

2025 IEEE Photonics Conference (IPC 2025)

**Singapore, Singapore
9-13 November 2025**

IEEE Catalog Number:
ISBN:

CFP25LEO-POD
979-8-3315-2560-6



Copyright © 2025, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP25LEO-POD
ISBN (Print-On-Demand):	979-8-3315-2560-6
ISBN (Online):	979-8-3315-2559-0
ISSN:	2374-0140

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

Design and Modelling of a One-Dimensional Photonic Crystal Biosensor for the Identification of Blood Components and Blood Infections	1
<i>Divya Sampath, Venkateswaran N</i>	
High-Performance Fiber Optic Humidity Sensor Based on Cellulose Nanocrystals	3
<i>Manish Singh Negi, Sunil K Khijwania</i>	
Investigation of a Tm:YLF Quasi-3-Level Laser in Continuous and Pulsed Operation	5
<i>L. Appignani, P. Tidemand-Lichtenberg, L. Høgstedt, S.M.M. Friis, C. Pedersen</i>	
Direct Emission of Vector Vortex Beam (VVB) from Buried Heterostructure (BH) Laser	7
<i>Soumi Pal, Arpit Khandelwal, Nitin Bhatia</i>	
Compact Design of Low-Loss Optical Vias for 3D Silicon Photonic Integrated Circuits	9
<i>Sarad Subhra Bhakat, Kumar Piyush, Riddhi Goswami, Arnab Goswami, Marigo Eloi Ferrer Gan Yih Loong, Ng Chew Yan, Bijoy Krishna Das</i>	
Fabrication of a Calcite Birefringent Lens Using Micro-Abrasive Blasting	11
<i>Md Rabiul Hasan, Amirali Nikeghbal, Seungbeum Noah, Hanseup Kim, Carlos H. Mastrangelo</i>	
Scalable Sputter Deposited PZT on 100 mm Silicon Wafer for MEMS and Photonic Applications	13
<i>A. Daniel Yumnam, B. Shankar Kumar Selvaraja</i>	
Ultrawide Bandgap Corundum-Structured Iridium Gallium Oxide via Pulsed Laser Deposition	15
<i>A. Alquwayzani, T.K. Ng, B. Ooi</i>	
Parameter-Efficient Residual Interferometric Neural Network for Speech Representation	17
<i>Zih-Chen Ciou</i>	
Energy-Efficient Optical Neural Activation in PPLN Racetrack Resonator	19
<i>Lei Shi, Wujie Fu, Minghao Shang, Yuhui Yin, Aaron Danner, Tong Zhang</i>	
Pulse Generation in Quantum Dot Comb Laser with Amplified Spontaneous Emission Injection	21
<i>M. Shi, M. Dumont, H. Huang, J. E. Bowers, F. Grillot</i>	
Polarization Independent, Low-Loss Coupling Structure for Silicon Photonics Chips using an Angled Cut Fiber	23
<i>Hideaki Iwata, Hayato Sasazawa, Hiroyuki Tsuda</i>	
Adaptive Polarization Alignment for Polarization-Independent Gain in OPAs Using SPGD	25
<i>Joydip Dutta, Geethakrishnan Purushothaman, Jonaq Niveer Sarma, Deepa Venkitesh</i>	
Performance Analysis of Crosstalk-Induced Degradation in MCF-Based Bidirectional Links	27
<i>Sameer Ahmad Mir, Jonaq Niveer Sharma, Joydip Dutta, Arvind Mishra, Deepa Venkitesh</i>	
Experimental Demonstration of Fiber Nonlinearity Compensation Using Scalable Reservoir Computing Connected via Tapped Delay Lines	29
<i>S. Shimomura, K. Ikuta, T. Yamada, T. Yamamoto, S. Uchide, T. Sakamoto, N. Yamamoto, M. Nakamura</i>	
Acoustic Signal Encryption Using Binary Polarization States of Light Beam	31
<i>Allarakha Shikder, Sudheesh K. Rajput, Naveen K. Nishchal, Osamu Matoba, Yasuhiro Awatsuji</i>	

