Leninskie Gory, 1, Russia
pp06.022	**Novel Low Band Gap Conjugated Polymers for Organic Solar Cells** [1] Iliya E. Kusnetsov, [1] Diana K. Susarova, [1] Dmitry V. Novikov, [1] Alexander A. Akkuratov, [1] Pavel A. Troshin [1] IPCP RAS, Semenov Prospect 1, Chernogolovka, Moscow region, Russia
pp06.023	**Synthesis and Characterization of CdS Nanocrystals Produced by Using a Novel Stabilizer** [1] Yasemin Samav, [2] Cansel Tuncer, [2] Vural Butun, [3] M. Celaleddin Baykul [1] Bilecik Seyh Edebali University, The Program of Chemistry, Vocational School of Higher Education, 11210, Bilecik, Turkey [2] Eskisehir Osmangazi University, Department of Chemistry, Faculty of Arts and Science, 26480, Eskisehir, Turkey [3] Eskisehir Osmangazi University, Department of Physics, Faculty of Arts and Science, 26480, Eskişehir, Turkey
pp06.024	**Self-Assembly and Conformational Effects in Aniline Oligomers** [1] Olga E. Bogomolova, [1] Vladimir G. Sergeyev [1] Lomonosov Moscow State University, Faculty of Chemistry, 1, Leninskie Gory, Moscow, 119991, Russia

Section 07 – Nanomaterials for Energy

12:00 PM – 2:00 PM	Poster session
pp07.034	**The Enhanced Electrochemical Performances of $Li_4Ti_5O_{12}$ by Atomically Controlled Surface Layer** [1] Jae Hyun Kim, [1] Jung Soo Park, [1] Seong-Ho Baek [1] DGIST, 333, Techno Jungang Daero, Hyeonpung-Myeon, Dalseong-Gun, Daegu, Korea
pp07.035	**Graphene Oxide Films as Separators of Polyaniline-Based Supercapacitors** [1] Yury M. Shulga, [1] Sergey A. Baskakov, [1] Vyacheslav A. Smirnov, [2] Nataliya Y. Shulga, [3] K G. Belay, [3] Gennadiy L. Gutsev [1] Institute of Problems of Chemical Physics, Russian Academy of Sciences, 142432 Chernogolovka, Moscow Region, Russia [2] Moscow Steel and Alloys Institute, Moscow Steel and Alloys Institute, 117936 Moscow, Leninsky pr. 4, Russia [3] Department of Physics, Florida A&M University, Tallahassee, Florida 32307, USA
pp07.036	**Modelling Hydrogen Storage in Aromatic Carbon Ring based Molecular Materials with Alakli or Alakli-Earth Metals** [1] Alexander V. Nikolaev, [2] Igor V. Bodrenko, [1] Evgenij V. Tkalya, [3] Alexander V. Avdeenkov, [4] Michael D. Taran, [5] Dmitri Bessarabov [1] Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Leninskie gory 1/2, RU-119234 Moscow, Russia [2] National Nanotechnology Laboratory (NNL), Istituto Nanoscienze–CNR, Via per Arnesano 16, I-73100 Lecce, Italy [3] SSC Institute of Physics and Power Engineering, Bondarenko sq.1, Kaluga region, RU-249033 Obninsk, Russia [4] National Institute for Theoretical Physics, Stellenbosch Institute of Advanced Study, Private Bag X1, Matieland 7602, South Africa [5] Troitsk Institute of Innovative and Thermonuclear Research, Poushkovyh 12, Troitsk RU-142190, Russia [6] DST Hydrogen Infrastructure Center of Competence (HySA Infrastructure), North-West University, Faculty of Natural Sciences, Private Bag X6001, Potchefstroom, 2520 South Africa
pp07.037	**Synthesis and Hydrogen Storage Ability of Nanocrystalline TiFe Intermetallic Compound with Polymer Protective Coating** [1] Daria V. Strugova, [1] Mikhail Yu. Zadorozhnyy, [2] Semen N. Klyamkin, [1] Leonid K. Olifirov, [1] Gennady S. Milovzorov, [1] Sergey D. Kaloshkin, [1] Vladislav Yu. Zadorozhnyy [1] National University of Science and Technology (MISIS), 119049, Moscow, Leninskiy prospekt 4, MISiS, Russia [2] Department of Chemistry Lomonosov Moscow State University, Leninskie Gory, 1/3 119991 Moscow Russia

pp07.038	**Carbon Nanotube - Metal Oxide Nanoplate Supercapacitor Composite Materials** [1] Dylan Brokow, [1] James Mitchell, [1] Jordan C. Poler [1] University of North Carolina at Charlotte, 9201 University City Blvd. Charlotte NC 28223 USA
pp07.039	**Understanding Graphene Electrochemistry and Emerging Concepts for Future Mass-Production** [1] Dale Brownson, [1] Craig Banks [1] Manchester Metropolitan University (MMU), Chester Street, Manchester, M1 5GD UK
pp07.040	**Study of Lithium Peroxide Crystal Clusters Formation at Cathode in Li-O_2 Cell** [1] Tatiana K. Zakharchenko, [1] Anna Ya. Kozmenkova, [1] Daniil M. Itkis [1] Department of Materials Science, Moscow State University, Leninskie gory, Moscow 119991, Russia
pp07.041	**Substitution and Size Effects on the Structure and Electrochemistry of 5 V Spinel Cathode Materials $LiNi_{0.5-x}Mn_{1.5-y}M_{x+y}O_4$** [1] Nina V. Kosova, [1] Evgeniya T. Devyatkina, [1] Olga A. Podgornova, [2] Ivan A. Bobrikov, [2] Ivan D. Karpov, [2] Anatoly M. Balagurov [1] Institute of Solid State Chemistry and Mechanochemistry SB RAS, 18 Kutateladze, Novosibirsk 630128, Russia [2] Joint Institute for Nuclear Research, 6 Joliot-Curie, Dubna 141980, Russia
pp07.042	**Structural Changes in Cathode Material Li-Fe-V Composite During Charge/Discharge Cycles** [1] Victor V. Shapovalov, [1] Alexander A. Guda, [1] Alexander V. Soldatov, [2] Alexander Pohl, [2,3] M Fichtner [1] Southern Federal University, Rostov-on-Don, Russia [2] Institute of Nanotechnology, Karlsruhe Institute of Technology, Karlsruhe, Germany [3] Helmholtz Institute Ulm, Ulm, Germany
pp07.043	**Resorcinol-Formaldehyde Carbon Xerogels as Lithium-Ion Battery Anodes: Synthesis, Grinding, Coating on Current Collector and Electrochemical Characterization** [1] Marie-Laure C. Piedboeuf, [1] Alexandre F. Leonard, [1] Jean-Paul Pirard, [1] Nathalie Job [1] University of Liege, Laboratoire de Genie Chimique Bat B6a Allee de la chimie 3 4000 Liege, Belgium
pp07.044	**Laser Pyrolysis for the One Step Synthesis of Core-Shell Silicon/Carbon Nanoparticles: Interest as Anode Material in Li-Ion Batteries** [1] Julien Sourice, [1] Axelle Quinsac, [1] Yann Leconte, [1] Olivier Sublemontier, [1] Nathalie Herlin, [1] Cecile Reynaud, [2] Cedric Haon, [2] Willy Porcher, [2] Severine Jouanneau [1] CEA Saclay, DSM/IRAMIS/NIMBE/LEDNA bldg 522, 91191, Gif sur Yvette, France [2] CEA Grenoble, DRT/LITEN/DEHT/SCGE/LCB bldg C2, 38000, Grenoble, France

pp07.045	**Electrochemical Oxygen Reduction on Different Graphite Planes** [1] Alina I. Belova, [1] Alexander V. Gavrikov, [1] Daniil M. Itkis [1] Lomonosov Moscow State University, Moscow, Leninskiye Gory 1, Russia
pp07.046	**Effect of Fe and V Doping on Electrochemistry of Nanostructured $LiCoPO_4$ - High-Voltage Cathode Material** [1] Olga A. Podgornova, [1] Nina V. Kosova [1] Institute of Solid State Chemistry and Mechanochemistry SB RAS, 18 Kutateladze, Novosibirsk 630128 Russia
pp07.047	**Effect of Surfactant on the Electrochemical Properties of Nano-$LiMn_2O_4$ Cathode Material for Lithium-Ion Battery** [1] I-Ming Hung, [2] Hsiang-Ju Su, [2] Yung-Chin Yang [1] Department of Chemical Engineering and Materials Science, Yuan Ze University, No. 135, Yuan-Tung Road, Chungli, Taoyuan 320 Taiwan [2] Institute of materials science and engineering, National Taipei University of Technology, 1, Sec. 3, Zhongxiao E. Rd., Taipei 10608 Taiwan
pp07.048	**Design of Heterometallic Single-Source Precursors for the Low-Temperature Preparation of $LiCoO_2$ Cathode Material** [1] Haixiang Han, [1] Zheng Wei, [1] Alexander S. Filatov, [1] Evgeny V. Dikarev [1] State University of New York at Albany, Department of Chemistry, 1400 Washington Avenue, Albany, NY 12222 USA
pp07.049	**$(Li,Na)_2MPO_4F$ (M = Mn, Fe, Co) as High-Energy Cathode Materials for Rechargeable Batteries** [1] Stanislav S. Fedotov, [1] Nellie R. Khasanova, [1] Sergey M. Kuzovchikov, [1] Oleg A. Drozhzhin, [1] Evgeny V. Antipov [1] Moscow State University, 1, Leninskiye Gory, Moscow, Russia
pp07.050	**Metallic Catalyst Nano-Particles with Fluoropolymer Surrounding Produced by Self-Organization of Diblock Copolymer with Perfluorinated Block in SC CO_2 Solution** [1] Igor V. Elmanovich, [2] Dmitry O. Kolomytkin, [2] Marat O. Gallyamov [1] A.N.Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences (INEOS RAS), Moscow, Vavilova, 28 Russia [2] Faculty of Physics M.V. Lomonosov Moscow State University, Moscow, Leninskie Gory, 1 Russia

Section 08 – Biological and Biomedical Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp08.040	**Novel Multiparameter Sensors for Influenza Virus Determination** [1] Alexandra Isakova, [2] Valeriya Ivanova, [1] Oleg Rightman, [1] Victor Ivanov, [2] Elena Burceva, [1] Anatoly Vannikov [1] A.N.Frumkin Institute of physical chemistry and electrochemistry RAS, 119071 Moscow, Leninsky Prospekt, 31, Russia [2] D.I. Ivanovsky Institute of Virology, of Ministry of Health of the Russian Federation, 123098 Moscow, Str. Gamalei, Russia
pp08.041	**CNT-BSA and CNT-DNA Complexes Distribution and Influence on Mitochondrion in C6 Glioma Cells** [1] Elena N. Golubeva, [1] Tatsiana A. Kulahava, [1] Alesia G. Paddubskaia, [1] Mikhail V. Shuba [1] Belarusian State University, 4, Nezavisimosti avenue, 220030, Minsk, Republic of Belarus
pp08.042	**Common Dogwood Berries Extract Mediated Green Synthesis of Silver Nanoparticles and Evaluation of Their Anticancer Activity** [1] Luminita C. David, [1] Bianca E. Moldovan, [2] Liliana Olenic, [2] Adriana Vulcu, [3] Maria Perde-Schepler [1] Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca, Romania, Arany Janos11, Cluj-Napoca, Romania [2] National Institute for Research and Development for Isotopic and Molecular Technologies, Cluj-Napoca, Romania [3] «I.Chiricuta» Oncologic Institute, Cluj-napoca, Romania
pp08.043	**Label-Free Gold Nanoparticle Biosensor for Protein-Conjugated Acrolein** [1] Chen Wei-Hung, [1] Lin Kuan-Jiuh, [1] Lee Chung-Cheng [1] National Chung-Hsing University, No. 250, Kuo-Kuang Road, Taichung 402, Taiwan
pp08.044	**Modulatory Effects of Nanostructures Based on Gold Nanoparticles and Natural Extracts in Experimental Inflammation in Rats** [1] Adriana G. Filip, [1] Simona Clichici, [2] Pompei Bolfa, [1] Adriana Muresan, [1] Ioana Baldea, [1] Diana Olteanu, [3] Luminita David, [4] Liliana Olenic [1] „Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania, 13 Emil Isaac Street, 400023 Romania [2] University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania, 3-5 Calea Manastur Str., 400372 Romania [3] Babes-Bolyai – University, Cluj-Napoca, Romania, 11 Arany Janos Street, RO 400028 Romania [4] National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania, 65-103 Donath Street, RO 400293 Romania
pp08.045	**New Way to Prepare Aqueous Dispersion of Fullerene for Biomedical Applications** [1] Daria D. Purgina, [1] Elena N. Bashkatova, [1] Musa R. Khaitov, [1] Sergey M. Andreev [1] NRC Institute of Immunology, Kashirskoye shosse 24-2, Moscow, Russia

pp08.046	**Novel Calix[4]resorcinarene Bearing Four β-Diketon Groups on the Upper Rim and Its Complex Formation with Tb(III) Ions as Promising Basis for Core-Shell Luminescent Nanoparticles** [1] Nataliya Shamsutdinova, [1] Sergey Podyachev, [1] Victor Syakaev, [1] Il`dar Rizvanov, [1] Asiya Mustafina, [1] Svetlana Sudakova [1] A.E. Arbuzov Institute of Organic and Physical Chemistry of Kazan Scientific Center of Russian Academy of Sciences, Arbuzov str. 8, Kazan, Russian Federation
pp08.047	**Peculiarities of Magnetic Properties of 4-nm Maghemite Nanoparticles** [1] Vladimir N. Nikiforov, [1] Anastasia E. Goldt, [1] Eugene A. Goodilin, [2] Valentine Yu. Irkhin [1] Lomonosov moscow state university, Leninskie Gory, 119991, Moscow, Russia [2] Institute of Metal Physics, S. Kovalevskaya Street 18, 620990 Yekaterinburg, Russia
pp08.048	**Physical and Chemical Characterization of Functionalized Hydroxyapatite Nanoparticles** [1] Fabiola Vazquez-Hernandez, [2] Claudia O. Mendoza-Barrera, [3] Salvador Mendoza-Acevedo, [4] Jose L. Herrera-Perez, [5] Julio Mendoza-Alvarez, [1,6] Juan P. Luna-Arias
pp08.049	**Production and Characterization of Nanocrystalline Ti-Mo-Fe-Sn Ultrafine Eutectics** [1] Conrado RM. Afonso, [1] Marina OA. Rocha [1] Universidade Federal de São Carlos (UFSCar)/Department of Materials Engineering (DEMa), Rod. Washington Luis, km 235, CEP 13.565-905, São Carlos – SP, Brazil
pp08.050	**Transformations of Silver Nanoparticles in Physiological Media** [1] Ngoc Tran, [1] Eudald Casals, [1] Victor Puntes [1] Catalan Institute of Nanoscience and Nanotechnology, CIN2 Building, UAB campus, Bellaterra 08193, Barcelona, Spain
pp08.051	**Trace Detection of Aniline on Nanostructured Silver Films by Surface-Enhanced Raman Spectroscopy** [1] Ramil Ibragimov, [1] Ivan Bobrinetskiy, [1] Aleksey Romashkin [1] National Research University of Electronic Technology (MIET), Bld. 5, Pas. 4806, Zelenograd, Moscow, 124498 Russia
pp08.052	**Viability and Neuronal Differentiation of PC12 Cells on the CNT Films Obtained by Vapor Deposition** [1] Igor A. Gayduchenko, [1] Georgy E. Fedorov, [1] Mikhail Yu. Presniakov, [1] Galina A. Posypanova, [1] Elizaveta Yu. Moskaleva [1] NRC «Kurchatov Institute», Moscow, Akademika Kurchatova pl. 1, Russia
pp08.053	**Surface Protein Imprinted Bacterial Cellulose Nanofiber for Lysozyme Purification** [1] Yeseren Saylan, [2,3] Emel Tamahkar, [1] Adil Denizli [1] Hacettepe University, Department of Chemistry, 06800, Ankara, Turkey [2] Hitit University, Department of Chemical Engineering, 19030, Corum, Turkey [3] Hacettepe University, Department of Bioengineering, 06800, Ankara, Turkey
pp08.054	**Heterofunctional Polyacrylates as Linkers in Peptide Arrays** [1] Roza Trzcinska, [1] Dawid Szweda, [1] Jerzy Silberring, [1] Barbara Trzebicka, [1] Andrzej Dworak [1] Center of Polymer and Carbon Materials Polish Academy of Sciences, M. Curie-Sklodowskiej 34, 41-819 Zabrze, Poland

