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26th International Semiconductor Laser Conference ISLC 2018

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Lin Liu (*Sun Yat-sen University*)
Chunchuan Yang (*Sun Yat-sen University*)
Mengya Liao (*University College London*)
Mingchu Tang (*University College London*)
Jiang Wu (*University College London*)
Alwyn J. Seeds (*University College London*)
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Tin Komljenovic (*University of California, Santa Barbara*)
Jonathan Peters (*University of California, Santa Barbara*)
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G. Balakrishnan (*University of New Mexico*)
R. J. Jones (*University of Arizona*)
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J. V. Moloney (*University of Arizona*)

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Masaya Notomi (*NTT Corporation*)
Takaaki Kakitsuka (*NTT Corporation*)
Shinji Matsuo (*NTT Corporation*)

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Anna Rippien (*University of Kassel*)
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Simon Rauch (*TRUMPF Laser GmbH*)
Prasanta Modak (*TRUMPF Photonics, Inc.*)
Carlo Holly (*TRUMPF Photonics, Inc.*)

Hagen Zimer (*TRUMPF Photonics, Inc.*)

TuP2: Influence of Quantum Well Barrier Height on Series Resistance in GaAs-Based Broad Area Diode Lasers (Page 117)

C. Frevert (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)

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P. Crump (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)

TuP3: Advancements in Broad Area InP Based High Power Lasers Operating from 1100 nm to 2100 nm (Page 119)

Tawee Tanbun-Ek (*Coherent Inc.*)

Zuntu Xu (*Coherent Inc.*)

Jeff Mott (*Coherent Inc.*)

TuP4: Mode Engineering via Waveguide Structuring (Page 121)

Pawel Strzebonski (*University of Illinois*)

Bradley Thompson (*University of Illinois*)

Katherine Lakomy (*University of Illinois*)

Paul Leisher (*Freedom Photonics*)

Kent D. Choquette (*University of Illinois*)

TuP5: Scattering Loss at Waveguide Facets and Implications for Laser Efficiency (Page 123)

R. Swint (*MIT-Lincoln Laboratory*)

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Cunzhu Tong (*Chinese Academy of Sciences*)

Fangyuan Sun (*Chinese Academy of Sciences & University of Chinese Academy of Science*)

Yufei Zhao (*Chinese Academy of Sciences & University of Chinese Academy of Science*)

Shili Shu (*Chinese Academy of Sciences*)

Guanyu Hou (*Chinese Academy of Sciences & University of Chinese Academy of Science*)

Lijie Wang (*Chinese Academy of Sciences*)

Lijun Wang (*Chinese Academy of Sciences*)

TuP7: Optically Pumped Polarization-Pinned GaN-Based Vertical-Cavity Surface-Emitting Lasers Using Nanoporous Distributed Bragg Reflectors (Page 127)

Saadat M. Mishkat-Ul-Masabih (*University of New Mexico*)

Ting S. Luk (*Sandia National Laboratories*)

Morteza Monavarian (*University of New Mexico*)

Daniel F. Feezell (*University of New Mexico*)

TuP8: High Power GaN-Based Blue Superluminescent Diode Exceeding 450 mW (Page 129)

Abdullah A. Alatawi (*King Abdullah University of Science and Technology (KAUST) & King Abdulaziz City for Science and Technology*)

Jorge A. Holguin-Lerma (*King Abdullah University of Science & Technology (KAUST)*)

Chao Shen (*King Abdullah University of Science and Technology (KAUST)*)

Mohammad Khaled Shakfa (*King Abdullah University of Science and Technology (KAUST)*)

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Abdulrahman M. Albadri (*King Abdulaziz City for Science and Technology*)

Ahmed Y. Alyamani (*King Abdulaziz City for Science and Technology*)

Tien Khee Ng (*King Abdullah University of Science & Technology (KAUST)*)

Boon S. Ooi (*King Abdullah University of Science & Technology (KAUST)*)

TuP9: Theoretical and Experimental Studies on Potential Fluctuation in InGaN Quantum-Well Layers (Page 131)