Multispectral Computational Ghost Imaging Based on Single-Pixel Silicon Detector	33
<i>Yixuan He, Yingxiao Ma, Baolei Liu, Yao Wang, Jiaqi Song, Weiqi Jin, Fan Wang, Ziyuan Li</i>	
Nanoparticle-On-Resonator-Boosted Spontaneous Emission	35
<i>Xuran Zhang, Chongwu Wang, Qi Jie Wang</i>	
Waste Factor Analysis in SLIPT-Enabled FSO Wireless Systems with Optical RIS	37
<i>Akhil Misra, B. Sainath</i>	
Deep Fade Event Probability Analysis of FSO Channels with Strong and Weak Turbulence	39
<i>Akhil Misra, B. Sainath</i>	
Porosity Meets Plasmonics: A Novel Route to High-Q Mechanical Nanoresonators	41
<i>J. I. Sangiorgio, C. Borrazás, J. Mascarenhas, N. Roqueiro, E. Cortés, M. C. Fuertes, G Grinblat A. V. Bragas</i>	
Leveraging Distributed ZnO-Cu ₂ O Heterojunctions for Ultraviolet Photodetector Applications	43
<i>Ashutosh Kumar, Sanutosh Kumar, Nikita Mohanta, Mukesh Kumar</i>	
Gallium Nitride Nanowire Array-Based Optoelectronic Synapses for Biorealistic Neuromorphic Functions	45
<i>Xin Liu, Danhao Wang, Wei Chen, Yang Kang, Muhammad Hunain Memon, Shi Fang, Haiding Sun</i>	
Stokes Skyrmion in Few-Mode Fibers	47
<i>Zekun Shi, Yan-Ge Liu</i>	
Nonlinear Switching and Discrete Solitons in Femtosecond Laser-Inscribed Photonic s-p Orbitals	49
<i>Gayathry Rajeevan, Seababrat Mukherjee</i>	
Optimization of 1D Photonic Crystal Biosensor for Hemoglobin Based Anemia Detection	51
<i>Smruti M, Swastika S, Divya S, Venkateswaran N, Allwyn S. Rajamani</i>	
AI-Augmented Photonic Crystal Biosensing Platform for Human Papillomavirus Detection in Urine	53
<i>A.Yashaswini P. R, B.Bhavith M Gowda, C. A Karthik Lal, D. Adithya Bhat U, E. Arun Kumar Srikanth P. C</i>	
Multi-Fiber Optic Sensing Solution for Real-Time Condition Monitoring of Eco-Friendly Gas-Insulated Switchgear	55
<i>H. K. Jung, J. G. Shin, J. Eom</i>	
Hundred-Millijoule-Level Water Cooled Ultrafast Yb:YAG Laser at 100 Hz Repetition Rate	57
<i>Hang Yang, Kun Liu, Zihan Zhou, Jiajia Mao, Junhao Chen, Xiang Gao, Liujing Xu, Dayong Zhang Hong Zhao</i>	
Photonics Based Ultra Wideband Reactive Jamming of Unauthorized Radio Channels	59
<i>Thejna Ros Joseph, Chiranjeevi Damacherla, Ranu Tyagi, Pushpalata T</i>	
Near-Infrared Surface-Plasmon-Induced Photoconductance Photodetector	61
<i>I-Hsuan Liu, Yin-Jung Chang, Tang-Chun Liu, Kuan-Ting Lai</i>	
Polarization-Based Data Reuploading	63
<i>M. Taguchi, T. Koike-Akino, A. Hosaka, T. Yoshida, K. Kojima</i>	

Efficient All-Optical Modulation via ENZ-Statelriven ITO Ring Resonator with Layered Bus-Ring Integration	65
<i>Swati Rajput, Abhinav Singh Parihar, Mukesh Kumar</i>	
Optical Pitch Transformer Chiplet for Glass Interposer: Concept and Feasibility Study	67
<i>How Yuan Hwang, Xiuyun He, Peter O'Brien</i>	
Individual Rate-Guaranteed Noma/Oma Switching Mechanism and Multi-Resource Allocation Optimization for Sipm-Based Vlc Systems	69
<i>Feiyu Jiao, Yansong Du, Yuting Zhou, Yuyu Wang, Yuxuan Liu, Bangyao Wang, Jian Song, Xun Guan</i>	
Phase Retrieval in Quadriwave Lateral Shearing Interferometry with Large Shear Ratio Improved by Wiener Filter	71
<i>Hui Xie, Jun Xie, Tong Ling</i>	
Observation of Exceptional Points by Different Hermite-Gaussian Transverse Modes in a Birefringent Fabry-Perot Cavity	73
<i>J. Seo, J. Kim, K. An</i>	
3D Optical Switch for Quantum Communication	75
<i>Takao Tomono, Rumiko Yamaguchi</i>	
Digital Twin of Metro Area Quantum Access Network	77
<i>Vaibhav Pratap Singh, Abhishek Singh Rao, Ashutosh Kumar Singh, Sajimon P. C., Anurag Dutt Nilesh Sharma, Aneesh Kumar K. B., Anil Prabhakar</i>	
AI-Driven Automatic Ship Detection Using Intensity-Based Das on Submarine Cables	79
<i>Jiajia Huang, Wei Liu, Vuong Nhu Khue, Hailiang Zhang, Hui Dong, Yixin Wang, Meng Fai Yue Kum Yeow Lum, Gary Jia Rui Chew, Bien Aik Tan, Dora Juan Juan Hu</i>	
Underground Pipeline Monitoring Using Quasi-Distributed Fiber-Optic Network with Integrated Energy, Sensing, and Communication	81
<i>Fares Banjar, Baoshi Sun, Chun Hong Kang, Tien Khee Ng, Islam Ashry, Boon S. Ooi</i>	
Wavelength Dependence of Polarization State in Single-Mode Fiber: Implications for BOTDA	83
<i>Zhizhi Yang, Bart Kuyken, Roel Baets, Yanlu Li</i>	
Experimental Demonstration of Simplified OFDR Based on Ultra-Low-Loss Inline Point Reflector	85
<i>Yufeng Wang, Xinke Tang, Zecong Liu, Zhixue He, Pengtao Luo, Ruohui Wang, Xun Guan</i>	
Data-Driven Excavation Detection and Localization Using ϕ -OTDR Distributed Acoustic Sensing	87
<i>Nhu Khue Vuong, Gen Liang Lim, Lianlian Jiang, Hailiang Zhang, Hui Dong, Dora Juan Juan Hu Jun Hong Ng</i>	
Studying the Single and Ensemble of NV Center Emission for Enhanced Magnetic Field Sensitivity	90
<i>Ashish Redhu, Rajesh V. Nair</i>	
An All-Silicon Approach to Large-Scale Quantum Key Distribution	92
<i>Valeria Saggio, Florian Honz, Hannes Hübeler, Bernhard Schrenk</i>	
Scalable Optical Crosshaul for Future Wireless Systems	94
<i>Christina Lim, Yijie Tao, Chathurika Ranaweera, Ampalavanapillai Nirmalathas, Lena Wosinska</i>	
Linearity Enhancement of GHz Brillouin Filters	96
<i>Md Kamran Afroz, Deeksha Jachpure, Amol Choudhary</i>	