pp08.055	**Chlorofullerene $C_{60}Cl_6$: A Versatile Precursor for Synthesis of Water-Soluble [60]Fullerene Derivatives for Biomedicine Applications** [1] Ekaterina A. Khakina, [1] Anastasiya A. Yurkova, [2] Alexander S. Peregudov, [1] Alexander V. Chernyak, [3] Sergey I. Troyanov, [1] Alexander V. Mumyatov, [1] Vyacheslav M. Martynenko, [1] Pavel A. Troshin [1] Institute for Problems of Chemical Physics of Russian Academy of Sciences, Semenov ave 1, Chernogolovka, Moscow region, 142432, Russia [2] A. N. Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences, 1 Vavylova St. 28, B-334, Moscow, 119991, Russia [3] Department of Chemistry, Moscow State University, Leninskie gory, Moscow, 119991, Russia
pp08.056	**Characterization of Hollow Hematite Sub-Micron Spheres Prepared by Sol-Gel** [1] Silvia M. Espinoza, [2] Luis De los Santos Valladares, [3] Angel Bustamante, [4] Lisbet Leon, [5] Heinz Amentish, [6] j Albino, [2] C.H.W. Barnes [1] TECSUP - UNMSM, Av. Cascanueces 2221 Sta. Anita. Lima 43, Perú [2] UNMSM, Ap. Postal 14-0149, Lima, Peru [3] University of Cambridge, Cambridge, CB3 0HE, United Kingdom [4] Universidade de Brasília, Brasília, DF 70910-900, Brasil [5] Elettra Sincrotrone, Strada Statale 14 - km 163, 5 in Area Science Park, 34149 Basovizza, Trieste, Italy [6] Universidad Federal de Pernambuco, Universidad Federal de Pernambuco 50670-901, Recife, Brazil
pp08.057	**In Vitro Effects of Silver Nanoparticles Synthesized with a Polyphenols Rich Extract from Cornelian Cherry (Cornus Mas) Fruits** [1] Maria Perde-Schrepler, [1] Eva Fischer-Fodor, [1] Piroska Virag, [1] Olga Soritau, [1] Ioana Brie, [2] Luminita David, [3] Liliana Olenic [1] Ion Chiricuta Oncology Institute Cluj-Napoca, 34-36, Republicii street, 400015, Cluj-Napoca, Romania [2] Babes-Bolyai University Cluj-Napoca, 1, Mihail Kogalniceanu street, 400084, Cluj-Napoca, Romania [3] National Institute for Research and Development of Isotopic and Molecular Technologies, 65-103, Donath street, 400293 Cluj-Napoca, Romania

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

12:00 PM – 2:00 PM	Poster session
pp09.023	**Nanostructured Carbon Materials Growth Directly on Stainless Steel Substrates** [1] Ronaldo D. Mansano, [1] Ana P. Mousinho [1] University of So Paulo, Avenida Professor Luciano Gualberto, 158, trav 3. Sao Paulo, Brazil
pp09.024	**Pulsed Laser Deposition of PZT/Diamond Heterostructures for High Frequency Saw Device Applications** [1] Maneesh Chandran, [2] S. S. Bhattacharya, [1] M.S. Ramachandra Rao [1] Nano Functional Materials Technology Centre, MSRC and Department of Physics, Indian Institute of Technology Madras, Chennai 600036, India [2] Department of Metallurgical and Materials Engineering, Indian Institute of Technology Madras, Chennai 600036, India
pp09.025	**Development of Technology Elements and Evaluation of Processing Parameters of Multi-ECAP-Conform** [1] Elvira Fakhretdinova, [1] Georgiy Raab [1] Ufa State Aviation Technical University, Ufa, Russia
pp09.026	**Dynamics of Edge Dislocations in Disclination Stress Fields Under Shock Compression of Metals and Alloys** [1] Egor Rzhavtsev, [1] Michail Gutkin [1] Saint-Petersburg Staye Polytechnical University, Saint-Petersburg, Russia [2] Saint-Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia [3] Institute of Problems in Mechanical Engineering RAS, Saint-Petersburg, Russia
pp09.027	**Fatigue Life Increase of Stainless Steel After Electron Beam Treatment** [1] Victor E. Gromov, [1] Vasiliy V. Sizov, [1] Sergei V. Vorobyov, [2] Yurii F. Ivanov, [1] Sergei V. Konovalov, [1] Krestina V. Alsaraeva [1] Departament Physics Siberian State Industrial University, 654007, Novokuznetsk, Kirov Street 42, Russia [2] Institute of high–current electronics SB RAS, 634055, Tomsk, Akademicheskii 2/3, Russia
pp09.028	**Functional Properties of Nanostructured Ni-Ti Shape Memory Alloy** [1] Victor V. Koledov, [2] Vladimir A. Andreev, [1] Vladimir S. Kalashnikov, [1] Alexey V. Petrov, [3] Dmitry V. Gunderov, [4] Ramil M. Gizatulin [1] Kotel'nikov Institute of Radio Engineering and Electronics of Russian academy of sciences, Mokhovaya 11-7, Moscow, 125009, Russia [2] ISC "Nano-dent" ltd, Kasatkina st. 3-3, Moscow, 129301, Russia [3] «Matek-Sma Ltd.», Kar'er st. 2A-1-313, Moscow, 117449, Russia [4] Ufa State Aviation Technical University, K. Marx Street 12, Ufa, The Republic of Bashkortostan, 450000, Russia

pp09.029	**Nano Structure-Phase States and Fatigue Life Increase of Rail Steel After Electron Beam Treatment** [1] Victor E. Gromov, [2] Yurii F. Ivanov, [3] Konstantin V. Volkov, [3] Konstantin V. Morozov, [1] Sergei V. Konovalov, [1] Krestina V. Alsaraeva [1] Departament Physics Siberian State Industrial University, 654007, Novokuznetsk, Kirov Street 42, Russia [2] Institute of High Current Electronics, SB, RAS, 634055, Tomsk, Akademicheskii 2/3, Russia [3] EVRAZ Consolidated West Siberian Metallurgical Plant, 654043, Novokuznetsk, Kosmicheskoe av., 16, Russia
pp09.030	**Pressure Welding of Nickel-Based Alloy Using Nanocrystalline Interlayer** [1] Elvina Valitova, [1] Minaul Mukhametrakhimov, [1] Ramil Lutfullin, [1] Vener Valitova [1] Institute for Metals Superplasticity Problems of Russian Academy of Sciences, 39. Khalturin Street; Ufa 450001, Russia
pp09.031	**Thermomechanical Steel Strengthening due to the Nanosize Structure Formation** [1] Victor E. Gromov, [2] Yurii F. Ivanov, [1] Sergey V. Konovalov, [1] Krestina V. Alsaraeva [1] Departament Physics Siberian State Industrial University, 654007, Novokuznetsk, Kirov Street 42, Russia [2] Institute of High Current Electronics, SB, RAS, 634055, Tomsk, Akademicheskii 2/3, Russia

July 16 (Wednesday)

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

12:00 PM – 2:00 PM	Poster session
pp10.025	**Sensitization to the VIS Region of Nano-Structures Based on TiO_2 and ZnO** [1] Andrey A. Lisachenko [1] St. Petersburg State University, V.A.Fock Institute of Physics, Ulyanovskaya 1, Saint-Petersburg, 198504 Russia
pp10.026	**Synthesis and Characterization of PLD CoFe Thin Films as a Function of Composition and Deposition Conditions** [1] Elisabetta Agostinelli, [2] Ksenia Chichay, [1] Gaspare Varvaro, [1] Davide Peddis, [3] Paolo Mengucci, [1] Sara Laureti [1] ISM - CNR, AREA Roma1-Via Salaria km 29.300-00015 Monterotondo Scalo (Roma) Italy [2] Immanuel Kant Baltic Federal University, Kaliningrad, Russia [3] Dipartimento SIMAU, Università Politecnica delle Marche, 60131 Ancona, Italy
pp10.027	**Multilayer Ge/Si Heterostructures with Chains of Ge Quantum Dot** [1] M. S. Storozhevykh, [2] S. S. Gizha, [2] V. M. Senkov, [1] O. V. Uvarov, [1] K. V. Chizh, [1] V. A. Chapnin, [1] V. P. Kalinushkin, [1] L. V. Arapkina, [1] V. A. Yuryev, [2] I. V. Pirshin [1] A. M. Prokhorov General Physics Institute, RAS, 38 Vavilov Street, Moscow, 119991, Russia [2] P. N. Lebedev Physical Institute, RAS, 53 Leninskiy Prospect, Moscow, 119991, Russia
pp10.028	**An Optical Remagnetization of Nanostructured Transition Metal Silicides** [1] Andrei V. Tuchin, [1] Grigory I. Glushkov [1] Voronezh State University, 394006, Voronezh, Universitetskaya pl.1, Russia
pp10.029	**The Study of the Structural Parameters of Chromium Dioxide Nanoparticles** [1] Dmitry I. Arkhipov, [1] Ella L. Dzidziguri, [2] Mikhail G. Osmolowsky, [2] Olga M. Osmolowskaya [1] National University of Science and Technology "MISIS", 119049, Moscow, Leninskiy prospekt 4, Russia [2] Saint Petersburg State University Faculty of Chemistry, 198504, Saint-Petersburg, Petrodvorets, Universitetskii pr. 26, Russia
pp10.030	**High Sensitivity Gas Sensor using Buckypapers of Carbon Nanotubes** [1] G. Eduardo Sandoval-Romero, [1] Asur Guadarrama-Santana, [1] Elena V. Basiuk, [1] Augusto Garcia-Valenzuela [1] Centro de Ciencias Aplicadas y Desarrollo Tecnologico, Universidad Nacional Autonoma de Mexico, Circuito Exterior S/N, Ciudad Universitaria, A.P.70-186, C.P. 04510, Mexico D.F., Mexico
pp10.031	**Parameters of Memristive Effect in Ti/TiO_2/Au Nanostructures** [1] Ilya A. Weinstein, [1] Aleksander S. Vokhmintsev, [1] Robert V. Kamalov, [1] Irina B. Dorosheva [1] Ural Federal University, Mira street, 19, Ekaterinburg, 620002 Russia

pp10.032	**Si-Based Microresonators for Photonic Applications** [1] Alexey V. Novikov, [1] Margarita Stepikhova, [1] Valerij Verbus, [1] Sergey Sergeev, [1] Zakharij Krasilnik, [2] Vladimir Shengurov, [3] Alexey Kolomiytsev, [4] Vadim Talalaev, [4] Jorg Schilling [1] Institute for Physics of Microstructures RAS, GSP-105, 603950 Nizhny Novgorod, Russia [2] Physico-Technical Research Institute, Nizhny Novgorod State University, Gagarin Ave. 23, 603950 Nizhny Novgorod, Russia [3] Taganrog Institute of Technology - Southern Federal University, Nekrasovsky st., 44, Taganrog, GSP-17A, 347928 Russia [4] Martin-Luther-University Halle-Wittenberg, ZIK SiLi-nano, 06120 Halle, Germany
pp10.033	**Single–Walled Carbon Nanotubes as Luminescence Quencher** [1] Hiroshi Shioyama [1] National Institute of Advanced Industrial Science and Technology, Midorigaoka 1-8-31, Ikeda,Osaka 563-8577, Japan
pp10.034	**Size-Dependent Thermal Behavior of One-Dimensional Nanoarrays of Poly(Vinylidene Fluoride-Co-Trifluoroethylene)** [1] Yulia Shilyaeva, [1] Maxim Silibin, [2] Mikhail Zheludkevich, [1] Alexander Solnyshkin, [1] Sergey Gavrilov, [3] Vladimir Shvartsman, [3] Doru Lupascu [1] National Research University of Electronic Technology, Bld. 5, Pas. 4806, Zelenograd, Moscow, 124498 Russia [2] Universidade de Aveiro, 3810-193 Aveiro, Portugal [3] Institut für Materialwissenschaft, Universität Duisburg-Essen, Universitätsstr. 15, 45141 Essen, Germany
pp10.035	**Synthesis of Thin Colloidal Crystal Films and Monolayer Masks for Metal Ions Implantation** [1] Tamuna Bakhia, [1] Alexander V. Knotko, [1] Sergey O. Klimonsky, [2] Andrey L. Stepanov [1] Lomonosov Moscow State University, Leninskie Gory, Moscow, 119991, Russia [2] Kazan Physical-Technical Institute RAS, Sibirsky Trakt, 10/7, Kazan, 420029, Russia

Section 11 – Nanomaterials and Catalysis

12:00 PM – 2:00 PM	Poster session
pp11.031	**Photocatalytic Properties of Perovskite-Like Sodium Neodymium Titanate Prepared via Hydrothermal Method** [1] Anton Gavrilov, [1] Nikolay Belich, [1] Sergey Shuvaev, [1] Bulat Churagulov [1] Lomonosov Moscow State University, GSP-1, Leninskie Gory, Moscow, 119991, Russian Federation
pp11.032	**Preparation of Polyelectrolyte Multilayer Nanocatalysts** [1] Alia K. Ospanova, [1] Svetlana Sukhishvili, [1] Almagul Mentbaeva, [1] Maxim A. Dergunov, [2] Sergey A. Dergunov [1] Al-Farabi Kazakh National University, Almaty, Kazakhstan [2] Department of Chemistry, Saint Louis University, St Louis, MO 63103, USA
pp11.033	**Ivestigation of the Properties of Alginat/Poly (Vinil Alcohol) Nano Fibers** [1] Seyda S. Canbolat, [2] Dilara D. Kocak, [2] Ramazan R. Erdem, [1] Nigar N. Merdan, [2] Erhan E. Sancak [1] Marmara University, Goztepe, Istanbul, Turkey [2] Istanbul Commerce University, Kucukyali, Istanbul, Turkey
pp11.034	**Preparation and Characterization of Al_2O_3-TiO_2 Photoinduced Sorbent-Catalysts** [1] Irene I. Lebedeva, [1] Irene I. Sizeneva, [1] Dmitriy M. Kiselkov, [1] Victor V. Valtsifer [1] Institute of Tecnical Chemistry Ural branch of the RAS, Perm, Akademika Koroleva, 3, Russia
pp11.035	**Synthesis of Fe/Fe_3O_4 Core-Shell Iron Nanocubes from Iron–Arene Sandwich Complexes** [1] Alvaro Duarte-Ruiz, [2] Alex Wei, [2] Ahn Nguyen [1] Universidad Nacional de Colombia, Kr30 No 45-03, Colombia [2] Purdue University, West Lafayette IN, USA
pp11.036	**Ethanol Gas Sensing Mechanism of ZnO Nanowires** [1] Giancarlo Cicero, [2] Korir K. Kipronoh, [3] Alessandra Catellani [1] Politecnico di Torino - DISAT, I-10129 Torino, Italy [2] CNR-IMEM, I-431100 Parma, Italy [3] CNR-NANO, Istituto Nanoscienze, Centro S3, I-41125 Modena, Italy
pp11.037	**A Simple Kinetic Modelling of Charge Carrier Recombination in UV-Illuminated Aqueous Suspensions of Nanosized Titanium Dioxide** [1] Alexey Ignatev, [2] Alexander Kondrakov, [2] Fritz Frimmel, [1] Valery Lunin [1] Lomonosov Moscow State University, Department of Chemistry, 1-3 Leninskie Gory, Moscow 119991, Russia [2] Karlsruhe Institute of Technology, Engler-Bunte Institute, 1 Engle-Bunte Ring, Karlsruhe 76134, Germany
pp11.038	**Annealing-Free Synthesis of C–N Co-Doped TiO_2 Hierarchical Spheres Using Amine Agents via Microwave-Assisted Solvothermal Method and Their Photocatalytic Activity** [1] Yuchun Wu, [1] Lung-Shen Ju [1] National Cheng-Kung University, Department of Resources Engineering, Taiwan

