CONFERENCE 10553
LOCATION: ROOM 206 (SOUTH LEVEL 2)

Monday–Thursday 29 January–1 February 2018 • Proceedings of SPIE Vol. 10553

Novel In-Plane Semiconductor Lasers XVII

Conference Chairs: Alexey A. Belyanin, Texas A&M Univ. (USA); Peter M. Smowton, Cardiff Univ. (United Kingdom)

Program Committee: Yasuhiro Arakawa, The Univ. of Tokyo (Japan); Mikhail A. Belkin, The Univ. of Texas at Austin (USA); Dan Botez, Univ. of Wisconsin-Madison (USA); Federico Capasso, Harvard School of Engineering and Applied Sciences (USA); Gary A. Evans, Southern Methodist Univ. (USA); Michael Kneissl, Technische Univ. Berlin (Germany); Luke F. Lester, Virginia Polytechnic Institute and State Univ. (USA); Shinji Matsuo, NTT Photonics Labs. (Japan); Luke J. Mawst, Univ. of Wisconsin-Madison (USA); Jerry R. Meyer, U.S. Naval Research Lab. (USA); Roberto Paieila, Boston Univ. (USA); Richard V. Penty, Univ. of Cambridge (United Kingdom); Johann Peter Reithmaier, Univ. Kassel (Germany); Haisheng Rong, Intel Corp. (USA); Gary M. Smith, MIT Lincoln Lab. (USA); Nelson Tansu, Lehigh Univ. (USA); Miriam Serena Vitiello, Consiglio Nazionale delle Ricerche (Italy); Qi Jie Wang, Nanyang Technological Univ. (Singapore)

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, Rockey Photonics Ltd. (United Kingdom)

8:50 am: Ill-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)

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

SESSION 1
LOCATION: ROOM 206 (SOUTH LEVEL 2) .......................... MON 10:30 AM TO 12:20 PM

Developing Laser Materials
Session Chair: Nelson Tansu, Lehigh Univ. (USA)

10:30 am: Characterization of [Gan]As/[Ga(AsSb)]/[Gan] As “W”-quantum well lasers at 1.3 µm
Christian Fuchs, Anja Brüggemann, Maria J. Weseloh, Christian Berger, Christoph Möller, Stefan Reinhard, Philippus-Univ. Marburg (Germany); Jörg Hader, Nonlinear Control Strategies, Inc. (USA) and The Univ. of Arizona (USA); Ada Bäumner, Stephan W. Koch, Philippus-Univ. Marburg (Germany); Jerome V. Moloney, Nonlinear Control Strategies, Inc. (USA) and The Univ. of Arizona (USA) ............................. [10553-1]

10:50 am: Toward edge-emitting 1550-nm InGaAsP laser diodes grown on (001) Si and SOI substrates by MOCVD, Ludovico Megalini, Simone Tommaso Brunel Sundrini, Bastien Bonet, Hongwei Zhao, Aidan Taylor, Kunal Mukherjee, James S. Speck, John E. Bowers, Jonathan Khamkin, Univ. of California, Santa Barbara (USA) ........................................ [10553-2]

11:10 am: GaN-based F-P cavity and micro-cavity laser diodes grown on Si (Invited Paper), Qian Sun, Key Lab. of Nano-Devices and Applications, Chinese Academy of Sciences (China) and Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO) CAS (China) ............................. [10553-3]

11:40 am: Cavity design based on scattering for reversibly wavelength tunable nanowire laser, Minhua Zhuge, Qing Yang II, Zhejiang Univ. (China); Tawfiqie Hasan, Zongyi Yang, Univ. of Cambridge (United Kingdom); Chenlei Pang, Zhejiang Univ. (China) ........................ [10553-4]

12:00 pm: Laser diodes using InAlGaAs multiple quantum wells intermixed to varying extent, Yousef Alahmadi, CREOL, The College of Optics and Photonics, Univ. of Central Florida (USA) and King Abdulaziz City for Science and Technology (Saudi Arabia); Patrick Malik, CREOL, The College of Optics and Photonics, Univ. of Central Florida (USA) . . . [10553-56]

Lunch Break ................................. Mon 12:20 pm to 1:50 pm

SESSION 2
LOCATION: ROOM 206 (SOUTH LEVEL 2) .......................... MON 1:50 PM TO 3:30 PM

Nitrates/Visible Emitting Lasers
Session Chair: Michael Kneissl, Technische Univ. Berlin (Germany)

1:50 pm: Defect evolution during catastrophic optical damage in 450-nm Emitting GaN/GaN diode lasers (Invited Paper), Jen W. Tomm, Robert Kermke, Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie (Germany); Andreas Löfler, Bernhard Stojetl, Alfred Leil, OSRAM Opto Semiconductors GmbH (Germany) ............................ [10553-5]

2:20 pm: Band anticrossing model in dilute-Anion III-nitrides, Justin Goodrich, Damir Borovac, Lehigh Univ. (USA); Chee-Keong Tan, Clarkson Univ. (USA); Nelson Tansu, Lehigh Univ. (USA) ........................ [10553-6]

2:40 pm: 10th-order laterally coupled GaN-based DFB laser diodes with v-shaped surface gratings (Invited Paper), Ji Hye Kang, Ferdinand-Braun-Institut (Germany) and Leibniz-Institut für Höchstfrequenztechnik (Germany); Hans Wenzel, Veit Hoffmann, Erik Freier, Ferdinand-Braun-Institut (Germany); Luca Sulmoni, Technische Univ. Berlin (Germany); Wilfred John, Sven Einfeldt, Ferdinand-Braun-Institut (Germany); Tim Wernicke, Michael Kneissl, Technische Univ. Berlin (Germany) ........................ [10553-7]

3:10 pm: Characteristics of dilute-As InGaNAs quantum wells for laser active regions, Wei Sun, Damir Borovac, Lehigh Univ. (USA); Chee-Keong Tan, Clarkson Univ. (USA); Nelson Tansu, Lehigh Univ. (USA) ........................ [10553-8]

Coffee Break ................................. Mon 3:30 pm to 4:00 pm

SESSION 3
LOCATION: ROOM 206 (SOUTH LEVEL 2) .......................... MON 4:00 PM TO 5:00 PM

Antimonide-based Mid-IR Lasers
Session Chair: Leon Shterengas, Stony Brook Univ. (USA)

4:00 pm: New GasB-based single-mode diode lasers in the NIR and MIR spectral regime for sensor applications, Tobias Mide, Sacher Lasertecnik GmbH (Germany); Morten Hoppe, Technische Hochschule Mittelhessen (Germany); Alvaro Jimenez, Hervé Tatenguem, Martin Honsberg, Sacher Lasertecnik GmbH (Germany); James O’Gorman, Sensor Photonics GmbH (Germany); Wolfgang Schade, Technische Univ. Clausthal (Germany); Joachim R. Sacher, Sacher Lasertecnik GmbH (Germany) ........................ [10553-9]

4:20 pm: Reliability of GasB-based laser for space applications, Mathieu Fradel, Ryan Briggs, Clifford F. Frez, Siamak Forouhar, Jet Propulsion Lab. (USA) ........................ [10553-10]

4:40 pm: Mid-infrared laser based on bound states in the continuum, David E. Zelmon, Air Force Research Lab. (USA) ........................ [10553-11]
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