A Low-Redundancy Programmable Optical Delay Line Network Based on Dynamic Allocation of Optical Delay Resources	98
<i>Ting Lyu, Shaofu Xu, Bo Li, Ruicheng Qiu, Yixi Liu, Weiwen Zou</i>	
Hybrid Integrated Nonlinear Photonics Platform Enabled by Efficient Inter-Layer Couplers	100
<i>Kunhao Lei, Boshu Sun, Kangjian Bao, Lan Li, Hongtao Lin</i>	
Enhanced X-Ray Generation from Bulk van der Waals Materials	102
<i>Qingwei Zhai, Nikhil Pramanik, Ruihuan Duan, Sunchao Huang, Zheng Liu, Liang Jie Wong</i>	
Beam Expansion for High-Power Transmission in Solid-Core to Hollow-Core Fiber Coupling	104
<i>V. Mičin, A. Zhong, S. Zvánovec, R. Slavík, M. Komanec</i>	
Experimental Crosstalk Analysis in SDM Systems with Multimode Fiber Geometry Mismatch	106
<i>Mareli Rodigheri, Fabio A. Barbosa, Evandro Conforti, Filipe M. Ferreira</i>	
Evaluation of Inter-Mode-Group Stimulated Raman Scattering on Multi-Mode Fibers	108
<i>Lucas Alves Zischler, Julian Schneck, Giammarco Di Sciullo, Divya A. Shaji, Besma Kalla, Stefano Gaiani</i>	
<i>Ruben S. Luís, Daniele Orsuti, Pierre Sillard, Chigo Okonkwo, Pierpaolo Boffi, Hideaki Furukawa</i>	
<i>Georg Rademacher, Cristian Antonelli</i>	
Real-Time Mode Decomposition in Multimode Fiber Communications Using Optical Diffractive Neural Network	110
<i>Qian Zhang, Yu Miao, Jürgen Czarske</i>	
Mach-Zehnder Interferometer in Thin Film Barium Titanate on Insulator by Wet Etching	112
<i>Hong-Lin Lin, Yuhui Yin, Yu Cao, Aaron J. Danner</i>	
Novel Hollow-Core Fiber Communication Systems of the Future	114
<i>Dawei Ge, Dong Wang, Mingqing Zuo, Dechao Zhang, Han Li</i>	
Effective Numerical Aperture of Antiresonant Hollow Core Fibers	116
<i>Charu Goel, Trivikramarao Gavara, Wonkeun Chang</i>	
Quantum Cascade Laser-Based Multi-Gas Sensors for Ambient Air and Process Stream Monitoring	118
<i>H. Moser, J.P. Waclawek, B. Lendl</i>	
Amphibious Hydrogel/Nanowire Heterostructure Photosensor for Stable Cross-Medium Ultraviolet Light Monitoring	120
<i>Wei Chen, Yang Li, Xin Liu, Yang Kang, Shi Fang, Muhammad Hunain Memon, Haiding Sun</i>	
Simultaneous Decoupling of Temperature, Pressure, and Refractive Index via Tilted Fiber Bragg Grating Written by Femtosecond Laser	122
<i>Simeng Li, Yuting Zhou, Yuxuan Liu, Yansong Du, Feiyu Jiao, Qiang Jin, Yuyu Wang, Xun Guan</i>	
Towards High-Contrast Table-Top Imaging of Integrated Circuit Defects via Tunable X-Rays	124
<i>W. W. Lee, Q. Zhai, N. Pramanik, F. Maddalena, C. Dang, L. J. Wong</i>	
High-Sensitivity Bimodal Waveguide Sensor Based on Dispersion Turning Point	126
<i>Rui Li, Jiewen Li, Wanxin Li, Zheng Cao, Fatao Chen, Weiming Yao, Yong Yao, Yongkang Dong</i>	
<i>Xiaochuan Xu</i>	
Compact Trace Gas Sensing Employing Interferometric Cavity-Assisted Photothermal Spectroscopy	128
<i>J. P. Waclawek, H. Moser, B. Lendl</i>	