pp11.039	**Highly Dispersed Fe_2O_3 Nanoparticles for P-Nitrophenol Degradation by Photo-Fenton Effect** [1] Julien G. Mahy, [1] Ludivine Tasseroul, [1] Anthony Zubiaur, [1] Jeremy Geens, [2] Magali Bribois, [3] Raphael P. Hermann, [1] Benoit Heinrichs, [1] Stephanie D. Lambert [1] Laboratory of Chemical Engineering, B6a, University of Liege, 4000 Liege, Belgium [2] Department of Chemistry, LCIS GreenMat, B6a, University of Liege, 4000 Liege, Belgium [3] Jülich Center for Neutron Science JCNS and Peter Grünberg Institut PGI, Forschungszentrum Jülich GmbH, JCNS, 52425 Jülich, Germany
pp11.040	**Hydrogen Production via Methanol Steam Reforming Reaction on Bimetallic Nanocatalysts** [1] Aleksandra A. Lytkina, [1] Andrey B. Yaroslavtsev, [1] Natalia A. Zhilyaeva, [1] Natalia V. Orekhova, [1] Margarita M. Ermilova [1] A.V. Topchiev Institute of Petrochemical Synthesis RAS, Leninsky pr. 29, Moscow, 119991 Russia
pp11.041	**Liquid-Phase Oxidation of Naphthenic-Paraffinic Hydrocarbons Blendof the Diesel Fraction in the Catalytic Presence of Five-Cored Complexes** [1] Lala Afandiyeva, [1] Vagif Abbasov, [1] Eldar Zeynalov, [1] Latif Nuriyev, [1] Sevinj Hajiyeva, [1] Gulnar Valiyeva, [1] Khayale Abbasova [1] Institute of Petrochemical Processes, Khodjali 30, Baku, Az 1027 Azerbaijan
pp11.042	**Nanosized Ferromagnetic Particles Dispersed in Polyconjugated Polymeric Materials: Peculiarities of Formation and Catalytic Properties** [1] Mayya V. Kulikova, [1] Mikhail I. Ivantsov, [1] Lev M. Zemtsov, [1] Galina P. Karpacheva, [1] Salambek N. Khadzhiev [1] A.V.Topchiev Institute of Petrochemical Synthesis, RAS (TIPS RAS), 29, Leninsky prospekt, Moscow, 119991, Russia
pp11.043	**Photocatalytic Degradation of the Pharmaceutical Anti-Inflammatory Drug Diclofenac Sodium over Anatase-Brookite Heterojunction** [1] Said M. El-Sheikh, [1] Tamer Kheder, [2] Geshan Zhangb, [1] Adel A. Ismail, [3] Kevin O'Shea, [2] Dionysios D. Dionysiou [1] Centeral Metallurgical R&D instutite CMRDI, Elfelzat Street Tebbin - Helwan, Egypt [2] University of Cincinnati, Cincinnati, OH 45221, USA [3] Department of Chemistry and Biochemistry, Florida International University, Miami, FL 33199, USA
pp11.044	**Production of Doped Nanostructured TiO_2 for Photo Catalysis Applications** [1] Yana Ruzmanova [1] University of Rome «La Sapienza», Via Eudossiana 18, 00184 Rome, Italy
pp11.045	**Remote TiO_2-Photocatalysis with Use of Nanoporous Silica Carrier** [1] Aleksandr O. Kondrakov, [2] Alexey N. Ignatev, [1] Fritz H. Frimmel, [2] Alexander I. Revelsky, [1] Harald Horn, [1] Stefan Braese

pp11.046	**Topochemical Conversions of Protonic Forms of Layered Perovskite-Like Titanates for Synthesis of Nanostructured Materials** [1] Liliia D. Abdulaeva, [1] Alexander N. Bugrov, [1] Irina A. Zvereva [1] Institute of Chemistry, Saint Petersburg State University, 26 Universitetskiy pr., 198504, Petrodvorets, Saint Petersburg, Russia
pp11.047	**Template Synthesis of Nanosized Titania on Polysaccharides Matrixes** [1] Anna V. Skatova, [1] Irina V. Postnova, [1] Yurii A. Shchipunov [1] Institute of Chemistry, Far East Department, Russian Academy of Sciences, 690022 Vladivostok, pr. 100 let Vladivostoku, 159, Russia

July 17 (Thursday)

Section 01 – Formation, Shaping and Self-assembly of Inorganic Nanoparticles; Carbon Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp01.086	**Features of Synthesis of Bi Nanoclusters in an Amorphous Hydrogenated Carbon Matrix by RF Method** [1] Alexander P. Ryaguzov, [1] Nazim R. Guseinov, [2] Nurlan K. Manabaev, [1] Timur E. Nurmamytov [1] National Nanotechnological Laboratory Open Type Al-Farabi KazNU, Almaty, Al Farabi 71, Physical and Technical faculty, Kazakhstan [2] Al Farabi Kazakh National University, Almaty, Kazakhstan
pp01.087	**Electron Capture β Decay of ^{7}Be Encapsulated in Fullerenes (C_{60} and C_{36})** [1] Alexander V. Nikolaev, [1] Evgenij V. Tkalya, [2] Alexander V. Avdeenkov, [1] Anton V. Bibikov, [3] Igor V. Bodrenko [1] Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Leninskie gory 1/2, RU-119234 Moscow, Russia [2] SSC Institute of Physics and Power Engineering, Bondarenko sq.1, Kaluga region, RU-249033 Obninsk, Russia [3] National Nanotechnology Laboratory (NNL), Istituto Nanoscienze–CNR, Via per Arnesano 16, I-73100 Lecce, Italy [4] National Institute for Theoretical Physics, Stellenbosch Institute of Advanced Study, Private Bag X1, Matieland 7602, South Africa
pp01.088	**The Functional Composites Obtained with Use Carbon Nanomaterials** [1] Victor N. Gulbin, [1] Nikolay S. Kolpakov, [1] Victor V. Polivkin [1] OJSC «EMC of «Vega» Concern, 125190 Russia
pp01.089	**Growth and Characterization of Diamond Particles, Diamond Films and CNT-Diamond Composite Films Deposited Simultaneously by Hot Filament CVD** [1] C R. Kumaran, [1] Maneesh Chandran, [1] Krishna M. Surendra, [1] Subramshu S. Bhattacharya, [1] M S. Ramachandra Rao [1] Indian Institute of Technology Madras, Nano Functional Materials Technology Centre (NFMTC) Department of Physics and Department of Metallurgical & Materials Engineering, IIT Madras, Chennai - 600036, India

pp01.090	**Surface Modification of Detonation Synthesis Nanodiamond** [1] Alexandra Isakova, [2] Nina Skorik, [1] Boris Spitsyn, [1] Olga Omelchenko [1] A.N.Frumkin Institute of physical chemistry and electrochemistry RAS, 119071 Moscow, Lenisky prospect, 31, Russia [2] Tomsk State University, 634050 Tomsk, Lenin Prospekt, 36, Russia
pp01.091	**Synthesis and Characterization of Nanoparticles of Ti-O and Ti-N Systems Manufactured via the Flow-Levitation Method** [1] Alexey N. Zhigach, [1] Ilya Leipunsky, [1] Michael L. Kuskov, [1] Elena S. Afanasenkova, [1] Nadezda G. Berezkina, [1] Vladimir V. Artemov [1] Talrose Institute for Energy Problems of Chemical Physics, 119334 Moscow, Leninsky prosp, 38, bld.2, Russia
pp01.092	**Few-Layer Graphene Under an Applied Pressure up to 50GPa** [1] Andrei V. Tuchin, [1] Anna M. Bokova [1] Voronezh State University, 394046, Voronezh, Universitetskaya pl.1, Russia
pp01.093	**The Electronic Structure and Vibrational Spectrum of the Fullerene C_{60} Excited by the Electric Field** [1] Andrei V. Tuchin [1] Voronezh State University, 394046, Voronezh, Universitetskaya pl.1, Russia
pp01.094	**A Novel Electrochemical Method of Boron Doped Graphene Synthesis in Molten Salt Electrolyte** [1] Liudmila A. Yolshina, [2] Varvara A. Yolshina, [1] Emma G. Vovkotrub, [1] Vyacheslav B. Malkov [1] Institute of High-Temperature Electrochemistry Urals Branch of Russian Academy of Sciences, 620990 Ekaterinburg Akademicheskaya str., 20, Russia [2] Ural Federal University named by B.N.Yeltsin, 620002 Ekaterinburg Mira str., 19, Russia
pp01.095	**Atomic and Electronic Structure of Graphene on SiC(001)/Si(001) Wafers** [1,2] Alexander Chaika, [3] Olga Molodtsova, [4] Alexei Zakharov, [5,6] Dmitry Marchenko, [5] Jaime Sánchez-Barriga, [5] Andrei Varykhalov, [7] Marc Portail, [8] Marcin Zielinski, [2] Igor Shvets, [1,3] Victor Aristov [1] Institute of Solid State Physics RAS, Chernogolovka, Moscow district 142432, Russia [2] CRANN, School of Physics, Trinity College, Dublin 2, Ireland [3] HASYLAB at DESY, D-22607 Hamburg, Germany [4] MAX-lab, Lund University, Box 118, 22100 Lund, Sweden [5] Helmholtz-Zentrum Berlin für Materialien und Energie, D-12489 Berlin, Germany [6] Freie Universität Berlin, D-14195 Berlin, Germany [7] CNRS-CRHEA, Rue Bernard Gregory, 06560 Valbonne, France [8] NOVASiC, Savoie Technolac, Arche Bat 4, BP 273, 73375 Le Bourget Du Lac Cedex, France
pp01.096	**Atomic Resolution of Nanocrystalline Ge and SbTe Encapsulated Inside Carbon Nanotubes** [1] Samuel R. Marks, [1] Reza Kashtiban, [1] Jeremy Sloan [1] University Of Warwick, Coventry, CV4 7AL, UK
pp01.097	**Comparative Study of the Removal of Cadmium (II) from Water by Using Regular and Modified Carbon Nanofibers** [1] Ihsan Ullah [1] 1Department of Chemical Engineering King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia

pp01.098	**Continuum Model of SWNT Based on the Generalized Theory of Adhesion Interactions** [1] Sergey A. Lurie, [2] Petr A. Belov, [3] Victor A. Eremeyev [1] Institute of Applied Mechanics of RAS, Leningradskii pr. 7,125040, Moscow, Russia [2] Bauman University, Research and Education Center, -nd Baumanskaya str., 5, 105005, Moscow, Russia [3] Otto-von-Guericke-University Magdeburg, Universitatplatz 2, 39106 Magdeburg, Germany
pp01.099	**Direct Chemical Vapor Deposition of Graphene on Alumina Nanofibers** [1] Irina Hussainova, [1] Roman Ivanov [1] Tallinn University of Technology, Ehitajate 5, Tallinn, Estonia
pp01.100	**Epitaxial Graphene on Silicon: Reconstruction of the Substrate Surface by Silicon Carbide at Magnetron Sputtering** [1] Shikhgasan M. Ramazanov, [2] Dinara S. Dallaeva, [1] Guseyn M. Ramazanov, [3] Nariman M. Alikhanov, [3] Ruslan M. Emirov, [3] Marat E. Iskhakov [1] SICLAB LLC, Makhachkala, Dagestan, 367000 Russia [2] Brno University of Technology, Brno, 616 00 Czech Republic [3] Dagestan State University, Makhachkala, Dagestan, 367000 Russia
pp01.101	**Graphene Synthesis by Chemical Interaction of Carbides with Molten Aluminium in Alkali Chloride Melts** [1] Varvara A. Yolshina, [2] Liudmila A. Yolshina, [2] Emma G. Vovkotrub [1] Ural Federal University named after B.N.Yeltsin, Mira str., 19, Ekaterinburg, 620002 Russia [2] Institute of High-Temperature Electrochemistry Urals Branch of Russian Academy of Sciences, Akademicheskaya str., 20, Ekaterinburg, 620990 Russia
pp01.102	**Heating Graphene on Single Crystal Copper and Its Dependence on the Substrate Orientation: A Raman Spectroscopy Study** [1] Sara D. Costa, [1] Johan Ek Weis, [1] Otakar Frank, [1] Martin Kalbac [1] J. Heyrovsky Institute of Physical Chemistry, Dolejškova 3, CZ-18223 Prague 8, Czech Republic
pp01.103	**Hydrogen Adsorption in Graphene Nanostructures and Uncatalytic Hydrogenation of Decene-1 Using This Hydrogen** [1] Anatoly P. Soldatov [1] Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Leninsky av., 29, Russia
pp01.104	**In situ Investigation of the Active Component Formation of Fe-Co Catalyst During MWCNT Growth** [1] Dmitry V. Krasnikov, [2] Vladimir L. Kuznetsov, [2] Alexander N. Shmakov, [2] Arcady V. Ishchenko, [2] Andrey S. Andreev, [2] Oga B. Lapina [1] Novosibirsk State university, Novosibirsk, Russia [2] Boreskov Institute of Catalysis, Novosibirsk, Russia

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pp01.105	**In-Situ Evidence of Molecular Trapping in Hybrid Imogolite Nanotubes** [1] Mohamed-Salah Amara, [1] Erwan Paineau, [1] Stephan Rouziere, [1] Pascale Launois, [2] Antoine Thill [1] Laboratory of Solid State Physics, Paris Sud 11 University, B.510, , 91405 Orsay, France [2] Laboratoire Interdisciplinaire sur l'Organisation Nanométrique et Supramoléculaire, CEA Saclay, IRAMIS, LIONS, 91191 Gif-sur-Yvette, France
pp01.106	**Large-Scale Synthesis of Nanoporous Carbide-Derived Carbons** [1] Alexei G. Gogotsi, [2] Yury G. Gogotsi [1] Materials Research Centre, Kiev, 03680, Ukraine [2] A.J. Drexel Nanotechnology Institute, Department of Material Science and Engineering Drexel University, Philadelphia, PA 19104, USA
pp01.107	**Materials for Spintronics: Edge and Substrate-Induced Bandgap in Zigzag Graphene Nanoribbons on the h-BN(0001)** [1] Victor V. Ilyasov, [1] Besarion Ch. Meshi, [1] Chiong V. Nguyen, [1] Igor V. Ershov [1] Don State Technical University, Gagarin sq.1, Rostov-on-Don, 344000, Russia
pp01.108	**Morphology and Magnetic Properties of $(Mg,Ni)_3Si_2O_5(OH)_4$ Nanorolls** [1,2] Andrei A. Krasilin, [3] Anastasiya M. Suprun, [1] Vladimir N. Nevedomsky, [4] Anna S. Semenova [1] Ioffe Physical Technical Institute, 26 Polytekhnicheskaya st., St. Petersburg, 194021, Russia [2] St. Petersburg National Research University of Information Technologies, Mechanics and Optics, 49 Kronverkskiy pr., St. Petersburg, 197101, Russia [3] St. Petersburg State Technological Institute (Technical University), 26 Moskovsky pr., St. Petersburg, 190013, Russia [4] Institute of Solid State Chemistry, Ural Branch of the Russian Academy of Sciences, 91 Pervomaiskaya st., Ekaterinburg, 620990, Russia
pp01.109	**Morphology Engineering of Zeolites with Graphene** [1] Paul Gebhardt, [2] Sebastian W. Pattinson, [3] David J. Cooke, [2] James Elliott, [1] Dominik Eder [1] Westfaelische Wilhelms-Universitaet Muenster, Corrensstr. 28, 48149 Muenster, Germany [2] Department of Materials Science and Metallurgy, University of Cambridge, U.K, University of Cambridge, U.K [3] Department of Chemical and Biological Sciences, University of Huddersfield, U.K, University of Huddersfield, U.K
pp01.110	**Nanocrystalline Fe-Clusters Imbedded in Vertically Aligned Carbon Nanotubes: Location and Properties** [1] Nikolay G. Chechenin, [1] Pavel N. Chernykh, [1] Ekaterina A. Vorobyeva, [2] Michail V. Dutka, [2] David I. Vainshtein, [2] Jeff Th. De Hosson [1] Lomonosov Moscow State University Skobeltsyn Institute of Nuclear Physics, Leninskie Gory 1/2, 119234, Russian Federation [2] Department of Applied Physics, Materials Innovation Institute (M2i), University of Groningen, Nijenborgh 4, 9747 AG Groningen, The Netherlands