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S. Sakai (*Kanazawa Institute of Technology*)
Y. Ikeda (*Kanazawa Institute of Technology*)
A. A. Yamaguchi (*Kanazawa Institute of Technology*)
Y. Kanitani (*Sony Corporation*)
S. Tomiya (*Sony Corporation*)

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Ashwin K. Rishinaramangalam (*University of New Mexico*)
Arman Rashidi (*University of New Mexico*)
Saadat Mishkat Ul Masabih (*University of New Mexico*)
Andrew A. Aragon (*University of New Mexico*)
Morteza Monavarian (*University of New Mexico*)
Changmin Lee (*University of California, Santa Barbara*)
Steven P. DenBaars (*University of California, Santa Barbara*)
Daniel F. Feezell (*University of New Mexico*)

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Shigeta Sakai (*Kanazawa Institute of Technology*)
Kazunobu Kojima (*Tohoku University*)
Shigefusa F. Chichibu (*Tohoku University*)
Atsushi A. Yamaguchi (*Kanazawa Institute of Technology*)

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Igor P. Marko (*University of Surrey*)
Aidas Baltusis (*University of Surrey*)
Alf R. Adams (*University of Surrey*)
Daehwan Jung (*University of California, Santa Barbara*)
Justin C. Norman (*University of California, Santa Barbara*)
John E. Bowers (*University of California, Santa Barbara*)
Stephen J. Sweeney (*University of Surrey*)

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Constanze Hantschmann (*University of Cambridge*)
Peter P. Vasil'ev (*University of Cambridge & PN Lebedev Physical Institute*)
Siming M. Chen (*University College London*)
Mengya Liao (*University College London*)
Alwyn J. Seeds (*University College London*)
Huiyun Liu (*University College London*)
Richard V. Penty (*University of Cambridge*)
Ian H. White (*University of Cambridge*)

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V. Mikhelashvili (*Technion - Israel Institute of Technology*)
O. Eyal (*Technion - Israel Institute of Technology*)
S. Ghosh (*Technion - Israel Institute of Technology*)
I. Khanonkin (*Technion - Israel Institute of Technology*)

S. Banyoudeh (*University of Kassel*)
V. Sichkovskyi (*University of Kassel*)
Johann Peter Reithmaier (*University of Kassel*)
Gadi Eisenstein (*Technion - Israel Institute of Technology*)

TuP15: Carrier Dynamics in a 1.55 μm Tunneling Injection Quantum Dot Semiconductor Optical Amplifier (Page 143)

Igor Khanonkin (*Technion - Israel Institute of Technology*)
Michael Lorke (*University of Bremen*)
Stephan Michael (*University of Bremen*)
Akhilesh Kumar Mishra (*Technion - Israel Institute of Technology & Nanyang Technological University*)
Johann Peter Reithmaier (*Kassel University*)
Frank Jahnke (*University of Bremen*)
Gadi Eisenstein (*Technion - Israel Institute of Technology*)

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Dominik Auth (*Technische Universität Darmstadt*)
Sebastian Stutz (*Technische Universität Darmstadt*)
Christoph Weber (*Technische Universität Darmstadt*)
Oleg Nikiforov (*Technische Universität Darmstadt*)
Ricardo Rosales (*Technische Universität Berlin*)
Thomas Walther (*Technische Universität Darmstadt*)
Luke F. Lester (*Virginia Polytechnic Institute and State University*)
Stefan Breuer (*Technische Universität Darmstadt*)

TuP17: Continuous-Wave Lasing of 1.3- μm Quantum-Dot Photonic-Crystal Surface-Emitting Lasers (Page 147)

Ming-Yang Hsu (*National Chiao Tung University*)
Gray Lin (*National Chiao Tung University*)
Po-Chou Pan (*National Chiao Tung University*)
Yu-Chen Chen (*National Chiao Tung University*)

TuP18: Mode Locking Stability Regimes in Tapered Quantum Dot Lasers (Page 149)