Polarization Transformations and Compressed Sensing from Solution-processed, Meso-ordered, Metaphotonic Films	130
<i>Ji Feng, Xiaojing Weng, Altai Perry, Alma K. González-Alcalde, Mario J. Mencagli, Luat T. Vuong</i>	
High-Efficiency Polarization-Independent Free-Space Modulator with Plasmonic-Organic-Hybrid Metasurface	132
<i>S. Karakida, K. Ariu, H. Miyano, G. Soma, T. Tanemura</i>	
Integrated Plasmonic Digital-to-Analog Converter, Using Broadband Low-Loss Electro-Absorption Hybrid Plasmonic Switches	134
<i>Rajib Ratan Ghosh, Anuj Dhawan</i>	
Microwave to Optical Transduction Using Efficient Acousto-Optic Modulation in Aluminum Nitride-on-Sapphire	136
<i>A. Shreelakshmi KP, B. Viresh Bhan, C. Srinivasan Raghavan, D. Shankar Kumar Selvaraja</i>	
Integrated High-Q Fabry-Pérot Cavity at 780 Nm with Ultrabroad Operating Bandwidth	139
<i>Shuhuai Bai, Chunxue Wang, Xucheng Zhang, Yadong Jiao, Xingchen Ji, Yikai Su</i>	
Toward Self-Healing Optical Networks: A Vision for AI-Native, Autonomous Resilience	141
<i>Khouloud Abdelli</i>	
Nonlinearity Mitigation in Optical Fiber Transmission Using Quaternion-Valued Neural Networks: An Experimental Study	143
<i>K. Ochiri, T. Sakamoto, N. Yamamoto, M. Nakamura</i>	
LLM-Assisted Concurrent Physical-Layer Key Generation/Distribution and Encrypted Data Transmission on Single-Wavelength	145
<i>Geyang Wang, Xiaotian Jiang, Zelu Wang, Hon Ki Tsang, Lian-Kuan Chen</i>	
Polarization-Aware Modular IR Apertures for Interference Mitigation in Multi-User Indoor Networks	147
<i>S. Gunathilake, A. Nirmalathas, K. Herath, M. Premaratne</i>	
Novel Orientation Design and Jointly Optimal Resource Allocation for Mobile Receivers in MIMO-VLC-NOMA Systems	149
<i>Yuyu Wang, Feiyu Jiao, Yansong Du, Yuting Zhou, Jian Song, Xun Guan</i>	
Coherent Control of Ultrafast Currents for Terahertz Magnetic Fields	151
<i>Kamalesh Jana, Yonghao Mi, Shima G. Mirzaei, Dong Hyuk Ko, Shawn Sederberg, P. B. Corkum</i>	
Observation of Joule-Thomson Expansion of Light	153
<i>M. S. Kirsch, G.G. Pyrialakos, R. M. Altenkirch, T. A. W. Wolterink, M. Khajavikhan, A. Szameit M. Heinrich, D. N. Christodoulides</i>	
Sonogram Analysis of Nanosecond, THz-Bandwidth Optical Waveforms in a Single Spectral Measurement	155
<i>Geunweon Lim, Benjamin Crockett, Majid Goodarzi, José Azaña</i>	
Uni-Traveling Carrier Photodetector Beyond 100 GHz for High-Speed Optical Communication	157
<i>H. Ye, Q. Han, L. Geng, Z. Jia, X. Yi, H. Yang</i>	
Multi-Gigabit Optical Link in the Long-Wave Infrared Using Quantum Cascade Emitters and Detectors	159
<i>T. Poletti, N. Nawfal, E. Awad, G. Maisons, V. Trinité, H. Huang, S. Pes, F. Grillot</i>	

High-Speed Ge/Si Photodetector with Poly-Si Electric Field Modulation in a PIN Configuration	161
<i>T. Xia, S. H. Liu, W. Cao, M. L. Wei, X. Sun, G. N. Liu</i>	
Gate-Integrated Dual-Functional GaN-Based Three-Terminal p-n Diode for Visible Light Communication	163
<i>Muhammad Hunain Memon, Huabin Yu, Haochen Zhang, Yang Kang, Wei Chen, Xin Liu, Shi Fang Haiding Sun</i>	
Numerical Analysis of Bandwidth in III-V Membrane MOSCAP Optical Phase Shifters	165
<i>Hiroya Sakumoto, Kasidit Toprasertpong, Mitsuru Takenaka</i>	
Direct Laser Lithography on Sb ₂ S ₃ Thin Film for Optical Waveguide Fabrication	167
<i>Mamoru Tanabe, Jooyoung Yoo, Kotaro Makino, Shogo Hatayama, Yuto Miyatake, Kasidit Toprasertpong Shinichi Takagi, Mitsuru Takenaka</i>	
α -Ga ₂ O ₃ Molecular Beam Epitaxy for Photodetector-Based Authentication	169
<i>Hongliang Chang, Yanqing Jia, Yue Wang, Hang Lu, Abdullah Alquwayzani, Wenqing Niu, Tien Khee Ng Boon S. Ooi</i>	
Low-Loss Adiabatic Coupler for ScAlN-Si Integration	171
<i>Yangyang Zhuge, Bo Li, Chong Pei Ho, Zhihao Ren, Wing Wai Chung, Amy Sen Kay Tong, Xianshu Luo Chengkuo Lee, Nanxi Li</i>	
Fabrication and Characterization of GaAsSb/Si Heterostructure Photodiode via Transfer Printing	173
<i>Yongkang Xia, Manisha Muduli, Naga Swetha Nallamothu, Sophie Mills, Nathan Gajowski Ronald M. Reano, Sanjay Krishna, Steven Ringel, Shamsul Arafin</i>	
Anisotropic and Heterogeneous Graphite- Na_2SiO_3 Films: a Platform for Exploring Structure-Sensitive Optical Phenomena	175
<i>Luana De-Moraes, Freddy Jara-Poma, Paloma E. S. Pellegrini, Silvia V. G. Nista, Stanislav Moshkalev Hugo E. Hernández-Figueroa</i>	
Monolithic GaSb-Based Waveguides for PICs at Mid-Wave Infrared Wavelengths	177
<i>Md Saiful Islam Sumon, Sk Shafaat Saud Nikor, Arnob Ghosh, Grayson Ullman, G Sai Sri Prabhat Imad I. Faruque, Sarvagya Dwivedi, Shamsul Arafin</i>	
Enhanced Crystallization and Charge Transport in Inverted Perovskite Solar Cells Through Buried Interface Engineering	179
<i>Yu Chen, Qingshun Dong, Yuanmin Du</i>	
Nanocavity-Engineered 2D Perovskite High-Speed Photodetectors with Robust Ambient Stability	181
<i>Murali Gedda, Qiaoqiang Gan</i>	
Vertically Integrated Deep Ultraviolet Micro-Led Array With Photodetector for Stable and Compact Maskless Photolithography	183
<i>Yang Kang, Huabin Yu, Jikai Yao, Muhammad Hunain Memon, Xin Liu, Wei Chen, Haiding Sun</i>	
Ultra-Small Ultra-Violet GAN based Micro Light Emitting Diodes with High Efficiencies	185
<i>Yu-Hsien Wen, Yu-Long Zhong, Hao-Jen Chang, Ke-Hsi Chiang, Yi-Chia Hwang, Hao-Chung Kuo Chien-Chung Lin</i>	
Modeling GaN-on-Si MicroLEDs and MicroPDs for Chip-to-Chip Optical Links	187
<i>Patrick Le Maitre, Sultan El Badaoui, Anthony Cibié, Aurélien Lardeau, Julia Simon, Michael Pelissier Jeremy Bilde, Louwenn Cherruault, Manon Arch, Paolo De Martino, Yannis Le Guennec</i>	