pp01.111	**Synthesis, Properties and Potential Application of Carbon Nanoscrolls with Polygonal Cross-Section** [1] Andrey M. Alexeev, [1] Rinat R. Ismagilov, [1] Sergei A. Malykhin, [1] Alexander N. Obraztsov [1] Lomonosov Moscow State University, Department of Physics, Leninskie Gory, Moscow 119991 Russia
pp01.112	**The Carbon Nanomaterials Manufacture at High-Frequency Induction Plasma Torch** [1] Artur V. Krasilnikov, [1] Georgiy N. Zalogin, [1] Nikoly F. Rudin [1] Central Institute of Machine Building, 141070, Pioneer st., 4, Korolev, Moscow region, Russia
pp01.113	**Theoretical Study of Addition Motifs in Stepwise Functionalization of Graphene** [1] Olga N. Mazaleva, [1] Aleksandra A. Brunovlenskaya-Bogoyavlenskaya, [1] Ruslan R. Gazizov, [1] Ilya N. Ioffe, [1] Pavel A. Khavrel, [1] Alexey A. Goryunkov, [1] Evgeny V. Skokan [1] Lomonosov Moscow State University, Leninskie Gory, 1, Russia
pp01.114	**Time and Energy Dependent Wave Packet Dynamical Simulations for Carbon Nanostructures** [1] Geza I. Mark, [1] Peter Vancso, [2] Dmitrii Kvashnin, [2] Victor A. Demin, [2] Leonid A. Chernozatonskii, [3] Philippe Lambin, [4] Chanyong Hwang, [1] Laszlo P. Biro [1] Institute of Technical Physics and Materials Science, Research Centre for Natural Sciences, PO Box 49, H-1525 Budapest, Hungary [2] N.M.Emanuel Institute of Biochemical Physics, Russian Academy of Sciences (IBCP), 4 Kosygin St., Moscow, 119991, Russian Ferderation [3] Department of Physics of Matter and Radiation, University of Namur (FUNDP), 61, Rue de Bruxelles, B-5000 Namur, Belgium [4] Korean-Hungarian Joint Laboratory for Nanosciences, PO Box 49, H-1525 Budapest, Hungary [5] Center for Nano-imaging Technology, Division of Industrial Metrology, Korea Research Institute of Standards and Science, Yuseong, Daejeon 305-340, Republic of Korea
pp01.115	**Transport and Magneto-Optical Properties of Bilayer Graphene in External Fields within Two- And Four-Band QFT Approximation** [1] Alexander A. Reshetnyak, [2] Valery P. Gusynin, [2] Sergey G. Sharapov [1] Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, (ISPMS SB RAS), Tomsk, 2/4, pr. Akademicheskii, Tomsk, 634021, Russia [2] Bogolyubov Institute for Theoretical Physics, National Academy of Science of Ukraine, 14-b, Metrologicheskaya Street, Kiev, 03680, Ukraine
pp01.116	**Variation of Composition and Structure over the Height in Arrays of Vertically Aligned CNT** [1] Alexey V. Makunin, [1] Kirill A. Bukunov, [1] Ekaterina A. Vorobyeva, [2] Denis A. Pankratov, [1] Dmitriy V. Petrov, [1] Nikolay G. Chechenin [1] Lomonosov Moscow State University Skobeltsyn Scientific Institute of Nuclear Physics, 1(2), Leninskie gory, GSP-1, Moscow 119991, Russian Federation [2] Lomonosov Moscow State University Chemical Faculty of MSU, 1(3), Leninskie gory, GSP-1, Moscow 119991, Russian Federation

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Section 02 – Thin Films and Heterostructures, 2D and 3D Nanofabrication

12:00 PM – 2:00 PM	Poster session
pp02.047	**Synthesis and Characterization of ZrO_2 Thin Films Prepared by Means of Microwave Heating** [1] Nancy Castillo, [2] Emma Luna, [2] Miguel Galván-Arellano, [3] Amado F. García-Ruiz, [1] Agustín Conde [1] UPIICSA-COFAA, Instituto Politécnico Nacional (IPN), Té 950, Col. Granjas-México, Iztacalco, C. P. 08400 México, D. F. Mexico [2] Física, Centro de Investigación y Estudios Avanzados del IPN (CINVESTAV-IPN), C. P. 07360 Mexico D. F, Mexico [3] Ingeniería Eléctrica, Centro de Investigación y Estudios Avanzados del IPN (CINVESTAV-IPN), C. P. 07360 México D. F, Mexico
pp02.048	**Atomic and Electronic Structures and VIS-Induced Photochemical Activity of Nanocrystalline n-ZnO Films Deposited by ALD onto p-Si(100)** [1] Andrey A. Lisachenko, [1] Viktor E. Drozd, [1] Viktor V. Titov, [1] Igor A. Kasatkin, [1] Lev L. Basov, [2] Oleksandr L. Stroyuk, [2] Stephan Y. Kuchmiy [1] St. Petersburg State University, V.A.Fock Institute of Physics, Ulyanovskaya 1, St-Petersburg, Russia [2] L.V.Pysarzhevsky Institute of Physical Chemistry, National Academy of Sciences of Ukraine, 31 Nauky av., 03028, Kyiv, Ukraine
pp02.049	**Self-Formation of Hierarchical Alumina Mesostructures via a Hydrothermal Route** [1] Irene I. Lebedeva, [1] Victor V. Valtsifer [1] Institute of Tecnical Chemistry Ural branch of the RAS, 614013, Perm, Akademika Koroleva, 3, Russia
pp02.050	**Formation of Nanoscale Defects on Si/Si(001) Growth Surface During Molecular Beam Epitaxy** [1] Larisa V. Arapkina, [1] Mikhail S. Storozhevykh, [1] Kirill V. Chizh, [1] Valery A. Chapnin, [1] Vladimir A. Yuryev [1] A.M.Prokhorov General Physics Institute of RAS, 38 Vavilov str., Moscow, Russia
pp02.051	**Negative Capacitance in n-Si/GaS Heterojunctions** [1] Dorin Spoiala, [1] Silvia Evtodiev, [2] Adrian Dafinei, [1] Petru Ketrush, [1] Dumitru Untila, [1] Irina Rotaru [1] Moldova State University, A. Mateevici, 60, MD-2009 Kishinev, Republic of Moldova [2] University of Bucharest, Atomistilor, 405, RO-077125, Bucharest-Magurele, Romania
pp02.052	**Adsorption, Diffusion and Intercalation of Alkali Metal Atoms Deposited on the Stepped Bi_2Se_3 Surface: An Ab Initio Study** [1] Anastasia G. Ryabishchenkova, [1] Mikhail M. Otrokov, [1] Vladimir M. Kuznetsov [1] Tomsk State University, Tomsk, prospect Lenina, 36, Russia

pp02.053	**Growth of 3C-SiC Thin Films on Silicon Substrate by Pulsed Laser Deposition** [1] Elena P. Pavlova, [1] Sergey M. Ryndya, [1] Aleksandr S. Gusev, [1] Nikolay I. Kargin [1] National Research Nuclear University MEPhI, Kashirskoe sh. 31, Moscow, 115409 Russia
pp02.054	**Hard TiCrBN Thin Films Produced by Magnetron Sputtering and Pulsed Arc Evaporation of Ceramic SHS-Targets** [1] Philipp V. Kiryukhantsev-Korneev, [1] Konstantin A. Kuptsov, [1] Alexander N. Sheveyko, [1] Evgeny A. Levashov, [1] Dmitry V. Shtansky [1] National University of Science and Technology «MISIS», Leninsky pr., 4, Moscow 119049, Russia
pp02.055	**Nanocrystalline Structure Formation of Superhard Coatings Deposited by Vacuum-Arc Plasma-Assisted Method** [1] Olga V. Krysina, [1] Nikolay N. Koval, [1] Yuriy F. Ivanov, [2] Nikolay A. Timchenko, [3] Stephen Doyle, [4] Taras Slobodskyy, [5] Nikolay A. Shmakov, [6] Yan V. Zubavichus, [2] Ruslan M. Galimov [1] Institute of high current electronics SB RAS, 634055, Tomsk, Akademicheskyy ave. 2/3, Russia [2] National Research Tomsk Polytechnic University, 634050, Tomsk, Lenin Avenue, 30, Russia [3] Siberian Synchrotron Radiation Center, BINP SB RAS, 630090, Novosibirsk, Lavrentyev ave., 11, Russia [4] National research centre "Kurchatov institute", 123182, Moscow, Akademika Kurchatova pl., 1, Russia [5] Karlsruhe institute of technology, ANKA Synchrotron Radiation Facility, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany [6] University of Hamburg, Institute of Applied Physics, Jungiusstraße11, 20 355 Hamburg, Germany
pp02.056	**Resistive Switching and Diode Properties of Mesoscopic Structures Based on Niobium Oxide** [1] Ivan Yu. Borisenko, [2] Nataliya A. Tulina, [2] Anna N. Rassolenko, [3] Andrey A. Ivanov, [2] Ivan M. Shmytko [1] Institute of Microelectronics Technology and High Purity Materials RAS, 6, Academician Ossipyan str, Chernogolovka, Moscow Region, 142432, Russia [2] Institute of Solid State Physics RAS, Chernogolovka, Moscow District, 2 Academician Ossipyan str., 142432 Russia [3] National Research Nuclear University "MEPhI", Kashirskoye shosse 31, Moscow, 115409, Russia
pp02.057	**Reversible UV Induced Metal-Semiconductor Transition in In_2O_3 Thin Films Prepared by Autowave Oxidation** [1] Igor A. Tambasov, [1] Victor G. Maygkov, [1] Anton S. Tarasov, [1] Alexander A. Ivanenko [1] Kirensky Institute of Physics, Siberian Branch of the Russian Academy of Sciences, Akademgorodok 50, 660036 Krasnoyarsk, Russia

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pp02.058	**Synthesis, Phase and Structural States and Magnetic Properties of Fe-Zr-N and Fe-Ti-B Films** [1] Elena N. Sheftel, [2] Philipp V. Kiryukhantsev-Korneev, [2] Pavel A. Trukhanov, [1] Valentin A. Tedzhetov, [1] Eugene V. Harin, [3] Anna S. Semisalova, [1] Galina Sh. Usmanova, [2] Evgeniy A. Levashov [1] Baikov Institute of Metallurgy and Material Science RAS, Leninsky pr. 49, Moscow 119991, Russia [2] National University of Science and Technology "MISIS", Leninsky pr., 4, Moscow 119049, Russia [3] Lomonosov Moscow State University, Leninskie Gory, 1, Moscow, Russia
pp02.059	**The Effect of Ion Irradiation on the Structure and Properties of Vacuum-Arc Nitride Coatings** [1] Anatoly A. Andreyev, [2] Oleg V. Sobol, [1] Viktor N. Voyevodin, [3] Viktor F. Gorban', [1] Vyacheslav A. Stolbovoy, [1] Gennady N. Kartmazov, [1] Vladimir V. Levenets, [1] Daria V. Lysan [1] National Technical University "Kharkiv Polytechnic Institute", 21 Frunze Str., 61002, Kharkiv, Ukraine [2] National Science Center "Kharkiv Institute of Physics & Technology", Akademicheskaya St., 61108 Kharkiv, Ukraine [3] Institute for Problems of Materials, 3, Krzhizhanovsky St., 303680, Kyiv, Ukraine
pp02.060	**Vis Sensitization of TiO_2 Nano-Films Deposited by ALD onto p-Si(100)** [1] Victor V. Titov, [2] Victor E. Drozd, [1] Lev L. Basov, [1] Andrey A. Lisachenko [1] Saint-Petersburg State University, Physics department, Saint-Petersburg, Peterhof, Ulyanovskaya 1, Russia [2] Saint-Petersburg State University, Chemical department, Saint-Petersburg, Peterhof, Universitetskii pr. 26, Russia

Section 03 – Nanoceramics

12:00 PM – 2:00 PM	Poster session
pp03.027	**Mechanochemical Synthesis of the Nanostructured Metallic, Ceramic and Salt Coatings on Different Metallic Surfaces** [1] Renata S. Hasenova, [1] Daria V. Strugova, [1] Vladislav Yu. Zadorozhnyy, [1] Ekaterina V. Kaevitser, [1] Yuliya V. Borisova, [1] Yevgeny V. Shelehov, [1] Sergey D. Kaloshkin [1] National University of Science and Technology (MISIS), 119049, Moscow, Leninskiy prospekt 4, Russia
pp03.028	**Effect of the Surface Treatment of Titanium on the Texture, Mechanical and Physicochemical Properties of the Rf-Magnetron Sputtered Silver-Doped Hydroxyapatite Coatings** [1] Tatiana S. Priamushko, [1] Irina Grubova, [1] Roman Surmenev, [1] Maria Surmeneva, [1] Anna Ivanova, [2] Sergey Kravchuk, [3] Oleg Prymak, [3] Matthias Epple [1] National Research Tomsk Polytechnic University, 634050, Tomsk, Lenin Avenue, 30, Russia [2] Technological Institute for Superhard and Novel Carbon Materials, Central Street 7a, 142190 Troitsk, Russia [3] Duisburg-Essen (CeNIDE), University of Duisburg-Essen, 45117 Essen, Germany
pp03.029	**Features of Yttrium Aluminate Synthesis for Optical Ceramics** [1] Vladimir M. Smirnov, [1] Dar'ya Tolstikova, [1] Michail D. Michailov [1] St-Petersburg state university, St-Petersburg, Universitetsky pr 25, Russia
pp03.030	**Preparation of Calcia Partially Stabilized Zirconia Ceramics Using Natural Baddeleyite** [1] Andrey Zhigachev [1] G.R. Derzhavin Tambov State University, Tambov, Internatsionalnaya str., b. 33, Russia
pp03.031	**Self-Propagating High-Temperature Synthesis of Zirconium Diboride Nanoparticles** [1] Hasan E. Camurlu, [2] Filippo Maglia [1] Akdeniz University, Makine Muh. Bol. Kampus, Antalya, Turkey [2] University of Pavia, Department of Physical Chemistry, V.le Taramelli 16, 26100 Pavia, Italy
pp03.032	**Synthesis of AlN Nanoparticles with Microwave-Assisted Organometallic Route** [1] Dongsoo Kim, [1] Jongbin Ahn, [1] Chuljin Choi [1] Korea Institute of Materials Science, 797 Changwondaero, Seongsan-gu, Changwon, Gyeongnam, 642-831, South Korea
pp03.033	**Synthesis of Two-Component Dense Xerogels Based on SiO_2, γ-Al_2O_3, ZrO_2, and Cr_2O_3 Sols** [1] Anna V. Volkova, [1] Evgenia V. Golikova, [1] Lyudmila E. Ermakova [1] Saint-Petersburg state university, 198504, Saint-Petersburg, Petrodvoretc, Universitetskii pr., 26, Russia
pp03.034	**Thermal Transformation of Nanometallocarbosilanes** [1] Galina Shcherbakova, [1] Pavel Storozhenko, [1] Maria Blokhina, [1] Dmitrii Sidorov, [1] Valentina Khramkova, [1] Denis Sidorov, [2] Gleb Yurkov [1] SSC GNIIChTEOS, 38 shosse Entuziastov Moscow 105118 Russia [2] A.A. Baikov Institute for Metallurgy and Material Science RAS, 49 Leninskii prospect Moscow 119991 Russia