Paolo Bardella (*Politecnico di Torino*)
Mattia Rossetti (*Politecnico di Torino*)
Lukas Drzewietzki (*Technische Universität Darmstadt*)
Christoph Weber (*Technische Universität Darmstadt*)
Michel Krakowski (*III-V Labs*)
Igor Krestnikov (*Innolume GmbH*)
Stefan Breuer (*Technische Universität Darmstadt*)

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Ryosuke Aoki (*Yokohama National University*)
Naoki Kobayashi (*Yokohama National University*)
Yusaku Kawamura (*Yokohama National University*)
Taro Arakawa (*Yokohama National University*)
Yasuo Kokubun (*Yokohama National University*)

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Nagisa Nakamura (*Tokyo Institute of Technology*)
Takamasa Yoshida (*Tokyo Institute of Technology*)
Weicheng Fang (*Tokyo Institute of Technology*)
Tomohiro Amemiya (*Tokyo Institute of Technology*)
Nobuhiko Nishiyama (*Tokyo Institute of Technology*)
Shigehisa Arai (*Tokyo Institute of Technology*)

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G. B. Morrison (*Freedom Photonics LLC*)
J. Sherman (*Freedom Photonics LLC*)
I. Gonzalez (*Freedom Photonics LLC*)
K. Ottosson (*Freedom Photonics LLC*)
J. Campbell (*Freedom Photonics LLC*)
S. Estrella (*Freedom Photonics LLC*)
R. Moireira (*Freedom Photonics LLC*)
P. Leisher (*Freedom Photonics LLC*)
D. Renner (*Freedom Photonics LLC*)
L. Johansson (*Freedom Photonics LLC*)
M. Mashanovitch (*Freedom Photonics LLC*)

TuP22: 1.5 μm GaInAsP High Mesa Laser Diode on Directly Bonded InP/Si Substrate (Page 157)

Gandhi Kallarasan Periyannayagam (*Sophia University*)
Kzuki Uchida (*Sophia University*)
Hirokazu Sugiyama (*Sophia University*)
Xu Han (*Sophia University*)
Natsuki Hayasaka (*Sophia University*)
Masaki Aikawa (*Sophia University*)
Hiromu Yada (*Sophia University*)
Kazuhiko Shimomura (*Sophia University*)

TuP23: Multi-Channel Interference Widely Tunable Laser Integrated with Semiconductor Optical Amplifier through Deeply Etched Slot (Page 159)

Chun Jiang (*Huazhong University of Science and Technology*)
Quanan Chen (*Huazhong University of Science and Technology*)
Qiaoyin Lu (*Huazhong University of Science and Technology*)
Weihua Guo (*Huazhong University of Science and Technology*)

TuP24: Extremely High Dynamic Outer Extinction Ratio (9.7 dB) of 56-Gb/s PAM-4 with EA-DFB Lasers by Optical Orthogonal Polarization-Multiplexing (Page 161)

Kouji Nakahara (*Oclaro Japan, Inc.*)
Riu Hirai (*Hitachi Ltd.*)
Nobuhiko Kikuchi (*Hitachi Ltd.*)
Koichi R. Tamura (*Oclaro Japan, Inc.*)
Shigehisa Tanaka (*Oclaro Japan, Inc.*)

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Mizuki Shirao (*Mitsubishi Electric Corporation*)
Hayato Sano (*Mitsubishi Electric Corporation*)
Seiki Nakamura (*Mitsubishi Electric Corporation*)
Asami Uchiyama (*Mitsubishi Electric Corporation*)
Yudai Imai (*Mitsubishi Electric Corporation*)

Kiyotomo Hasegawa (*Mitsubishi Electric Corporation*)

TuP26: In-Line Non-Destructive Characterisation Method for Photonic Crystal Surface Emitting Lasers (Page 165)

Ben C. King (*University of Glasgow*)
Richard J. E. Taylor (*University of Glasgow*)
Pavlo Ivanov (*University of Glasgow*)
Iain Butler (*University of Glasgow*)
Timothy S. Roberts (*University of Sheffield*)
David T. D. Childs (*University of Glasgow*)
Richard A. Hogg (*University of Glasgow*)