Machine Learning-Driven Optimized Epitaxial Structure Design of III-Nitride Based Green LEDs	189
<i>Chandra Prakash Singh, Kankat Ghosh</i>	
RGB Full-color and Wide Field-of-View Imaging by Metalens	191
<i>Hongli Yu, Hao Wang, Xia Yu, Perry Ping Shum</i>	
Meta-Operators for All-Optical Image Processing	193
<i>L. Yu, H. J. Singh, J. Pietilä, H. Caglayan</i>	
Dielectric Nanocavities for Wavelength-Multiplexed Optical Detection	195
<i>Bowen Fu, Zhiyi Yuan, Yu-Cheng Chen</i>	
Cc-Otdr Sequence Shaping Enabling Joint Co-Directional Sensing and Communication	197
<i>M. Ali Allousch, André Sandmann</i>	
Sliding Window-Based SNR Improvement for Coherent Correlation Differential Phase OTDR	199
<i>Lukas Fonk, Tobias Philipp, Tom Jürgensen, Annika Dochhan, Stephan Pachnicke</i>	
Normalized Intrusion Convolution Kernel for Smart Perimeter Detection Using Mach-Zehnder Interferometer Fiber Sensors	201
<i>M.F.F. Pradipta, B. Pamukti, S. Afifah, S. -K. Liaw, A. M. Hatta, F. -L. Yang</i>	
Joint Optimization of Photovoltaic-Based Optical Wireless Communications for Emergency Internet Recovery in Disaster Areas	203
<i>Shuyan Chen, Hui Yu, Ni Zhao, Lian-Kuan Chen</i>	
3D Photonic-Electronic Computing	205
<i>S. J. Ben Yoo</i>	
Electronic-Photonic Co-Design for All-Optical Signal Processing and Computing	207
<i>Francesco Zanetto, Alessandro di Tria, Emanuele Sacchi, Samuele De Gaetano, Monica Crico</i>	
<i>Francesco Morichetti, Andrea Melloni, Giorgio Ferrari, Marco Sampietro</i>	
Opto-Electronic Spiking Neuron Using Integrated Photodetector and Resonant Tunnelling Diode	209
<i>D.A. Harmsen, E. Malysheva, K.A. Williams, V. Dolores-Calzadilla</i>	
Wafer-Scale Integration of Lithium Niobate on a Silicon Photonics 200-mm Platform	211
<i>Margot Niels, Ewoud Vissers, Tom Vanackere, Arno Moerman, Xiujun Zheng, Xin Guo, Peter Geerinck</i>	
<i>Emadreza Soltanian, Jing Zhang, Sofie Janssen, Peter Verheyen, Neha Singh, Dieter Bode, Martin Davi</i>	
<i>Filippo Ferraro, Philippe Absil, Sadhishkumar Balakrishnan, Joris Van Campenhout, Sebastian Hänsch</i>	
<i>Hanh Mai, Nishant Singh, Günther Roelkens, Sarah Uvin, Maximilien Billet, Bart Kuyken</i>	
Ferroelectric Nematic Glass: An Emerging Candidate for Next-Generation High-Speed Silicon-Organic Electro-Optic Modulators	213
<i>Li-Yuan Chiang, Gianlorenzo Masini, Jerome Jahn, Ching-Wen Huang, Pao-Chieh Huang, Chirag Patel</i>	
<i>Pavel Savechenkov, Rih-You Chen, Yi-Jen Chiu, Cory Pecinovsky, Jason W. Sickler</i>	
Monolithic Integrated Optic-Electronic-Optic Interferometer Transceiver PIC	215
<i>Alexander Schindler, Hendrik Boerma, Colin Sklenar, Trung Thanh Tran, Patrick Runge, Martin Schell</i>	
Experimental Investigation of Compact Electro-Optic Modulators Based on Meandered Thin-Film Lithium Niobate Waveguides	217
<i>Jungwoo Lee, Min-Suk Kwon</i>	