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Section 04 – Bulk Metallic Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp04.021	**Synthesis of Lead (II) Oxide Nano-Structures from Thermolyses of a New Lead (II) Coordination Polymer** [1] Akram Hosseinian, [2] Hedayat Hedayat Haddadi, [3] Ali Ali Akbar Ashkarran [1] Department of Engineering Science, College of Engineering, University of Tehran, P.O. Box 11155-4463 Iran [2] Department of Chemistry, Faculty of Sciences, Shahrekord University, P.O. Box 115, Shahrekord, Iran [3] Department of Physics, Faculty of Basic Sciences, University of Mazandaran, Babolsar, Iran
pp04.022	**Indentation Properties of Cu-Zr-Al Metallic-Glass at Elevated Temperatures via Molecular Dynamics Simulation** [1] Yunche Wang, [1] Chunyi Wu [1] National Cheng Kung University, 1 University Road, Tainan 70101 Taiwan
pp04.023	**Annealing Behavior of Al-Mg-Sc-Zr Alloy Processed by Warm ECAP and Subsequent Cold Rolling** [1] Stanislav Krymskiy, [1] Elena V. Avtokratova, [1] Oksana E. Mukhametdinova, [1] Rafis R. Ilyasov, [1] Oleg Sh. Sitdikov, [1] Michael V. Markushev, [2] S.V.S. Narayana Murty, [3] M.J.N.V. Prasad, [3] Bhagwati P. Kashyap [1] Institute for Metals Superplasticity Problems RAS, Khalturin St. 39, Ufa, 450001, Russia [2] Vikram Sarabhai Space Center, Trivandrum – 695022, Kerala, India [3] Indian Institute of Technology - Bombay, Powai, Mumbai-400076, India
pp04.024	**Evolution of Grain Structure and Nanoprecipitates in Severely Deformed Al-Mg-Sc-Zr Alloy During Annealing** [1] Stanislav Krymskiy, [1] Michael V. Markushev, [1] Elena V. Avtokratova, [1] Oksana E. Mukhametdinova, [1] Oleg Sh. Sitdikov, [2] S.V.S. Narayana Murty, [3] M.J.N.V. Prasad, [3] Bhagwati P. Kashyap [1] Institute for Metals Superplasticity Problems, Khalturin St. 39, Ufa, 450001, Russia [2] Vikram Sarabhai Space Center, Trivandrum – 695022, Kerala, India [3] Indian Institute of Technology - Bombay, Powai, Mumbai-400076, India

Section 05 – Nanocomposites and Hybrid Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp05.054	**Synthesis and Physicochemical Characterization of Core-Shell Fe_3O_4@Au Nanoparticles** [1] Polina G. Rudakovskaya, [1] Alexander G. Majouga, [2] Sergei V. Salihov, [1] Maria V. Efremova, [2] Igor V. Schetinin, [1] Alexander V. Barulin, [1] Olga M. Metelkina [1] Lomonosov Moscow State University, Leninskie Gory 1, 3, Russia [2] National University of Science and Technology «MISIS», Leninskiy prospect, 4, Russia
pp05.055	**Tuning the Shape and Size of Hybrid Gold Nanoparticles by Porphyrins Using Seed-Mediated Synthesis** [1] Jolanda Spadavecchia, [1] Sandra Casale, [1] Jessem Landoulsi, [1] Claire-Marie Pradier [1] CNRS, UMR 7197, Laboratoire de Réactivité de Surface, F-75005, Paris, 3 rue Galilee site Raphael 94200 Ivry sur Seine, France
pp05.056	**Chitosan Bionanocomposites with Clay Nanoparticles Prepared by Novel Technique** [1] Vladimir E. Silant'ev, [2] Irina V. Postnova, [1] Yury A. Shchipunov [1] Institute of Chemistry, Far East Department Russian Academy of Sciences, Ave. 100-letya of Vladivostok, 159, 690022, Vladivostok, Russia [2] Far Eastern Federal University, the School of Natural Sciences, Vladivostok, Russia
pp05.057	**Photocatalytic and Gas Sensing Properties of ZnO/TiO_2 and TiO_2/ZnO Nanofibers Prepared by Electrospinning and ALD** [1] Stefan I. Boyadjiev, [1] Péter Bárdos, [2] Zsombor Nagy, [3] Zsófia Baji, [1] Imre M. Szilágyi [1] Budapest University of Technology and Economics, Department of Inorganic and Analytical Chemistry, Technical Analytical Chemistry Research Group of the Hungarian Academy of Sciences, H-1111 Budapest, Műegyetem rakpart 3, Hungary [2] Budapest University of Technology and Economics, Department of Organic Chemistry and Technology, H-1111 Budapest, Budafoki út 8, Hungary [3] Hungarian Academy of Sciences, Research Centre for Natural Sciences, Institute of Technical Physics and Materials Science, H-1121 Budapest, Konkoly Thege M. út 29-33, Hungary
pp05.058	**Photocatalytic Activity of Titania-Based Nanocomposites with Metals (Cu, Ag) and Semiconductors (CuO, WO_3)** [1] Vasily A. Lebedev, [1] Daniil A. Kozlov, [2] Vladislav V. Sudin, [1] Irina V. Kolesnik, [1, 2] Alexei V. Garshev [1] Lomonosov Moscow State University, Department of Materials Science, Moscow, Russia [2] Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russia

pp05.059	**Passivation and Treatment of InP Quantum Dots** [1] Natalia E. Mordvinova, [1] Alexander A. Vinokurov, [1] Sergey G. Dorofeev [1] Lomonosov Moscow State University, Leninskie Gory 1, Russia
pp05.060	**In Situ Characterization of Optically-Active Nanocomposite Using Small Angle X-Ray Scattering Technique** [1] Anna N. Galkina, [1] Sergey S. Voznesenskiy, [1] Alexander A. Sergeev, [1] Yuriy N. Kulchin, [2] Irina V. Postnova, [2] Yuriy A. Shchipunov [1] Institute of Automation and Control Processes Far Eastern Branch of RAS, 690041, 5, Radio st. Vladivostok, Russia [2] Institute of Chemistry Far Eastern Branch of the Russian Academy of Sciences, 690022, 159, Prosp. 100-Letiya Vladivostoka, Vladivostok, Russia
pp05.061	**Functional Properties of Nanostructured Blankets TiNiCu Formed by Complex Processing** [1] Etibar Balayev, [1] Piter Rusinov, [1] Zhesfina Blednova [1] Kuban state university of technology, Krasnodar, Moskovskaya, 2, Russia
pp05.062	**Facile Formation of Ga-Cu and Ga-Au Intermetallic Compounds Using Ultrasonic Energy** [1] Vijay B. Kumar, [2, 3] Ze'ev Porat, [1] Aharon Gedanken [1] Institute of nanotechnology and advanced materials, Department of Chemistry, Bar-Ilan University, Ramat-Gan 52900, Israel [2] Division of Chemistry, Nuclear Research Center-Negev, P.O.Box 9001, Be'er-Sheva 84190, Israel [3] Institutes of Applied Research, Ben-Gurion University of the Negev, Be'er-Sheva 841051, Israel

Section 06 – Polymer, Organic and Other Soft Matter Materials

12:00 PM – 2:00 PM	Poster session
pp06.025	**Liposome-Templated Biocompatible Nanomaterials with Nanometer-Thin Walls: Synthetic Approach and Creation of Functional Nanodevices** [1] Sergey A. Dergunov, [2] Maxim A. Dergunov, [1] Mariya D. Kim, [1] Eugene Pinkhassik [1] Department of Chemistry, Saint Louis University, St Louis, MO 63103, USA [2] Al-Farabi Kazakh National University, Almaty, Kazakhstan
pp06.026	**Modification of CdSe/CdZnS/ZnS Quantum Dots by Polyelectrolytes and Quenching of Their Fluorescence by Antimicrobial Agents in Solution and on Silica Support** [1] Tatiana Samarina, [1] Alexandra Turkova, [1] Alexander Bodrov, [1] Mikhail Beklemishev [1] Department of Chemistry, Lomonosov Moscow State University, Leninskie Gory 1, bldg. 3, Moscow 119991, Russia
pp06.027	**High Strength Cellulose Aerogel Filaments** [1] Bjoern Schulz, [2] Maria Schestakow, [2] Ilknur Karadagli, [2] Barbara Milow, [1] Gunnar Seide, [1] Thomas Gries, [2] Lorenz Ratke [1] Lehrstuhl für Textilmaschinenbau und Institut für Textiltechnik (ITA) der RWTH Aachen University, Otto-Blumenthal-Str. 1, 52074 Aachen, Germany [2] Institut für Werkstoffforschung, Deutsches Zentrum für Luft und Raumfahrt, Linder Höhe, 51147 Köln, Germany
pp06.028	**Influence of Regeneration Fluids on Structure and Properties of Cellulose Aerogels** [1] Maria Schestakow, [1] Ilknur Karadagli, [1] Lorenz Ratke [1] German Aerospace Center - Institute of Materials Research, Linder Hoehe, 51147 Cologne, Germany
pp06.029	**Study of Nanostructured Materials Based on Silcon Oxide (SiO_2)** [1] Gulzipa E. Satayeva [1] Eurasian Natianal University, Munaitpasov street 5, Astana, Kazakhstan
pp06.030	**Multi-Responsive Dispersion of Multi-Walled Carbon Nanotubes Modified with Poly(N-vinylcaprolactam)** [1] Igor V. Strokov, [1] Elena E. Makhaeva [1] Department of Physics, Lomonosov Moscow State University, Leninskiye Gory 1, 119991 Moscow, Russia
pp06.031	**Synthesis of Noble Metal Nanoparticles Using Grafted Chitosan. Obtaining Nanostructured Films** [1] Angel Leiva, [1] Sebastian Bonnard, [1] Maximiliano Pino, [1] Deodato Radic [1] Pontificia Universidad Catolica de Chile, Vicuna Mackenna 4860, Macul, Santiago, Chile

Section 07 – Nanomaterials for Energy

12:00 PM – 2:00 PM	Poster session
pp07.051	**Controlled Synthesis of $Bi_{1-x}Sb_x$ Free Alloy Nano-particles via Solvothermal Route** [1] Manolata Devi Mayanglambam, [1] Krishanu Biswas [1] Department of Materials Science and Engineering, Indian Institute of Technology Kanpur, Kanpur-208016, India
pp07.052	**Structured Composites Based on Ferrites as Cathode Materials for Lithium Batteries** [1] Anatoly Klenushkin, [1] Boris Medvedev, [1] Yurii Kabirov [1] Southern Federal university, 7 Zorge st. Rostov-on-Don, Russia
pp07.053	**High-Aligned Carbon Nanotubes Forest to Enhance the Quality of Membranes for Fuel Cells** [1] Ronaldo D. Mansano, [1] Ana P. Mousinho, [1] Nelson Ordonez [1] University of So Paulo, Avenida Luciano Gualberto, 158, trav. 3, Sao Paulo, Brazil
pp07.054	**Sonochemical Synthesis and Characterization of FeCo Nanoparticles** [1] Elisabetta Agostinelli, [1] Elvira M. Bauer, [1] Davide Peddis, [2] Xiaocao Hu, [2] George Hadjipanayis [1] ISM - CNR, Area Roma 1, via Salaria km 29.300 Monterotondo Scalo (RM) Italy [2] Department of Physics and Astronomy, University of Delaware, Newark, U.S.A
pp07.055	**Electrical Properties of Nanostructed Thermoelectric Materials Modified by Carbon Nanoclusters** [1] Danila Ovsyannikov, [1] Mikhail Popov, [1] Sergey Buga, [1] Sergey Tarelkin, [1] Evgeniy Tatyanin, [1] Aleksey Kirichenko, [1] Roman Lomskin, [1] Vladimir Blank [1] Federal State Bugetary Institution "Technological Institute for Superhard and Novel Carbon Materials, Moscow, Troitsk, Centralnaya 7a, Russia
pp07.056	**In Situ Synthesis of Oriented, Single Crystalline La-Doped TiO_2 Nanorod Arrays for Enhanced Photoelectrochemical Activity** [1] Subha Sadhu, [1] Pankaj Poddar [1] National Chemical Laboratory, Pune- 411008 India
pp07.057	**Interaction of Thermal and Solar Radiation with Dense Ensembles of Disordered Nanoparticles** [1] Andrei V. Galaktionov [1] Joint Institute for High Temperatures of the Russian Academy of Sciences, Izhorskaya st. 13 Bd.2, Moscow, 125412 Russia

pp07.058	**Intercalation of Organic Molecules in 2D Copper Nitroprusside** [1] Arely A. Cano, [2] Joelis J. Rodriguez, [1] Osiry O. Hernandez, [1] Adela A. Lemus, [1] Edilso E. Reguera [1] Center of Applied Science and Technology of IPN, CICATA-Unidad Legaria, Mexico [2] Institute of Materials Science and Technology, 10400 Havana University, Havana, Cuba
pp07.059	**Interface Engineering in Nanocarbon – Ta_2O_5 Hybrid Photocatalysts** [1] Alexey S. Cherevan, [1] Paul Gebhardt, [1] Cameron J. Shearer, [2] Michinori Matsukawa, [2] Kazunari Domen, [1] Dominik Eder [1] Institute of Physical Chemistry and Graduate School of Chemistry, Westfalische Wilhelms-Universitat, Corrensstrasse 28/30, Munster, 48149, Germany [2] Department of Chemical System Engineering, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan
pp07.060	**Liquid Metal Technology for Synthesis of Nanostructured Materials for Example Alumina Airgel. Properties of Materials and Applications Areas** [1] Radomir Sh. Askhadullin, [1] Petr N. Martinov, [1] Alexander A. Osipov, [1] Sergey E. Kharchuk [1] FSUE «SSC RF – IPPE», Obninsk, Russia
pp07.061	**Nanocrystalline Beryllium: Preparation and Application in New Energy** [1] Dmitry Brilev, [1] Alexey Zabrodin, [1] Yury Tuzov, [1] Igor Kuprianov [1] JSC «VNIINM», Moscow, Rogova st., 5, Russia
pp07.062	**Observation of Large Magnetocaloric Effect and Giant Magnetoresistance in Nanocrystalline Manganites Near Room Temperature** [1] Kanikrishnan Sethupathi, [1] Rabindra N. Mahato, [1] Venkataraman Sankaranarayanan [1] Indian Institute of Technology, Department of Physics, India
pp07.063	**Photoactivity of Nanotubular TiO_2, Doped with D-Elements** [1] Mislimat P. Faradzheva, [1] Nabi S. Shabanov, [1] Murtazali H. Rabadanov, [1] Marasilav M. Hamidov [1] Dagestan state university, Gadzhieva street, 43-a, Maxachkala, Russia
pp07.064	**Photocatalytic Activity of Layered Niobates for Hydrogen Evolution in Water Solution** [1] Alena A. Burovikhina, [1] Ivan A. Rodionov, [1] Mikhail V. Chislov, [1] Dmitriy A. Porotnikov, [1] Irina A. Zvereva [1] Institute of chemistry, Saint Petersburg State University, 198504, Saint-Petersburg, Petrodvorets, Universitetskii pr. 26, Russia
pp07.065	**Processes of Structure Formation and Thermoelectric Properties of the Semiconductor Systems Pb(Sn)-Sb(Bi)-Te** [1] Lyubomyr Nykyruy, [1] Dmytro Freik, [2] Rasit Ahiska, [1] Lyubov Mezhylovska [1] Vasyl Stefanyk Precarpathian National University, 57, Shevchenko Str., Ivano-Frankivsk, 76018, Ukraine [2] Gazi University, Ankara, Teknikokullar 06500, Turkey

pp07.066	**Structural and Electrochemical Properties of Novel Mesoporous Titania Nanopowders Showing an Enhanced Photocatalytic Activity** [1] Elisabetta Masolo, [1] Gabriele Mulas, [1] Sebastiano Garroni, [2] Krzysztof Guguła, [3] Iris Herrmann-Geppert, [3] Thomas Klassen, [4] Maria Dolors Baró, [3] Mauricio Schieda, [1] Stefano Enzo, [4] Emma Rossinyol, [3] Agnieszka Rzeszutek, [1] Manuela Meloni, [1] Maria I. Pilo [1] University of Sassari, Department of Chemistry and Pharmacy, Via Vienna 2, 07100, Sassari, Italy [2] Universitat Autònoma de Barcelona, Departament de Física, E-08193 Bellaterra, Spain [3] Helmholtz-Zentrum Geesthacht, Institute of Materials Research, Max-Planck-Str. 1, 21502 Geesthacht, Germany [4] Fachhochschule Münster, Fachbereich Chemieingenieurwesen, Stegerwaldstrasse 39 - GRIPSII/M10 48565 Steinfurt, Germany
pp07.067	**Structure and Thermoelectric Properties of InSb Nanowires** [1] Oleg N. Uryupin, [1] Yury V. Ivanov, [1] Alexander A. Shabaldin, [1] Alexander V. Fokin [1] Ioffe Institute, Politekhnicheskaya, 26, St. Petersburg 194021 Russia
pp07.068	**The Heat Capacity of Nanotube Bundles with 1D Xenon Chains. Spatial Redistribution of the Xe Atoms** [1] Maksym S. Barabashko, [1] Mikhail I. Bagatskii, [1] Vladimir V. Sumarokov [1] B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, 47 Lenin Ave., Kharkov 61103, Ukraine
pp07.069	**The Study of Anodic Aluminum Alloy 6061-T6 for Selective Solar Thermal Absorber** [1] Tsung-Chieh Cheng, [1] Chu-Chiang Chou [1] Department of Mechanical Engineering, National Kaohsiung University of Applied Sciences, No.415, Jiangong Rd., Sanmin Dist., Kaohsiung City 807, Taiwan