TuP27: Room Temperature Photonic Crystal Surface Emitting Laser with Synthesized Monolayer Tungsten Disulfide (Page 167)

Xiaochen Ge (*University of Texas at Arlington*)
Momchil Minkov (*Stanford University*)
Tanushree Choudhury (*Pennsylvania State University*)
Mikhail Chubarov (*Pennsylvania State University*)
Shanhui Fan (*Stanford University*)
Joan Redwing (*Pennsylvania State University*)
Xiuling Li (*University of Illinois Urbana-Champaign*)
Weidong Zhou (*University of Texas at Arlington*)

TuP28: Modelling and Device Simulation of Photonic Crystal Surface Emitting Lasers Based on Modal Index Analysis (Page 169)

Guangrui Li (*University of Glasgow*)
Jayanta Sarma (*University of Glasgow*)
Iain Butler (*University of Glasgow*)
Richard J. E. Taylor (*University of Glasgow*)
David T. D. Childs (*University of Glasgow*)
Richard A. Hogg (*University of Glasgow*)

TuP29: Random Bit Generation in Dual Transverse Mode Microlaser without Optical Injection or Feedback (Page 171)

Jin-Long Xiao (*University of Chinese Academy of Sciences, Chinese Academy of Sciences*)
Chun-Guang Ma (*University of Chinese Academy of Sciences, Chinese Academy of Sciences*)
Zhi-Xiong Xiao (*University of Chinese Academy of Sciences, Chinese Academy of Sciences*)
Yue-De Yang (*University of Chinese Academy of Sciences, Chinese Academy of Sciences*)
Yong-Zhen Huang (*University of Chinese Academy of Sciences, Chinese Academy of Sciences*)

TuP30: Waveguide Coupling of Wavelength-Scale Capsule-Shaped Metal-Clad Laser (Page 173)

Yi Xiao (*University of Tokyo*)
Mitsuhiro Watanabe (*University of Tokyo*)
Yuguang Wang (*University of Tokyo*)
Takuo Tanemura (*University of Tokyo*)
Yoshiaki Nakano (*University of Tokyo*)

TuP31: Photonic Crystal Surface Emitting Lasers with Novel Transparent Cladding Layers (Page 175)

Shen-Che Huang (*National Chiao Tung University*)
Kuo-Bin Hong (*National Chiao Tung University*)
Han-Lun Chiu (*National Chiao Tung University*)
Tien-Chang Lu (*National Chiao Tung University*)

TuP32: Cantilever-Based Microring Lasers (Page 177)

Taojie Zhou (*Chinese University of Hong Kong*)
Xiu Liu (*Chinese University of Hong Kong*)
Boyuan Xiang (*Chinese University of Hong Kong*)
Xuan Fang (*Chinese University of Hong Kong*)
Zhaoyu Zhang (*Chinese University of Hong Kong*)

TuP33: Gain Lever Effect in a 2 μm InGaSb/AlGaAsSb Quantum Well Laser

X. Li (*Nanyang Technological University*)
H. Wang (*Nanyang Technological University*)
Z. L. Qiao (*Nanyang Technological University*)
X. Guo (*Nanyang Technological University*)
W. J. Wang (*Nanyang Technological University*)
J. X. Sia (*Nanyang Technological University*)
C. Y. Liu (*Nanyang Technological University*)

TuP34: Efficiency Limiting Mechanisms in 1.2-1.3 μm GaInAs/GaAsSb 'W' Lasers (Page 181)

Timothy D. Eales (*University of Surrey*)
Igor P. Marko (*University of Surrey*)
Chris Kemp (*University of Surrey*)
Christian Fuchs (*Philipps-Universität Marburg*)
Wolfgang Stolz (*Philipps-Universität Marburg*)
Stephen J. Sweeney (*University of Surrey*)