Towards Automated Drift-Free High-Throughput Nanoscopy for Clinical Pathology	219
<i>Hongqiang Ma, Phuong Nguyen, Yang Liu</i>	
Line-Illumination-Modulated Four-Color Optical Sectioning Imaging for Fluorescence in Situ Hybridization	221
<i>Jing Zhang, Sijie Li, Jiangjiang Zhao, Jing Yuan</i>	
Design of a Flexure-based Vibratome for Precision Tissue Cutting and Organ-Wide Imaging	223
<i>Ruiheng Xie, Jianwei Chen</i>	
Intravital Autophagosome Generation Imaging in a LC3 Mouse using Multi-Photon Microscopy	225
<i>Saeed Bohlooli Darian, Jeongmin Oh, Jun Ki Kim</i>	
Quantum Nanoplasmonics for Enhanced Coherence and Single-Photon Detection	227
<i>O. Hess</i>	
Quantum Kapitza-Dirac Effect in Asymmetrical Laser Cavities	229
<i>Sunjun Hwang, Suraj Kumar, Lee Wei Wesley Wong, Liang Jie Wong</i>	
Squeezing and Flexible Time-Frequency Properties in Optical Fibers for Efficient Quantum Sources	231
<i>Liu Han, Meng Lon Iu, Noor Hamdash, Amr S. Helmy</i>	
Separated Charge O-Band Semiconductor Lasers	233
<i>Alfred R. Adams, Igor P. Marko, Dominic A. Duffy, Neil D. Gerrard, Stephen J. Sweeney</i>	
Optical Authentication Leveraging Chaotic-Cavity VCSEL Far-Field Patterns with Deep Learning	235
<i>Hang Lu, Zhican Zhou, Juan M. Marin, Chun Hong Kang, Omar Alkhazragi, Heming Lin, Islam Ashry Tien Khee Ng, Yating Wan, Boon S. Ooi</i>	
Extra-Large Aperture Multi-Junction VCSELs for High-Performance LiDAR Applications	237
<i>Y. Higa, G. Song, H. Watanabe, R. Koda, N. Futagawa</i>	
Miniaturized VCSEL Array With Ring-Shaped Zn-Diffusion Apertures for High-Speed and High-Brightness Performances	239
<i>Jian-Wei Tung, Zhe-Wei Hsu, Po-Jui Lai, Jin-Wei Shi</i>	
Mesa Orientation Engineering for Polarization Locking in VCSELs	241
<i>Zifeng Yuan, Wenkai Shan, Tingting Chen, Beibei Lin, Aaron Danner</i>	
Internal Turn-Off Temperature of Oxide-Confined VCSELs	243
<i>J. Baker, C. P. Allford, C. Hentschel, J. Meiklejohn, S. Gillgrass, S. Shutts, P. M. Smowton</i>	
Bloch Surface Modes Propagating at the Surface of 1D Photonic Crystals for Label-Free and Fluorescence Detection of Biomarkers in Human Serum	245
<i>A. Occhicone, A. Sinibaldi, A. Gaganina, F. Michelotti</i>	
Cascaded Double-Potential Model for Disordered Nanophotonic Systems	247
<i>Sandip Mondal, M. Balasubrahmaniam, Martin Kamp, Sushil Mujumdar</i>	
Vertically Coupled Si ₃ N ₄ Double Microdisks as a Photonic Molecule for 3D Nanophotonics	249
<i>Wenli Zhou, Sang Lam</i>	
Design and Analysis of BIC-based High Quality Factor Planer Laser Cavity	251
<i>Shashwat Tripathi, Aryan Pandey, Rahul Kumar, Ankit Arora</i>	