Section 08 – Biological and Biomedical Nanomaterials

12:00 PM – 2:00 PM	Poster session
pp08.058	**Infrared and Photoluminescence Characteristics of Nanocrystalline Carbonate Substituted Hydroxyapatite** [1] D. L. Goloshchapov, [1] D. A. Minakov, [1] P. V. Seredin, [1] Evelina Domashevskaya [1] Voronezh State University, Voronezh, Universitetskaya 1, 394006, Russia
pp08.059	**Composite Nanobiomaterials for Biological Tissue Joining** [1] Levan P. Ichkitidze, [1] Alexander Yr. Gerasimenko, [1] Sergey V. Selishchev [1] National Research University of Electronic Technology "MIET", MIET, Zelenograd, Moscow, 124498 Russia, MIET, 124498 Zelenograd, Moscow, Russian Federation
pp08.060	**Optical Properties and Hemocompatability of Stabilized Zno Nanoparticles, Perspective for UV-Protection in Sunscreens** [1] Svetlana I. Senatova, [1] Fedor S. Senatov, [1] Arup R. Mandal, [2] Natalya Yu. Anisimova, [1] Denis V. Kuznetsov, [1] Dmitry I. Arkhipov [1] National University of Science and Technology "MISIS", 119049, Moscow, Leninskiy prospekt 4, Russia [2] N.N. Blokhin Russian Cancer Research Center of RAMS, 115478, Moscow, Kashirskoye sh. 23, Russia
pp08.061	**A Study on Nonwoven Composite Structures for Wound Dressing Applications** [1] Muhammet Uzun, [1] Mustafa S. Ozen, [1] Erhan Sancak, [1] Mehmet Akalin, [1] Subhash C. Anand [1] Marmara University, Technology Faculty, Department of Textile Engineering, Marmara University, Goztepe, Turkey
pp08.062	**Aptamer-Anchored Reduced Graphene Oxide as Nanodetector** [1] Yu-Kyoung Oh, [1] Yuna Shon, [2] Jaiwoo Lee, [3] Young Bong Kim [1] College of Pharmacy and Research Institute of Pharmaceutical Sciences, Seoul National University, Seoul 151-742, Republic of Korea [2] Department of of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science, Seoul National University, Daehak-dong, Gwanank-gu, Seoul, Republic of Korea [3] Department of Bio-industrial Technologies, College of Animal Bioscience and Technology, Konkuk University, Seoul 143-701, Republic of Korea
pp08.063	**Atomic Structure of Metal Active Center in Metalloproteins: X-ray Nanodiagnostics and Computer Modeling** [1] Mariya A. Kremennaya, [1] M. A. Soldatov [1] Research Center for Nanoscale Structure of Matter, Southern Federal University, Sorge 5, Rostov-on-Don 344090 Russia

pp08.064	**Biodistribution Peculiarities of Detonation Nanodiamond** [1] Ruslan Yu. Yakovlev, [1] Nikolay B. Leonidov, [2] Georgii V. Lisichkin [1] Pavlov Ryazan State Medical University, Ryazan, Vysokovoltnaya 9, Russia [2] Lomonosov Moscow State University, Moscow, Leninskie gory 1 k. 3, Russia
pp08.065	**Cellulose Acetate Based Electrospun Scaffolds with Aligned Three-dimensional Micro- and Nano-fibrous Structure for Bone Tissue Engineering** [1] Deniz H. Atila, [1,2] Aysen Tezcaner, [1,2] Dilek Keskin [1] Middle East Technical University, Middle East Technical University, Üniversiteler Mahallesi, Dumlupınar Bulvarı, No:1, 06800 Çankaya Ankara, Turkey [2] Center of Excellence in Biomaterials and Tissue Engineering, Middle East Technical University, Üniversiteler Mahallesi, Dumlupınar Bulvarı, No:1, 06800 Çankaya Ankara, Turkey
pp08.066	**Nano³A - Architectomics Expose New Cellular Inclusions** [1] Johan L. Kock, [1] Chantel W. Swart, [1] Carlien H. Pohl [1] University of the Free State, South Africa, PO Box 339, Bloemfontein, 9301 South Africa
pp08.067	**Nanopetal Pseudoboehmite for Adsorption of Microorganisms** [1] Olga V. Bakina, [1] Elena A. Glazkova, [1] Natalya V. Svarovskaya, [1] Marat I. Lerner, [1] Alla N. Fomenko, [1] Alexandr S. Lozhkomoev, [1] Alexandr V. Pervikov, [1] Sergey S. Timofeev [1] Institute of Strength Physics and Materials Science Siberian Branch of Russian Academy of Sciences, 2/4, pr. Akademicheskii, Tomsk, 634021, Russia
pp08.068	**SPIO–Phthalocyanine Magneto-Optical Nanomaterials Built Step-By-Step Towards Bimodal Imaging** [1] Julien Boudon, [2] Yann Bernhard, [2] Richard A. Decreau, [3] Nadhir Yousfi, [3] Johanna Chluba, [1] Jeremy Paris, [1] Nadine Millot [1] Laboratoire ICB UMR 6303 CNRS-Universite de Bourgogne, 9 Av. A. Savary, BP 47 870, F-21078 DIJON Cedex, France [2] Institut de Chimie Moléculaire de l'Université de Bourgogne, UMR 6302 CNRS/Université de Bourgogne, BP 47870, 21078 Dijon cedex, France [3] INSERM, UMR 866, Lipides, Nutrition, Cancer, BP 27877, 21078 Dijon cedex, France
pp08.069	**Stable Conjugates of CdTe Quantum Dots with Oligo- and Polynucleotides** [1] Anna I. Ponomarenko, [2] Igor A. Prokhorenko, [2] Ekaterina A. Obraztsova, [2] Dmitry V. Klinov, [1] Timofey S. Zatsepin, [2] Andrey A. Formanovski, [1] Eugene A. Goodilin, [2] Vladimir A. Korshun [1] Shemmyakin-Ovchinnikov Institute of Bioorganic Chemistry, Miklukho-Maklaya 16/10, Russia [2] Lomonosov Moscow State University, Leninskie Gory 1, Russia

pp08.070	**Study of Chitosan-Based Composites Mechanical Properties: Coarse-Grained Molecular Dynamics Simulation** [1] Dmitry V. Ukrainskiy, [1] Elena L. Kossovich, [1] Irina V. Kirillova, [1] Leonid Yu. Kossovich, [1] Anastasiya A. Golyadkina, [1] Asel V. Polienko [1] Saratov State University, 83, Astrakhanskaya street, Saratov, Russia
pp08.071	**Study of Interaction of Bacterial Cells with Carbon Based Nanomaterials Using Atomic Force Microscopy** [1] Hike N. Nikiyan, [1] Olga K. Davydova, [1] Dmitry G. Deryabin [1] Orenburg State University, Pobedy, 13, Russia
pp08.072	**Gold Nanoparticles for Glycated Proteins SERS Quantification** [1] Natalia Nechaeva, [1] Igor Budashov, [1] Ilya Kurochkin [1] Lomonosov Moscow State University, Leninskie gory, 1, build. 73, room 526, 119899 Russia
pp08.073	**Effect of Super-Low Frequency AC Magnetic Field on Enzyme Loaded Magnetic Nanoparticles Clusters** [1] Kseniia Vlasova, [2] Hemant Vishwasrao, [1] Maxim Abakumov, [3] Marina Sokolsky, [1] Yurii Golovin, [1] Nataliya Klyachko, [3] Alexander Kabanov [1] Lomonosov Moscow State University, Moscow, Russia [2] University of North Carolina at Chapel Hill, Chapel Hill, USA [3] University of Nebraska Medical Center, Omaha, USA
pp08.074	**EDTA Stabilized Cadmium Sulfide Nanoparticles for Biomedical Visualization** [1,2] Svetlana V. Rempel, [1] Julia V. Kuznetsova, [1,3] Nina N. Aleksandrova [1] Institute of Solid State Chemistry, Ural Branch, Russian Academy of Science, Pervomaiskaya 91, Ekaterinburg 620990, Russia [2] Ural Federal University named after the first president of Russia B.N. Yeltsin, Mira 19, Ekaterinburg 620002, Russia [3] FGUN Ekaterinburg NII virus infections, Rospotrebnadzor, Letnaya 23, Ekaterinburg 620030, Russia
pp08.075	**Core-Shell Nanoparticles for Enhancement of Optical Coherence Tomography Signal** [1] Jana Drbohlavova, [1] Marian Marik, [1] Jaromir Hubalek, [2] Radim Kolar [1] Brno University of Technology, Central European Institute of Technology, Technicka 3058/10, 616 00 Brno, Czech Republic [2] International Clinical Research Center, Center of Biomedical Engineering, St. Anne's University Hospital, Pekarska 53, 656 91 Brno, Czech Republic
pp08.076	**Formulation and Characterization of Sustained Release Tetrahydrocurcumin Self-Microemulsifying Tablets** [1] Namfa Sermkaew, [1] Ruedeekorn Wiwattanapatapee [1] Prince of Songkla University, Hat Yai, Songkhla, 90112, Thailand

July 17 (Thursday)

pp08.077	**Nanoparticles for Magnetically Controlled Thermochemotherapy** [1] Vladimir N. Nikiforov, [2] Nikolay A. Brusentsov, [3] Tatyana S. Gendler, [4] Valentine Yu. Irkhin, [1] Tatyana N. Brusentsova [1] Lomonosov moscow state university, Leninskie Gory, 119991, Moscow, Russia [2] N.N. Blokhin Cancer Research Center RAMS, Kashirskoye shosse, 24, Moscow, 115478, Russia [3] United Institute of the physics of the Earth RAS, B. Gruzinskaya 10, Moscow, 123810, Russia [4] Institute of Metal Physics, S. Kovalevskaya 24, 620990, Ekaterinburg, Russia

Section 09 – Nanomaterials: Mechanics and Applications in Mechanical Engineering

12:00 PM – 2:00 PM	Poster session
pp09.032	**A Numerical Result of the Strain Rate Intensity Factor in Compression Between Rigid Plates** [1] Nguyen Minh Tuan, [1] Pham Duc Chinh, [2] Sergei Alexandrov, [1] Nguyen Manh Thanh, [3] Do Quoc Hoang [1] Institute of Mechanics, Vietnam Academy of Technology and Science, 264 Doi Can- Ba Dinh- Hanoi, Vietnam [2] Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, Pr. Vernadskogo, 101-1 Moscow, 119526, Russia [3] National University of Civil Engineering, Vietnam, 55 Giai Phong- Hai Ba Trung- Hanoi, Vietnam
pp09.033	**Analysis of Elastoplastic Flows Around Defect with Elliptic Form by the Splitting Method** [1] Alibay Iskakbayev, [2] Ainur Iskakbayeva [1] al-Faraby Kazakh State University, 050040, Almaty, al-Faraby avenue 71, Kazakhstan [2] Joldasbekov Institute of Mechanics and Engineering, 050100, Almaty, Pushkin st. 125, Kazakhstan [3] Caspian Social University, Seifulin St. 521, Kazakhstan
pp09.034	**Conflicting Axial Buckling Strains from Two Criteria to Detect Instability in Single-Walled Carbon Nanotubes** [1] Pranav Agrawal, [1] Shakti S. Gupta, [2] Romesh C. Batra [1] Indian Institute of Technology Kanpur, Kanpur, U.P. 208016, India [2] Virginia Polytechnic Institute and State University, Blacksburg, VA 24061, USA
pp09.035	**Cubic and Hexagonal Auxetics** [1] Dmitry S. Lisovenko [1] A.Yu. Ishlinsky Institute for Problems in Mechanics RAS, prospect Vernadskogo 101, b1, Moscow, 119526, Russia
pp09.036	**Discrete-Continuum Modeling of Layered Structures at Nano-Scale** [1] Alexander Chentsov, [1] Konstantin Ustinov [1] IPMech RAS, 119526, Moscow, Prosp. Vernadskogo 101-1, Russia
pp09.037	**Electromagnetic Shielding and Mechanical Properties of Reinforced Composites with Mono and Bi-Axial Fabrics** [1] Erhan Sancak, [1] Muhammet Uzun, [2] Metin Yukek, [1] Ismail Usta, [1] Mehmet Akalin [1] Technology Faculty, Department of Textile Engineering, Marmara University, Goztepe, Turkey [2] Department of Textile Education, Marmara University, Goztepe, Turkey

pp09.038	**Misfit Stress Relaxation via Generation of Rectangular Prismatic Dislocation Loops in Composite Nanostructures** [1] Michael Yu. Gutkin, [2] Andrei M. Smirnov [1] St. Petersburg State Polytechnical University, ul. Polytekhnicheskaya 29, St. Petersburg, 195251 Russia [2] ITMO University, Kronverkskii pr. 49, St. Petersburg, 197101 Russia [3] Institute of Problems in Mechanical Engineering, Russian Academy of Sciences, Bolshoi pr. 61, St. Petersburg, 199178 Russia
pp09.039	**Study of Deformation, Friction and Wear Mechanisms and Kinetics in Homogeneous and Heterogeneous Solid Bodies at Nanoscale by Micro And Nanoindentation Methods** [1] Maksim O. Vorobiev, [1] Tatyana S. Pirozhkova, [1] Aleksander I. Tyurin [1] G. R. Derzhavin Tambov State University, Tambov, Russia
pp09.040	**Determination of Thermodynamic Characteristics of Graphene Hydrides** [1] Yuriy S. Nechaev, [1] Varvara P. Filippova, [2] Vera A. Popova, [2] Nadezhda A. Popova, [3] Alp Yürüm, [4] Adem Tekin, [5] Yuda Yürüm, [6] Nejat T. Veziroglu [1] Bardin Institute for Ferrous Metallurgy, 2-nd Baumanskaya St., 9/23, Moscow 105005, Russia [2] Peoples' Friendship University, Miklukho-Maklaya, 6, Moscow 117198, Russia [3] Nanotechnology Research and Application Center, Sabanci University, Istanbul 34956, Turkey [4] Energy Institute, Istanbul Technical University, Istanbul 34469, Turkey [5] Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul 34956, Turkey [6] International Association for Hydrogen Energy, 5794 SW 40 St. #303, Miami, FL 33155, USA

Section 10 – Nanomaterials for Information Technologies, Nanoelectronics and Nanophotonics