TuP35: Evaluation of Dilute Bismide Materials for Mid-IR Applications (Page 183)

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S. C. Badescu (*Air Force Research Laboratory*)
L. C. Bannow (*Philipps-Universität Marburg*)
J. V. Moloney (*Nonlinear Control Strategies Inc. & University of Arizona*)
S. R. Johnson (*Arizona State University*)
S. W. Koch (*Philipps-Universität Marburg*)

TuP36: MEMS Tunable Littman-Metcalf Diode Laser at 2.2 μm for Rapid Broadband Spectroscopy in Aqueous Solutions (Page 185)

N. Torcheboeuf (*Centre Suisse d'Electronique et de Microtechnique SA (CSEM)*)
S. Droz (*Centre Suisse d'Electronique et de Microtechnique SA (CSEM)*)
I. Šimonytė (*UAB Brolis Semiconductors*)
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TuP37: Controlling the Quantum Cascade Laser Frequency Comb via Risken-Nummedal-Graham-Haken Instability (Page 187)

A. A. Antonov (*Institute for Physics of Microstructures Russian Academy of Sciences*)
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A. Gajic (*University of Belgrade & Regulatory Agency for Electronic Communications and Postal Services*)
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D. L. Boiko (*Centre Suisse d'Electronique et de Microtechnique SA (CSEM)*)

TuP38: Electrically-Injected VCSELs with a Composite Monolithic High Contrast Grating and Distributed Bragg Reflector Coupling Mirror (Page 189)

Marcin Gębski (*Technische Universität Berlin & Lodz University of Technology*)
Tomasz Czystanowski (*Lodz University of Technology*)
James A. Lott (*Technische Universität Berlin*)

TuP39: Lasing Action in GaN-Based VCSELs with Top High-Contrast Grating Reflectors (Page 191)

Tsu-Chi Chang (*National Chiao Tung University*)
Shuo-Yi Kuo (*National Chiao Tung University*)
Ehsan Hashemi (*Chalmers University of Technology*)
Åsa Haglund (*Chalmers University of Technology*)
Tien-Chang Lu (*National Chiao Tung University*)

TuP40: Large-Signal Circuit Model for Datacom VCSELs (Page 193)

Alexander Grabowski (*Chalmers University of Technology*)
Johan Gustavsson (*Chalmers University of Technology*)
Zhongxia Simon He (*Chalmers University of Technology*)
Anders Larsson (*Chalmers University of Technology*)

TuP41: Simultaneous Use of Spontaneous Emission Light in VCSEL for Improving Efficiency of Optical Wireless Power Transmission (Page 195)

Tomoyuki Miyamoto (*Tokyo Institute of Technology*)
Yoshihisa Suda (*Tokyo Institute of Technology*)

TuP42: Beam Quality Factor Analysis for Coherently-Coupled Vertically-Emitting Laser Arrays (Page 197)

James J. Raftery, Jr. (*United States Military Academy*)
Joshua B. Groen (*United States Military Academy*)
Kirk A. Ingold (*United States Military Academy*)

TuP43: Physics of Widely Tunable VCSELs with Coupled Cavities (Page 199)

Kevin T. Cook (*University of California, Berkeley*)
Pengfei Qiao (*University of California, Berkeley*)
Jipeng Qi (*University of California, Berkeley*)
Larry A. Coldren (*University of California, Santa Barbara*)
Connie J. Chang-Hasnain (*University of California, Berkeley*)

TuP44: Microscopic Many-Body Model for Mode-Locked and Multi-Wavelength Operation in Vertical External-Cavity Surface-Emitting Lasers (Page 201)

Isak Kilen (*University of Arizona*)
Stephan W. Koch (*Philipps-Universität Marburg*)
Jorg Hader (*University of Arizona*)
Jerome V. Moloney (*University of Arizona*)

TuP45: VECSEL-Based Offset-Free Frequency Comb in the MIR (Page 203)

Robert Rockmore (*University of Arizona*)

Alexandre Laurain (*University of Arizona*)

Jerome V. Moloney (*University of Arizona*)