Radially Confined III-Nitride Quantum Dots-on-Nanowires for High-Speed Room-Temperature Single-Photon Emission	253
<i>Swagata Bhunia, S. Chatterjee, A. Majumdar, K Saha, S. Mahapatra, Apurba Laha</i>	
Potential of Hollow-Core Fibers in Power-Constrained Submarine Networks	255
<i>A. Carbo Meseguer</i>	
Hollow Core Fibers for Microwave Photonics in Millimeter-Wave Range	257
<i>J. Vocilka, S. Zvánovec, M. Komanec, R. Slavík, J. Bohata</i>	
Ultra-High Splitting Ratio Access Network with Optically Powered Amplifier Using a Hollow Core Fiber	259
<i>M. Miyasugi, S. Kimura, Y. Seki, Y. Maetani, S. Okamoto, N. Yamanaka, M. Matsuura, T. Takagi, K. Mukasa, Z. Liu, H. Tsuda</i>	
Demonstration of 1.024 Tbps Data Transmission Over Field-Deployed Armored Multi-Core Fiber Cable	261
<i>Sameer Ahmad Mir, Jonaq Niveer Sarma, Annesha Maity, Pramod Mishra, Rachana, Shubham Vasane, Arvind Kumar Mishra, Deepa Venkitesh</i>	
Zero Forcing Precoder for Crosstalk Resilient Multi-Core Fiber Communication	263
<i>Nitin Sai Maradani, Sameer Ahmad Mir, Jonaq Niveer Sarma, Lakshmi Narasimhan Theagarajan, Deepa Venkitesh</i>	
AI-Based Inverse Design of Diffractive Metasurfaces Using Diffusion Models	265
<i>L. Hen, E. Yosef, D. Raviv, R. Giryas, J. Scheuer</i>	
Robust Design of Silicon Photonic Mach–Zehnder Interferometers Using Bayesian Optimization	267
<i>Zahra Ghanaatian, Edwin K. P. Chong, Mahdi Nikdast</i>	
Machine Learning Prediction of Optical Response in Bragg Gratings: From Partial to Full Spectrum	269
<i>M. R. Mahani, Igor A. Nechepurenko, Yasmin Rahimof, Thomas Flisgen, Andreas Wicht</i>	
Hybrid Genetic Algorithm for Power-Efficient Electro-Optic Frequency Combs	271
<i>Dixit Kumar, Amol Choudhary, Vivek Venkataraman</i>	
Comb Sources with Hybrid Photonic Integration	273
<i>Stefano Grillanda, Di Che, Mohamad Hossein Idjadi, Cristian Bolle, Rose Kopf, Mark Cappuzzo</i>	
Monolithically Integrated Actively Mode-Locked InP Laser with MZI Modulation	275
<i>Yunyun Ding, Duarte J.F. da Silva, Martijn J. R. Heck</i>	
Optical Architectures for Photon-Photon Resonance in Vertical-Cavity Surface-Emitting Lasers and Distributed Feedback Lasers	277
<i>Jack Jewell</i>	
High-Speed 100 Gbps Traveling-Wave (TW) Electro-Absorption Modulator Laser (EML) Using Ridge-Type Waveguide	279
<i>Tzu-I Hsieh, Zhen-Hua Wang, Bo-Hong Chen, Rih-You Chen, Shou-Ming Chen, Wei Lin, Yi-Jen Chiu</i>	
Coherent Beam Combining System with Pseudorandom Optical Phase Modulation for Realizing High-Power Laser System	281
<i>T. Suzuki, E. Haraguchi, H. Ono, R. Narazaki, T. Akiyama</i>	

Computational Ghost Imaging Based on Single-Pixel GaAsSb Nanowire Array Photodetector	283
<i>Yingxiao Ma, Zeyu He, Yixuan He, Baolei Liu, Yao Wang, Jiaqi Song, Yang Yu, Weiqi Jin, Lan Fu Fan Wang, Ziyuan Li</i>	
Superior AlGaIn/GaN-Based Phototransistors and Arrays with Reconfigurable Triple-Mode Functionalities for High-Quality Imaging	285
<i>Haochen Zhang, Muhammad Hunain Memon, Huabin Yu, Yang Kang, Wei Chen, Xin Liu, Shi Fang Haiding Sun</i>	
On-Chip Mid-Infrared Ge-On-Si Platform for Liquid Sensing	287
<i>A. Dabrowska, T. Zhai, G. Van Steenberge, B. Lendl</i>	
Quantitative Phase Imaging of Live Cells Using Quadriwave Lateral Shearing Interferometry with Large Shear Ratio	289
<i>Hui Xie, Jun Xie, Huakun Li, Tong Ling</i>	
Integrating Quadriwave Lateral Shearing Interferometry and Multielectrode Array for Studying Cardiac Cell Function	291
<i>Jun Xie, Louis Hanqiang Gan, Hui Xie, Tong Ling</i>	
Substrate-Enhanced Quantitative Phase Microscopy for Characterizing Migrasomes from Unlabeled Cells	293
<i>Xinyi Li, Nansen Zhou, Minze Xu, Tong Ling, Xiangzhou Lao, Liting Duan, Renjie Zhou</i>	
Optical Probing of Leaf Tissue Dehydration Using Coherent Backscattering	295
<i>Siddhanth Subramanian, Maria Merin Antony, R. Gayathri, Murukeshan V M</i>	
Polarization-Sensitive Nanowire Terahertz Receivers: From Laboratory Research to Industry	297
<i>Kun Peng, Nicholas P. Morgan, Dimitars Jevtics, Ford M. Wagner, Thomas Siday, Chelsea Q. Xia Didem Dede, Victor Boureau, Valerio Piazza, Benoit Guilhabert, Antonio Hurtado, Michael J. Strain Martin D. Dawson, Lan Fu, Hark H. Tan, Chennupati. Jagadish, Anna Fontcuberta i Morral Michael B. Johnston</i>	
Synaptic Plasticity in MoS ₂ Phototransistors Synthesized by Low-Temperature Chemical Vapor Deposition	299
<i>Jinan Jiang, Nasrullah Wazir, Han Yan, Zhixin Chen, Zichao Ma</i>	
Design and Fabrication of a DBR Resonator Using Nb ₂ O ₅ Horizontal Three-Layer Slot Waveguide for Sensing Devices	301
<i>Umi Endo, Nao Suzuki, Yoshiki Hayma, Katsumi Nakatuhara</i>	
Design of a Triple Band Near Perfect Terahertz Absorber for 6G Communication Systems	303
<i>Md. Moniruzzaman, Md. Imtiaz Uddin, Mohamed Ouda, Md. Hasenur Rahman Asu, Md. Golam Rabbani Mandeep Singh, Mohammad Tariqul Islam</i>	
Monolithically Integrated Dual-Wavelength GaN Devices for Enhanced Optical Sensing	305
<i>Zecong Liu, Lu Chen, Yufeng Wang, Xun Guan</i>	
Multi-Junction Grating-Stabilized Diode Lasers for Nanosecond-Pulse LIDAR	307
<i>H. Christopher, N. Ammouri, M. Beier, J. Fricke, S. Kreutzmann, A. Maaßdorf, S. Nozinic, H. Wenzel S. Einfeldt, A. Knigge</i>	
3.4 μm High-Peak-Power Laser Source Based on Synchronization-Free Parametric Conversion	309
<i>Junjie Jiang, Lin Li, Hang Yang, Zihan Zhou, Xiang Gao, Kun Liu, Hong Zhao, Xia Yu</i>	