12:00 PM – 2:00 PM	Poster session
pp10.036	**Chemical Vapor Deposition of Diamond Thin Films on Sapphire Substrates** [1] Maneesh Chandran, [2] S. S. Bhattacharya, [1] M.S. Ramachandra Rao [1] Nano Functional Materials Technology Centre, MSRC and Department of Physics, Indian Institute of Technology Madras, Chennai 600036, India [2] Department of Metallurgical and Materials Engineering, Indian Institute of Technology Madras, Chennai 600036, India
pp10.037	**Graphene in Impedimetric Electroanalysis** [1] Edward P. Randviir, [1] Craig E. Banks [1] Manchester Metropolitan University, John Dalton Building, CHester Street, Manchester, M1 5GD, UK
pp10.038	**Phonon-Mediated Interlayer Conductance in Twisted Graphene Bilayers** [1] Vasili Perebeinos [1] Skolkovo Institute of Science and Technology, 100 Novaya st., Skolkovo, Moscow Region, 143025 Russia
pp10.039	**Regulation of Vanadium Dioxide Morphology by Surfactants and Nucleus Assisted Hydrothermal Route** [1] Iuliia V. Petukhova, [1] Olga M. Osmolowskaya, [1] Mikhail G. Osmolowsky [1] Saint-Petersburg State University, Universitetskii pr. 26, Petergof, St. Petersburg, 198504 Russia
pp10.040	**Synthesis and Magnetic Properties of the Chromium-Doped Iron Sulfide $Fe_{1-x}Cr_xS$ Single Crystalline Nanodisks with a NiAs-Like Structure** [1] Igor S. Lyubutin, [2] Chun-Rong Lin, [1] Sergey S. Starchikov, [1] Konstantin O. Funtov, [2] Yaw-Teng Tseng [1] Shubnikov Institute of Crystallograghy RAS, Leninskiy av. 59, Moscow 119333, Russia [2] Department of Applied Physics, National Pingtung University of Education, Pingtung County 90003, Taiwan
pp10.041	**Theoretical Study of the Emergence of Spin-Filter State in One-Dimensional Pt-Fe Bimetallic Nanowires** [1] Ekaterina M. Smelova, [1] Kseniya M. Tsysar, [1] Alexander M. Saletsky [1] Lomonosov Moscow State University, Faculty of Physics, M.V.Lomonosov Moscow State University, Leninskie Gory,1, Moscow 119991, Russia
pp10.042	**Third-Harmonic Generation Microscopy of Plasmonic Metaatoms** [1] Anna N. Fedotova, [1] Alexander S. Shorokhov, [1] Maxim R. Shcherbakov, [1] Alexander A. Ezhov, [2] Kristof Lodewijks, [2] Alexander Dmitriev, [1] Andrey A. Fedyanin [1] Faculty of Physics, Lomonosov Moscow State University, 119991, Moscow, Russia [2] Department of Applied Physics, Chalmers University of Technology, 41296, Göteborg, Sweden

pp10.043	**Third-Harmonic Spectroscopy of Electric and Magnetic Resonances in Silicon Nanodisks** [1] Maxim R. Shcherbakov, [2] Dragomir N. Neshev, [1] Alexander S. Shorokhov, [2] Isabelle Staude, [1] Elizaveta V. Melik-Gaykazyan, [2] Ben Hopkins, [3] Jason Dominguez, [2] Andrey Miroshnichenko, [3] Igal Brener, [1] Andrey A. Fedyanin, [2] Yuri S. Kivshar [1] Faculty of Physics, Lomonosov Moscow State University, Moscow, 119991, Russia [2] Nonlinear Physics Centre, Research School of Physics and Engineering, The Australian National University, Canberra, ACT 2602, Australia [3] Center for Integrated Nanotechnologies, Sandia National Laboratory, Albuquerque, New Mexico 87185, United States
pp10.044	**Unique Magnetic Properties of Bimetallic Nanowires for Application in Spintronic and Nanoelectronics** [1] Kseniya M. Tsysar [1] Lomonosov Moscow State University, Faculty of Physics, Leninskie Gory, Moscow 119991 Russia

NANO 2014
Useful Information

Conference venue

The green campus of Moscow University is located in the famous district of Moscow «Yugo-Zapadniy» (South - West area) and can be reached easily by taxi, metro, busses. The Main Building of MSU is visible from almost any point around and is located near the metro station «Universitet» («University») which belongs to a historic «red line» of the metro transportation system crossing Moscow from beneath. It will take a couple of bus stops or 10 - 15 mins by feet down to the Lomonosovski avenue to reach one of the well - know symbols of Moscow, a landmark of the Main Building of MSU. Lomonosov Moscow State University is the oldest, the largest university in Russia and one of the biggest universities in Europe. The university owns over 1,000 buildings and structures, 22 000 of employees teach or supervise about 49 000 Russian and foreign students or PhD fellows. Founded in the 18th century, the University has been constantly growing. Moscow University has received the status of a self-governing institution of higher education in Russia. Nowadays the University retains its role of a major center of learning and research as well as an important cultural center. Its academics and students follow the long-standing traditions of the highest academic standards and democratic ideas. It offers training in almost all branches of modern science and humanities. There have been 11 Nobel Prize winners among its professors and alumni. Besides its 39 faculties, Moscow University comprises 15 research institutes, 4 museums, 6 local branches in Russia and abroad, the Science Park, the Botanical Gardens, the Library, the University Publishing House, a recreational centre and a school for talented children. The university has well-established contacts with the most distinguished universities in the World, exchanging students and lecturers with the leading international institutions.

In the MSU Campus, main events of NANO 2014 will proceed in the newly designed Lomonosov Building (Moscow, Lomonosovsky Avenue 27 building 1). All the buildings, lunch points, dinner restaurants, local museums, green parks are within a walking distance and compose a part of the Campus situated at a nice elevated point of Moscow - Lenin Hills. This area is known as a «must - to - see» point in most of sightseeing tours, it is also a favorite photo session place of wedding corteges of Moscow people and a chill out area of students. The MSU Campus is beautiful and safe in day time and is mystically illuminated tonight.

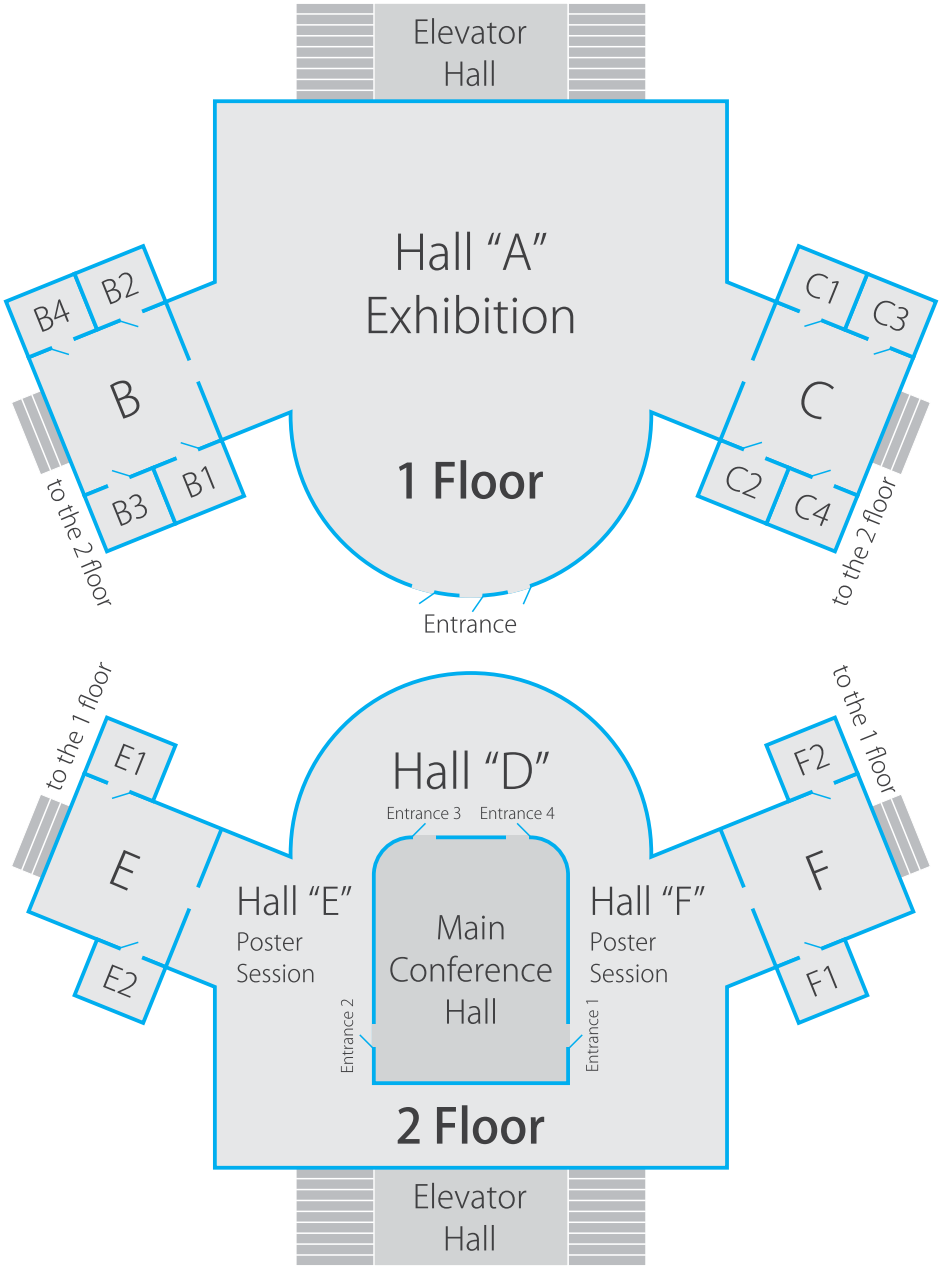
Starting from the university campus by taxi or metro, you need only a half of hour to reach the historical and geographic center of Moscow where you could find many points of interests and sightseeing in Moscow. If this is your first visit to Moscow, we recommend to start with Kremlin, The Red and Arbat squares, Bolshoy the Theater, the Big Stone Bridge there, Cathedral of Christ the Savior, the Picturesque Bridge, Novodevichy Convent, Peter the Great Monument, Tretyakov Gallery, Pushkin State Museum of Fine Arts, All - Russia Exhibition Center, Vorobyovy Gory Park, Tsaritsyno, Kolomenskoye, also the Moscow metro represents a unique historical and architectural sign of Moscow.

Lomonosov Building outlook (top) and Conference Hall (bottom)

Moscow Metro & Monorial Scheme

Art director Artemy Lebedev, *designer* Yegor Zhgun, *technical designer* Maxim Milko, *consultants* Alexander Popov and Ludwig Bystronovsky, *editor* Alexander Nosikov

Lomonosov Building Floor Plans



NANO 2014
Useful Information

Transportation and transfers

The comfortable buses will be offered for free transfer of our participants to the conference site from their hotels before the beginning of morning sessions and back in the evening. The shuttle schedule will be available at the reception.

Moscow river boat trip and other excursions

All excursions are provided by the «CTO Events» Agency Ltd.

Moscow River boat tour for registered participants	
Duration	4,5 hours
Time	7:00 PM – 11:30 PM
Starting point	Lomonosov Building of MSU
Date	July 13, 2014

A free round trip along the Moscow (Moskva) River will be available for all the registered participants. Comfortable yachts and late evening time will give a great chance to enjoy the magnetism of illuminated Moscow night and to talk with your colleagues in person. In a short time you will survey many of the architectural sightseeing points of the city. You will see Novospassky Monastery and beautiful buildings of Zamoskvorechye, Kremlin and the Cathedral of Christ the Savior, the grandiose monument to Peter the Great. You will sail under the bridges connect the right and left banks of the river.

Bus Tour around Moscow	
Duration	3 hours
Time	10:00 AM - 1:00 PM
Starting point	Lomonosov Building of MSU
Date	July 13, 2014

This excursion is to get you acquainted with the city of Moscow and its most important and beautiful sights. You certainly won't miss the city center – Red Square the Lenin Mausoleum, and Tverskaya Street. Then you will go to the Lenin's Hills, which is considered to be the highest point of Moscow where you will enjoy a great panorama of the city. Continuing the city tour, you will pass along the Kutuzov Street and visit the Victory Park with its fountains and churches.

NANO 2014
Useful Information

The Kremlin and Armory Chamber	
Duration	3 hours
Time	10:00 AM - 1:00 PM
Starting point	Lomonosov Building of MSU
Date	13 July, 2014

The Kremlin is the symbol of Russia and the main tourist attraction of Moscow. Once the residence of Tsars and Patriarchs, today it is one of the biggest architectural ensembles in the world, which is included into the UNESCO list. During this excursion you will see the chambers and cathedrals inside the fortress. You will visit some of the churches in the area of Kremlin, walk by the Tsar Bell and the Tsar Cannon and see the unique and priceless collections of the Armory Chamber.

Excursion to State Tretyakov Gallery	
Duration	3 hours
Time	10:00 AM - 1:00 PM
Starting point	Lomonosov Building of MSU
Date	13 July, 2014

The State Tretyakov Gallery is the national treasury of Russian's fine art and one of the greatest museums in the world. It is located in one of the oldest districts of Moscow – Zamoskvorechye, not far from the Kremlin. The Gallery's collection consists entirely of Russian art. Contributions were made by artists themselves or people connected to the history of Russian Art. The collection contains more than 150 000 works, including: paintings, sculptures and graphics, created throughout the centuries by successive generations of Russian artists.

Boat tour around Moscow	
Duration	4,5 hours
Time	12:00 AM - 4:30 PM
Starting point	Lomonosov Building of MSU
Date	July 15, 2014

We invite you to buy a day-time trip along the Moscow River on the snow-white yacht of a premium-class with restaurant service. It's great chance to mingle with the conference attendees and have a relaxing diner in a nice atmosphere enjoying spectacular views of Moscow.

You have an exciting opportunity to admire the ancient Moscow bridges decorated in thousands of color lights. There are 12 bridges along the route. From the water, fans of photos can make remarkable pictures of unique quays, the Kremlin, the Cathedral of Christ the Savior, world famous monuments. Onboard the service of a professional photographer is available. Travel by the most picturesque part of the city will give a lot of pleasure and nice memories for a lifetime! Trip on the river, sitting by a restaurant with a cozy table will take away any stress, and pleasant music, an excellent European cuisine will become part of a great experience.

NANO 2014
Useful Information

Welcome party

The welcome party will take place on July 14 (Tuesday), starting from 5:30 PM, in the sector D of Lomonosov building. All the participants are cordially welcome.

Conference banquet

The conference banquet will take place on July 17 (Thursday), starting from 7:30 PM, in the Lomonosov building. The detailed banquet information including prices will be available at the reception.

Poster guidelines

The format of poster presentation is A0 paper size in a portrait orientation (dimensions of poster are 841 × 1189 mm). Double sided scotch will be provided to mount the posters.

Important tips

Congress Badges: All participants and accompanying persons should wear the Congress' identification badge in a visible place.

Time: Moscow time is four hours ahead of Greenwich Mean Time (UTS / GMT+4).

Presentation Equipment: All meeting halls for oral sessions are equipped with multimedia projectors and computers.

Internet Availability: Free Wi-Fi access will be provided in the Lomonosov Building.
Electric Current: The standard in Moscow is 220 Volts.

Liability and Insurance: The participants are kindly advised to carry out their own insurance arrangements during their stay in Moscow. In case of emergency please call first of all hot line of the conference (see below).
Moscow Emergency Service's phone: 103.

Banks & Currency: Please be advised that, although it is possible to exchange your money into Rubles as a local currency in many places, only large banks offer this procedure comfortable and safely. Most banks are open Monday through Saturday from 10:00 AM to 7:00 PM. In order to exchange cash or travellers' cheques you need to have your passport. In addition most of hotels have exchange offices on their front desks.

Credit Cards: Visa, Master Card and other well known credit cards are also accepted by the majority of shops, rent-a-car companies and hotels.

Registration desk working hours	
Sunday, July 13	2:00 PM – 7:00 PM
Monday, July 14	9:00 AM – 7:00 PM
Tuesday, July 15	9:00 AM – 7:00 PM
Wednesday, July 16	9:00 AM – 7:00 PM
Thursday, July 17	9:00 AM – 7:00 PM
Friday, July 18	9:00 AM – 12:00 PM

Contacts

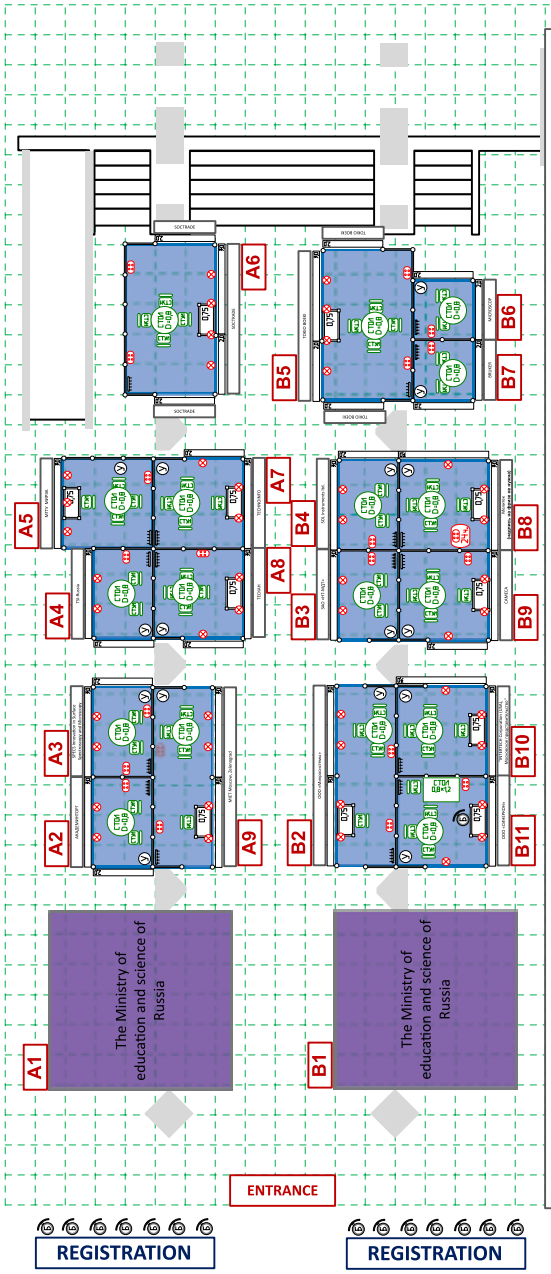
General Questions, Hotline: +7 495 939 55 57, +7 495 939 43 45, +7 905 722 37 49
Accommodation, Exhibition: Ms. Tatyana Ganina +7 903 734 24 63
Financial Questions: Mrs. Olga Bogomolova +7 903 734 26 25
Transfers: Ms. Regina Krivobok +7 903 734 25 73
Cultural Program: Ms. Irina Arzumanyan +7 903 734 29 70

NANO 2014 Exhibition

Exhibition working hours	
Monday, July 14	10:00 AM – 6:00 PM
Tuesday, July 15	10:00 AM – 6:00 PM
Wednesday, July 16	10:00 AM – 6:00 PM
Thursday, July 17	10:00 AM – 6:00 PM
Friday, July 18	10:00 AM – 3:00 PM

Mirror hall inside Lomonosov Building

Exhibition Floor Plan



EXHIBITORS

- A1, B1 The Ministry of education and science of Russia
- A2 Federal State Unitary Enterprise Foreign trade organization AKADEMINTORG
- A3 SPECS
- A4 TSI-Russia
- A5 MSTU MIREA
- A6 SOCTRADE
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- B9 CAMECA
- B10 «INTERTECH Corporation (USA). Moscow Representative Office »
- B11 «SYNERCON» LLC

Exhibitors

A1, B1

The Ministry of education and science of Russia is a federal body of executive power, which carries out functions on elaborating state policy and normative-lawful regulation in the sphere of education, scientific, scientific-technical and innovative activity, nanotechnologies, intellectual property, and also in the sphere of upbringing, social support and social protection of schoolchildren and pupils of educational institutions.

A2

AKADEMINTORG is an experienced supplier of high-tech instrumentation for scientific research and R&D. We proudly deliver to Russian customers the equipment and services of world-leading manufacturers from Europe, Asia and USA:

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A3

Company Profile
SPECS has more than 150 employees at its headquarters in Berlin and its subsidiaries in the USA and Switzerland. The company also has sales offices in Spain and international sales channels in sixteen countries. A team of scientists and engineers are involved in developing and producing scientific instruments for surface analysis, material science and nanotechnology. Since the company was founded in 1983, we have based our success on a continuous growth in experience. We are in close contact with a large number of satisfied customers around the world. We are truly essential partners due to our focus on customer support, know-how and our international contacts. Scientists all over the world can rely on our product quality and we inspire them with our continuous program of new product development.

A4

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In Russia: e-mail: info.tsirussia@gmail.com
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A5

Engineering Research and Production Center " Instruments of non-destructive control" Moscow State Technical University for Radioengineering, Electronics and Automation MIREA (ERPC "INC" MSTU MIREA).
Center conducts development of devices and methods for industrial diagnostics.

A6

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A7

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A8

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A9

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B2

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B4

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B5

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B6

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B7

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B8

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B9

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evgeny.norman@ametek.com
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B10

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B11

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Bilateral Russian-Taiwanese Symposium

(17 - 18 July 2014, Moscow, Russia)

"Polymers as a Basis for Advanced Materials"

The satellite symposium «Polymers as a Basis for Advanced Materials» is organized in the framework of agreement between Far-East Department of Russian Academy and National Science Council of Taiwan on scientific cooperation in view of the relative closeness of Vladivostok to Taiwan. Symposiums are usually convened in either Russian Far East or Taiwan under their aegis. In this year their geography is extended into the European part of Russia to involve more scientists and increase the scientific level. The reason is that the polymer community in Far-East Department of Russian Academy of Sciences is not numerous. The small delegation from Taiwan represents a good sampling from Taiwan's top universities/research institutes. The symposium serves to bring leading scientists in both polymer science and materials together for a close encounter to develop mutual understanding on what the scientists on the other side are interested in and capable of doing. Only with this understanding developed may complementary and efficient teams of collaboration be built.

The organization of this symposium during the XII International Conference on Nanostructured Materials (NANO 2014) has an additional important aspect. Its program is reconciled with that of the NANO 2014. It gives a good opportunity for the participants to attend the main events and lectures at the conference devoted to various subjects of nanotechnology which are interesting for them. They can also communicate with colleagues from various countries and establish new collaborative links.

Co-chairs

- Professor **Alexei Khokhlov,** Lomonosov Moscow State University (Russia)
- Professor **Yury Shchipunov**, Institute of Chemistry, Far East Department of the Russian Academy of Sciences (Russia)
- Professor **An-Chuhg Su**, National Tsing Hua University (Taiwan)

Co-organizers

- Organizing Committee of NANO 2014
- Institute of Chemistry, Far East Department, Russian Academy of Sciences

Participants

- Professor **Vyacheslav Bouznik**, Federal State Unitary Enterprise, All-Russian Scientific Research Institute of Aviation Materials, Moscow & Institute of Chemistry, FEB, Russian Academy of Sciences (Vladivostok, Russia)
  Professor **Jun-Tai Chen**, National Chiao Tung University (Taiwan)
- Professor **Sergei Gnedenkov**, Institute of Chemistry, FEB, Russian Academy of Sciences (Vladivostok, Russia)
- Professor **Masaki Horie**, National Tsing Hua University (Taiwan)
- Professor **Shan-Hui Hsu**, National Taiwan University (Taiwan)
- Professor **U-Ser Jeng**, National Synchrotron Radiation Research Center (Taiwan)
- Professor **Sergei Khatipov**, NIFKHI im. L.Ya. Karpova (Moscow, Russia)
- Professor **Gennadii Khomutov**, Lomonosov Moscow State University (Moscow, Russia)
- Professor **Alexei Khokhlov**, Lomonosov Moscow State University, State Institute of Chemistry and Technology of Elementoorganic Compounds (Moscow, Russia)
- Professor **Dmitry Paraschuk**, Lomonosov Moscow State University (Moscow, Russia)
- Professor **Irina Perminova**, Lomonosov Moscow State University (Moscow, Russia)
- Professor **Sergei Ponomarenko**, Enikolopov Institute of Synthetic Polymeric Materials, Russian Academy of Sciences (Moscow, Russia)
- Professor **Nataliya Prorokova**, Institute of Chemistry of Solutions, Russian Academy of Sciences (Ivanovo, Russia)
- Professor **Pavel Troshin**, Institute for Problems of Chemical Physics, Russian Academy of Sciences (Chernogolovka, Russia)
- Professor **Yury Shchipunov**, Institute of Chemistry, FEB, Russian Academy of Sciences (Vladivostok, Russia)
- Professor **An-Chung Su**, National Tsing Hua University (Taiwan)
- Professor **Sergey Tsyganov**, Russian Foundation for Basic Research (Moscow, Russia)

Symposium Program Overview

July 17 (Thursday)	
2:30 PM – 2:45 PM	Opening Ceremony
2:45 PM – 4:00 PM Location: C 2	**Lectures** Chairman: Professor Alexei R. Khokhlov
2:45 PM – 3:10 PM	**Nucleation of Polymer Crystals** An-Chung SU
3:10 PM – 3:35 PM	**Polymeric Fluorine Materials on the Basis of Microsized Fibers** Vyacheslav Bouznik
3:35 PM – 4:00 PM	**Wetting and Instability Studies of Polymer Nanomaterials** Jun-Tai Chen
4:00 PM – 4:10 PM	Break
4:10 PM – 5:00 PM	**Lectures** Chairman: Professor Shan-Hui Hsu
4:10 PM – 4:35 PM	**Nanostrucural Composite Protective Coatings at the Surface of Metals and Alloys** Sergei Gnedenkov
4:35 PM – 5:00 PM	**Radiation-Modified Materials of New Generation on the Basis of Polytetrafluorethylene** Sergei Khatipov
5:00 PM – 5:20 PM	Coffee break
5:20 PM – 6:35 PM	**Lectures** Chairman: Irina Perminova
5:20 PM – 5:45 PM	**Facile Synthesis Methods for Low-Bandgap Conjugated Polymers and Their Photovoltaic Characteristics** Masaki Horie
5:45 PM – 6:10 PM	**Novel Organosilicon Luminescent Materials and Their Applications** Sergei Ponomarenko
6:10 PM – 6:35 PM	**Design of Conjugated Polymers for Organic Bulk Heterojunction Solar Cells** Pavel Troshin
6:35 PM – 6:45 PM	Break
6:45 PM – 7:30 PM	**Lectures** Chairman: Sergei Ponomarenko
6:45 PM – 7:10 PM	**Ordering of Semiconducting Polymers by an Additive** Dmitry Paraschuk
7:10 PM – 7:30 PM	***Special lecture*** Russian-Taiwanese Scientific Cooperation Sergei Tzyganov
7:30 PM – 9:30 PM	Banquet

July 18 (Friday)	
9:15 AM – 10:55 AM Location: F2	**Lectures** Chairman: Professor An-Chung Su
9:15 AM – 9:40 AM	**Magneto-Controlled Elastomers Capable to Change Their Shape, Size and Viscoelasticity in External Magnetic Fields** Alexei Khokhlov
9:40 AM – 10:05 AM	**Simultaneous Small/Wide-Angle X-Ray Scattering for Structural/Kinetic Characterization of Nanomaterials and Soft Matter** U-Ser Jeng
10:05 AM – 10:30 AM	**Biogenic Polyamines as a Basis for Advanced Nanomaterials** Gennadii Khomutov
10:30 AM – 10:55 AM	**Humic Microligands in Synthesis and Stabilization of Nanoparticles** Irina Perminova
10:55 AM – 11:05 AM	Break
11:05 AM – 12:20 PM	**Lectures** Chairman: Professor Vyacheslav Bouznik
11:05 AM – 11:30 AM	**Green, Water-Based Synthesis and 3D Printing of Biodegradable Nanoelastomers for Biomedical Applications** Shan-Hui Hsu
11:30 AM – 11:55 AM	**New Ways to Surface and Bulk Modification of Synthetic Fiber Materials** Nataliya Prorokova
11:55 AM – 12:20 PM	**Functional Materials on the Basis of Cellulose Prepared Through Its Mineralization** Yury Shchipunov
12:20 PM – 12:30 PM	Closing Ceremony
12:30 PM – 2:00 PM	Lunch
July 19 (Saturday)	
10:00 AM	Excursion with Lunch

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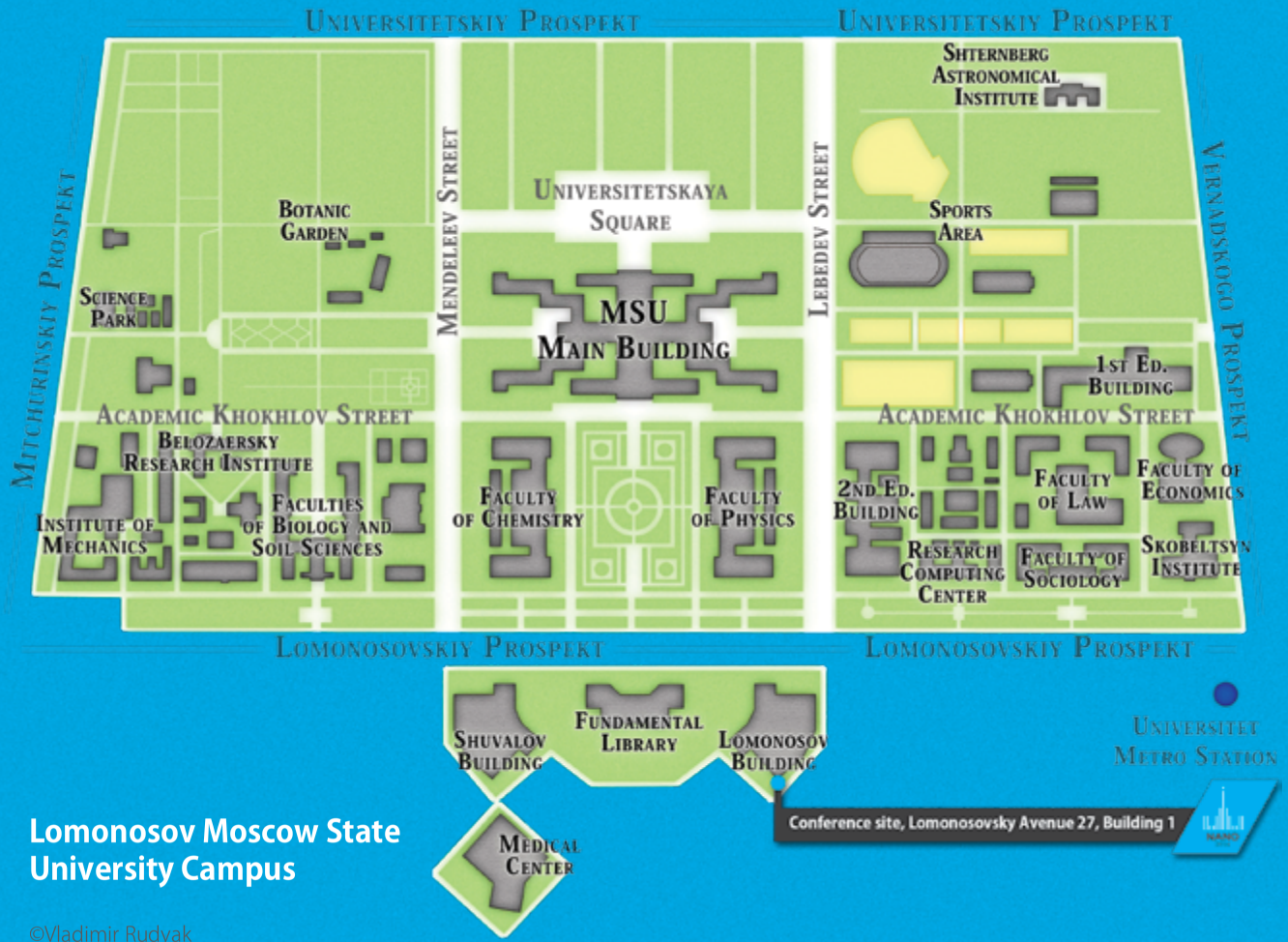
NANO 2014 Notes


VDNKh (Exhibition of Economy Achievements)
Worker and Collective Farmer
TV center
Ostankino TV tower
Sokol'niki
Belorussia Station
Sav'olovo station
Riga Station
Yaroslavl' Station
Leningrad Station
Circus on Tsvetnoy Boulevard
Tall house on Vosstania Square
Krylatskoye
White House
Bolshoi Theater
Tall house on Sadovo-Spasskaya Street
Kazan' Station
Museum-manor Izmailovo
Building of COMECON (Council for Mutual Economic Cooperation)
Kremlin
Panorama of Borodino battle
Cathedral of Vasily Blazhenny
Kursk Station
Izmaylovo
Tall house on Kutuzov Prospekt
Cathedral of Christ the Savior
Tall house on Kotel'nicheskaya Embankment
Moskva
Triumphal arch
Klev Station
Andrey Rublev Museum in Andronik Monastery
Tall house on Smolenskaya-Sennaya Square
Tretyakov Gallery
Novodevichy Convent
Novospassky monastery
Krymsky Bridge
Kuskov
Krutitzky Yard
Central Stadium Luzhniki
Tower by Shukhov
Paveletsk Station
Donskoy monastery
Simon's monastery
Moscow State University
Lomonosov Moscow State University Campus
NANO
Kuz'min
Church of Archangel Mikhail
Church of Boris and Gleb
Museum-manor
Moskva



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