R. Jason Jones (*University of Arizona*)

TuP46: Watt-Level High Order Hermite-Gaussian and Laguerre-Gaussian Beams from Vertical External Cavity Surface Emitting Lasers (Page 205)

Michal L. Lukowski (*University of Arizona & TPhotonics, Inc.*)

Jason T. Meyer (*University of Arizona*)

Chris Hessenius (*University of Arizona & TPhotonics, Inc.*)

Ewan M. Wright (*University of Arizona*)

Mahmoud Fallahi (*University of Arizona*)

TuP47: A Laser that Optomechanically Cools Itself

Justin M. Foley (*National Institute of Standards and Technology*)

Adarsh V. Ganesan (*National Institute of Standards and Technology*)

John R. Lawall (*National Institute of Standards and Technology*)

Weijian Yang (*University of California at Davis*)

Chris Chase (*Bandwidth10, Inc.*)

TuP48: A New Method to Evaluate the Degree of Potential Fluctuation in InGaN Quantum-Well Laser Diodes by Optical-Pump Stimulated-Emission Measurements (Page 209)

I. Oshima (*Kanazawa Institute of Technology*)

Y. Ikeda (*Kanazawa Institute of Technology*)

S. Sakai (*Kanazawa Institute of Technology*)

A. A. Yamaguchi (*Kanazawa Institute of Technology*)

Y. Kanitani (*Sony Corporation*)

S. Tomiya (*Sony Corporation*)

TuP49: High Speed Wavelength Tuning of MEMS VCSEL with Advanced Voltage Drive Technique (Page 211)

Shunya Inoue (*Tokyo Institute of Technology*)

Shun Nishimura (*Tokyo Institute of Technology*)

Masanori Nakahama (*Tokyo Institute of Technology*)

Akihiro Matsutani (*Tokyo Institute of Technology*)

Fumio Koyama (*Tokyo Institute of Technology*)

Session WA: Plenary III — 8:30 am-9:45 am — Mesa Ballroom

WA1: Opportunities in Semiconductor Laser Technology for Meeting the Requirements of Future High Energy Laser Missions (Page NA)

Paul Leisher (*Lawrence Livermore National Laboratory*)

WA2: Analysis and Design of Semiconductor Lasers Using Strain (Page NA)

Alf Adams (*University of Surrey*)

Session WB: Novel Lasers and Materials — 10:15 am-12:15 pm — Mesa Ballroom

WB1: Non-Reciprocal Lasing from Topological Cavities (Page NA)

Boubacar Kante (*University of California San Diego*)

WB2: 7W CW Operation of Double-Lattice Photonic-Crystal Lasers (Page 213)

Menaka De Zoysa (*Kyoto University*)

Masahiro Yoshida (*Kyoto University*)
Kenji Ishizaki (*Kyoto University*)
Bong-Shik Song (*Kyoto University & Sungkyunkwan University*)
Yoshinori Tanaka (*Kyoto University*)
Ranko Hatsuda (*Kyoto University*)
Shin Fukuhara (*Kyoto University*)
Susumu Noda (*Kyoto University*)

WB3: GaInAsP Photonic Crystal Bandedge Laser with High Ion Sensitivity (Page 215)

Keisuke Watanabe (*Yokohama National University*)
Toshihiko Baba (*Yokohama National University*)

WB4: Nanoscale III-V Light Emitting Diode with Antenna-Enhanced 250 Picosecond Spontaneous Emission Lifetime (Page 217)

Seth A. Fortuna (*University of California, Berkeley*)
Christopher Heidelberg (*Massachusetts Institute of Technology*)
Eli Yablonovitch (*University of California, Berkeley*)
Eugene A. Fitzgerald (*Massachusetts Institute of Technology*)
Ming C. Wu (*University of California, Berkeley*)

WB5: Iontronic Control of GaInAsP Photonic Crystal Nanolaser (Page 219)

Yoshito Saijo (*Yokohama National University*)
Takumi Watanabe (*Yokohama National University*)
Keisuke Watanabe (*Yokohama National University*)
Yoshiaki Nishijima (*Yokohama National University*)
Toshihiko Baba (*Yokohama National University*)

WB6: Low-Threshold Operation of GaAs-Based (Gain)As/Ga(AsSb)/(GaIn)As "W"-Quantum Well Lasers Emitting at 1.3 μm (Page 221)

C. Fuchs (*Philipps-Universität Marburg*)
P. Ludewig (*NAsPIII/V GmbH*)
A. Brüggemann (*Philipps-Universität Marburg*)
A. Ruiz Perez (*NAsPIII/V GmbH*)
M. J. Weseloh (*Philipps-Universität Marburg*)
S. Reinhard (*Philipps-Universität Marburg*)
J. Hader (*Nonlinear Control Strategies, Inc. & University of Arizona*)
J. V. Moloney (*Nonlinear Control Strategies, Inc. & University of Arizona*)
A. Bäumner (*Philipps-Universität Marburg*)
S. W. Koch (*Philipps-Universität Marburg*)
W. Stolz (*Philipps-Universität Marburg*)

WB7: The Nature of Auger Recombination in Type-I Quantum Well Lasers Operating in the Near- and Mid-Infrared (Page 223)

Timothy Eales (*University of Surrey*)
Igor P. Marko (*University of Surrey*)
Barnabas A. Ikyo (*University of Surrey*)
Alf R. Adams (*University of Surrey*)
Alexander Andrejew (*Technische Universität München*)
Kristijonas Vizbaras (*Technische Universität München*)
Markus-C. Amann (*Technische Universität München*)
Leon Shterengas (*State University of New York at Stony Brook*)
Stephen J. Sweeney (*University of Surrey*)

Session WC: High Power Lasers — 1:30 pm-3:30 pm — Mesa Ballroom

WC1: High Pulse Power Wavelength Stabilized Laser Diodes for Automotive LiDAR (Page 225)

A. Knigge (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)
A. Klehr (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)
H. Wenzel (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)
A. Zeghuzi (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)
J. Fricke (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)
A. Maaßdorf (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)
A. Liero (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)
G. Tränkle (*Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik*)

WC2: Tapered Monolithic Mode-Locked Laser Diode with 200 PJ Pulse Energy for Space Applications (Page 227)

M. Krakowski (*III-V Lab*)
P. Resneau (*III-V Lab*)
M. Garcia (*III-V Lab*)
E. Vinet (*III-V Lab*)
Y. Robert (*III-V Lab*)
C. Theveneau (*III-V Lab*)
M. Lecomte (*III-V Lab*)
O. Parillaud (*III-V Lab*)
B. Gerard (*III-V Lab*)
S. Kundermann (*Centre Suisse d'Electronique et de Microtechnique SA (CSEM)*)
N. Torcheboeuf (*Centre Suisse d'Electronique et de Microtechnique SA (CSEM)*)
D. L. Boiko (*Centre Suisse d'Electronique et de Microtechnique SA (CSEM)*)

WC3: High Power and High Beam Quality VCSEL Amplifier (Page 229)

Zeuku Ho (*Tokyo Institute of Technology*)
Junichiro Hayakawa (*Fuji Xerox Co., Ltd.*)
Keisuke Shimura (*Tokyo Institute of Technology*)
Keisuke Kondo (*Tokyo Institute of Technology*)
Xiaodong Gu (*Tokyo Institute of Technology*)
Akihiro Matsutani (*Tokyo Institute of Technology*)
Akemi Murakami (*Fuji Xerox Co., Ltd.*)
Fumio Koyama (*Tokyo Institute of Technology*)

WC4: Reliable 2 W DBR-Tapered Diode Lasers Lasing at 1180 nm Based on Highly Strained Quantum Wells (Page 231)

K. Paschke (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)
G. Blume (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)
A. Ginolas (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)
D. Feise (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)
W. John (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)
N. Werner (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)
F. Bugge (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)
B. Sumpf (*Ferdinand-Braun-Institut Leibniz-Institut für Höchstfrequenztechnik*)

WC5: Failure Mode and Lifetime Analysis of 9×× nm High Power Broad Stripe Laser Diodes (Page 233)

Y. Yamagata (*Fujikura Ltd.*)
S. Sato (*Optoenergy, Inc.*)
Y. Yamada (*Optoenergy Inc.*)
M. Yamaguchi (*Fujikura Ltd.*)

WC6: Flared Oscillator Waveguide Diodes (FLOW-Diodes) Produce Record-High Single-Wavelength Fiber-Coupled Power (Page 235)

M. Kanskar (*nLIGHT, Inc.*)
L. Bao (*nLIGHT, Inc.*)
Z. Chen (*nLIGHT, Inc.*)
D. Dawson (*nLIGHT, Inc.*)
M. DeVito (*nLIGHT, Inc.*)
M. Grimshaw (*nLIGHT, Inc.*)
X. Guan (*nLIGHT, Inc.*)
M. Hemenway (*nLIGHT, Inc.*)
Thomas Prunty (*nLIGHT, Inc.*)
W. Urbanek (*nLIGHT, Inc.*)
S. Zhang (*nLIGHT, Inc.*)

WC7: High Power, 14xx-nm Eye-Safe, Epitaxially Stacked Pulse Laser for Detection and Ranging Applications (Page 237)

Yasutaka Higa (*Furukawa Electric Co., Ltd.*)
Masahiro Yoshida (*Furukawa Electric Co., Ltd.*)
Nobuhiko Nishiyama (*Tokyo Institute of Technology*)
Yasuyuki Miyamoto (*Tokyo Institute of Technology*)
Nobuyuki Kagi (*Furukawa Electric Co., Ltd.*)

Session WD: Datacom VCSELs and Post Deadline — 4:00 pm-5:45 pm — Mesa Ballroom

WD1: How Ethernet Standards Shaped VCSEL Technology (Page 239)

Jack Jewell (*GreenVCSEL*)

WD2: Vertical-Cavity Silicon-Integrated Lasers by Bonding and Transfer Printing (Page 241)

E. P. Haglund (*Chalmers University of Technology*)

S. Kumari (*Ghent University*)

J. Goyvaerts (*Ghent University*)

J. S. Gustavsson (*Chalmers University of Technology*)

R. G. Baets (*Ghent University*)

G. Roelkens (*Ghent University*)

A. Larsson (*Chalmers University of Technology*)

WD3: Enhanced Digital Modulation of Coherent Photonic Crystal VCSEL Arrays (Page 243)

Harshil Dave (*University of Illinois Urbana-Champaign*)

Peicheng Liao (*University of Southern California*)

Stewart T. M. Fryslie (*Freedom Photonics*)

Zihe Gao (*University of Illinois Urbana-Champaign*)

Bradley J. Thompson (*University of Illinois Urbana-Champaign*)

Alan E. Willner (*University of Southern California*)

Kent D. Choquette (*University of Illinois Urbana-Champaign*)

WD4: 35 GHz Bandwidth with Directly Current Modulated 980 nm Oxide Aperture Single Cavity VCSELs (Page 245)

Nasibeh Haghighi (*Technische Universität Berlin*)

Gunter Larisch (*Technische Universität Berlin*)

Ricardo Rosales (*Technische Universität Berlin*)

Martin Zorn (*JENOPTIK Diode Lab GmbH*)

James A. Lott (*Technische Universität Berlin*)

PD1: Continuous Tuning of Gain Peak Linewidth Enhancement Factor from Negative to Positive with p Doping in InAs QD Laser on Si (Page 247)

Zeyu Zhang (*University of California, Santa Barbara*)

Daehwan Jung (*University of California, Santa Barbara*)

Justin C. Norman (*University of California, Santa Barbara*)

Pari Patel (*University of California, Santa Barbara*)

Weng W. Chow (*Sandia National Laboratories*)

John E. Bowers (*University of California, Santa Barbara*)