Diode Laser Technology for Inertial Fusion Energy: Techniques for Scaling Yield and Power	311
<i>P. Crump, P. Della Casa, R-S. Unger, D. Martin, A. Maaßdorf, K. Haberland, M. Binetti</i>	
<i>C. Lörchner-Gerdaus, H. Rupapara, J. Boschker, J. Glaab, C. Zink, S. Einfeldt, A. Knigge, M. Weyers</i>	
Photoionization Enhancement of Defect Growth in High Power Semiconductor Lasers	313
<i>W.E. Fenwick, R.J. Deri, L. Wang, K.P. Pipe, E.D. McVay, J.B. Varley, J. Li, S.H. Baxamusa</i>	
200 Mj Thin-Disk Picosecond Laser With Beam Aberration Compensation	315
<i>Zihan Zhou, Jiajia Mao, Hang Yang, Xiang Gao, Junjie Jiang, Dayong Zhang, Liuqing Xu, Xia Yu, Kun Liu</i>	
<i>Hong Zhao</i>	
Towards Linearizing Fiber Links with Optical Phase Conjugation	317
<i>Mark Pelusi, Ryosuke Matsumoto, Christian K. Schou, Michael Galili, Leif K. Oxenløwe, Shu Namiki</i>	
Continual Pdl Drift Detection and Estimation in Optical Networks	319
<i>Lina Shi, Qiaolun Zhang, Fabien Boitier, Massimo Tornatore, Patricia Layec</i>	
Mode Tracking Algorithms for Mode Vector Modulation/Direct Detection	321
<i>Mahmoudreza Dadras</i>	
Photonics-Driven Terahertz Communication Systems Based on SiC/Si Platform Technologies	323
<i>T. Nagatsuma, W. Gao, Y. Kawamoto, H. Ito, T. Ishibashi</i>	
Accurate Characterization of Third-Order Intermodulation Distortion in Photodetectors via Deembedding Modulator-Induced Nonlinear Spurious	325
<i>Di Lei, Yinfeng Wu, Xinhai Zou, Yali Zhang, Shangjian Zhang</i>	
Atomic Clock Referencing and Applications of Microresonator-Based Optical Frequency Division	327
<i>Xing Jin, Zhenyu Xie, Xiangpeng Zhang, Hanfei Hou, Bingyan Wu, Fangxing Zhang, Xuanyi Zhang</i>	
<i>Lin Chang, Qihuang Gong, Qi-Fan Yang</i>	
Enhanced Flatness in 25 GHz Electro-Optic Frequency Combs via Precision Bias Control	329
<i>D. Pavitra Varsha, Mandeep Singh, Deepa Venkitesh</i>	
High Quality Factor Micro-Ring Resonator with Ultra-Low Thermo-Refractive Noise	331
<i>Chunxue Wang, Congyu Hu, Xucheng Zhang, Yadong Jiao, Xingchen Ji, Yikai Su</i>	
Selective Epitaxial Growth of SiGe/Si Multi-Layer Structure for Silicon Photonics	333
<i>Xingwen Hong, Xuan Sang Nguyen, Tanmay Ghosh, Xuan Hui Siew, Leh Woon Lim, Landobasa Y M Tobing</i>	
<i>Xianshu Luo, Eng Soon Tok, Kah-Wee Ang</i>	
InAs/InAlGaAs Quantum Dash Regrowth on InP/SOI Stripes Emitting at Telecom Band	335
<i>Jie Li, Ying Xue, Jiaqi Liu, Xiangquan Liu, Kei May Lau</i>	
Flexible UV and NIR Photodetectors Enabled by Transfer-Printed ALGaIn/GaN and Group-IV Nanomembranes	337
<i>You Jin Kim, Munho Kim</i>	
Etch Engineered InP Processing for a Fabrication Tolerant Slanted Waveguide	339
<i>K. Mehrabi, F. J. Pronk, J. Bolk, J. J. G. M. van der Tol, W. Yao</i>	
Fabrication of Hybrid Photonic Structures Integrating Mesoporous Oxides and Metal Layers	341
<i>C. Borrazas, L. L. Missoni, J. Morrone, M. L. Martinez Ricci, M. C. Fuertes</i>	

Lensfree Microscopy for Nano-Biosensing	343
<i>Euan McLeod</i>	
Coherent Optical Sensor for Contactless Eye Movement Measurement in REM-Sleep Analysis	345
<i>M. Schmidt, S. Ernst, M. Berking, C. Carlowitz</i>	
Coated Phase-Shifted Fiber Bragg Grating Pressure Sensor for High-Sensitivity Heart Rate Monitoring	347
<i>Yuxuan Liu, