

CONFERENCE 10536

LOCATION: SEE INDIVIDUAL SESSIONS

Monday–Thursday 29 January–1 February 2018 • Proceedings of SPIE Vol. 10536

Smart Photonic and Optoelectronic Integrated Circuits XX

Conference Chairs: **Sailing He**, KTH Royal Institute of Technology (Sweden), Zhejiang Univ. (China); **Ei-Hang Lee**, Inha Univ. (Korea, Republic of)

Program Committee: **Pavel Cheben**, National Research Council Canada (Canada); **Ray T. Chen**, The Univ. of Texas at Austin (USA); **Louay A. Eldada**, Quanergy Systems, Inc. (USA); **Shanhui Fan**, Stanford Univ. (USA); **Chennupati Jagadish**, The Australian National Univ. (Australia); **Stefan A. Maier**, Imperial College London (United Kingdom); **Joachim Piprek**, NUSOD Institute LLC (USA); **David V. Plant**, McGill Univ. (Canada); **Andrew W. Poon**, Hong Kong Univ. of Science and Technology (Hong Kong, China); **Ali Serpengüzel**, Koç Univ. (Turkey); **Alan X. Wang**, Oregon State Univ. (USA); **Qian Wang**, A*STAR - Data Storage Institute (Singapore); **Michael R. Watts**, Massachusetts Institute of Technology (USA); **Lin Yang**, Institute of Semiconductors (China); **Rui Q. Yang**, The Univ. of Oklahoma (USA)

MONDAY 29 JANUARY

OPTO PLENARY SESSION

LOCATION: ROOM 3009 (WEST LEVEL 3) 8:00 AM TO 10:10 AM

- 8:00 am: **Welcome and Opening Remarks**
Connie J. Chang-Hasnain, Univ. of California, Berkeley (USA); **Graham T. Reed**, Optoelectronics Research Ctr. (United Kingdom)
- 8:00 am: **Presentation of 2018 SPIE Chandra S. Vikram Award in Optical Metrology**
Presented by SPIE President to:
Karl A. Stetson, Karl Stetson Associates (USA)
- 8:05 am: **Presentation of 2018 SPIE Technology Achievement Award**
Presented by SPIE President to: **Paul Daniel Dapkus**, Univ. of Southern California, Los Angeles (USA)
- 8:10 am: **Silicon Photonics: Bigger is Better**
Andrew G. Rickman, Rockley Photonics Ltd. (United Kingdom)
- 8:50 am: **III-nitride nanowire LEDs and diode lasers: monolithic light sources on (001) Si emitting in the 600-1300nm range**
Pallab K. Bhattacharya, Ctr. for Photonics and Multiscale Nanomaterials, Univ. of Michigan (USA)
- 9:30 am: **Photonics beyond the diffraction limit**
Min Gu, Lab. of Artificial-Intelligence Nanophotonics, RMIT Univ. (Australia)

For details see page 12.

Coffee Break Mon 10:10 am to 10:30 am

SESSION 1

LOCATION: ROOM 159 (SOUTH MEZZANINE) MON 10:30 AM TO 12:35 PM

Mid-Infrared Optoelectronics

Session Chair: **Rui Q. Yang**, The Univ. of Oklahoma (USA)

- 10:30 am: **Electrically-pumped VCSELs using type-II quantum wells for the mid-infrared (Invited Paper)**, Ganpath Kumar Veerabathran, Stephan Sprengel, Alexander Andrejew, Markus-Christian Amann, Walter Schottky Institut (Germany) [10536-1]
- 10:55 am: **III-V/silicon photonic integrated circuits for spectroscopic sensing in the 2µm wavelength range (Invited Paper)**, Ruijun Wang, Muhammad Muneeb, Anton Vasiliev, Aditya Malik, Univ. Gent (Belgium); Stephan Sprengel, Gerhard Boehm, Technische Univ. München (Germany); Ieva Simonyte, Augustinas Vizbaras, Kristijonas Vizbaras, Brolis Semiconductors UAB (Lithuania); Roel Baets, Univ. Gent (Belgium); Markus-Christian Amann, Technische Univ. München (Germany); Gunther Roelkens, Univ. Gent (Belgium) [10536-2]
- 11:20 am: **Monolithic integration of quantum cascade lasers and detectors (Invited Paper)**, Gottfried Strasser, Benedikt Schwarz, Andreas Harrer, Rolf Szedlak, Peter Reininger, Tobias Zederbauer, Technische Univ. Wien (Austria); Hermann Detz, Austrian Academy of Sciences (Austria); Donald MacFarland, Aaron M. Andrews, Technische Univ. Wien (Austria) [10536-3]
- 11:45 am: **Development of chalcogenide glass fibers for mid-IR technologies (Invited Paper)**, Bruno Bureau, Catherine Boussard, Virginie Nazabal, Johann Troles, Univ. de Rennes 1 (France) [10536-4]
- 12:10 pm: **Development of quantum and interband cascade lasers on silicon (Invited Paper)**, Charles D. Merritt, William W. Bewley, Chadwick L. Canedy, Chul Soo Kim, Igor Vurgaftman, Jerry R. Meyer, U.S. Naval Research Lab. (USA); Alexander Spott, Jon Peters, Eric J. Stanton, Michael L. Davenport, Alfredo Torres, John E. Bowers, Univ. of California, Santa Barbara (USA); Jeremy D. Kirch, Luke J. Mawst, Dan Botez, Univ. of Wisconsin-Madison (USA) [10536-5]
- Lunch Break Mon 12:35 pm to 1:40 pm

SESSION 2

LOCATION: ROOM 159 (SOUTH MEZZANINE) MON 1:40 PM TO 3:05 PM

Metamaterials and Metasurfaces I

Session Chairs: **Jian Wang**, Huazhong Univ. of Science and Technology (China); **Natalia M. Litchinitser**, Univ. at Buffalo (USA)

- 1:40 pm: **Flat optics: from high-performance metalenses to structured light (Keynote Presentation)**, Federico Capasso, Harvard School of Engineering and Applied Sciences (USA) [10536-6]
- 2:15 pm: **Beam shaping using nonlinear and reconfigurable engineered materials (Invited Paper)**, Natalia M. Litchinitser, Jingbo Sun, Wiktor Walasik, Salih Z. Silahii, Univ. at Buffalo (USA); Eric Johnson, Clemson Univ. (USA); Yun Xu, Univ. at Buffalo (USA); Apra Pandey, CST of America, Inc. (USA); Mikhail Shalaev, Univ. at Buffalo (USA); Jesse Frantz, Jason Myers, Jasbinder S. Sanghera, U.S. Naval Research Lab. (USA) [10536-8]
- 2:40 pm: **High-efficiency and tunable metasurfaces in reflective and transmissive geometries (Invited Paper)**, Lei Zhou, Qiong He, Shulin Sun, Fudan Univ. (China) [10536-9]
- Coffee Break Mon 3:05 pm to 3:35 pm

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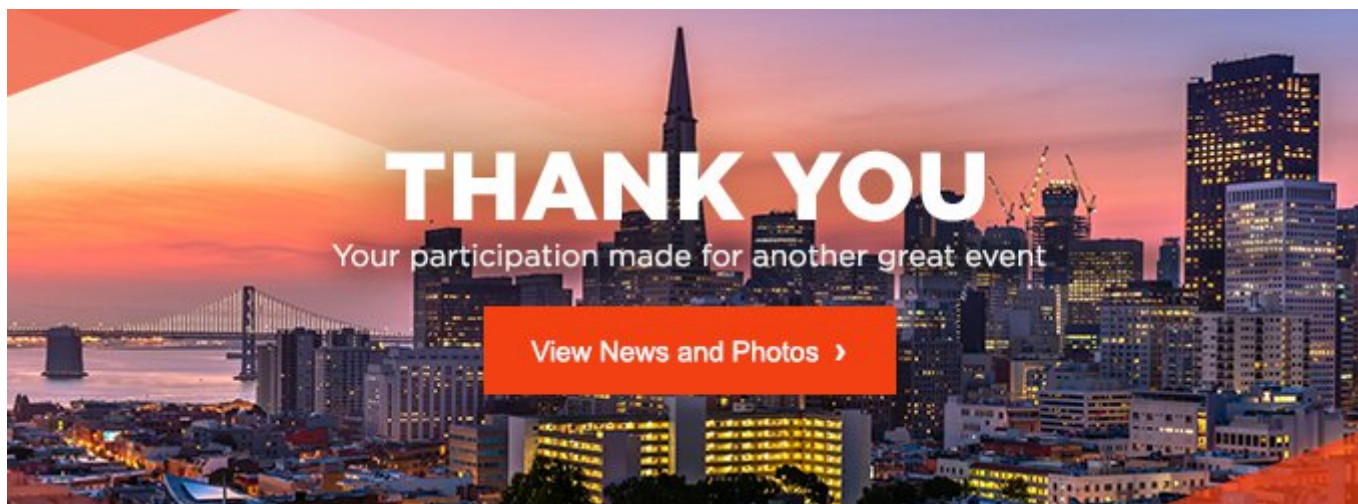
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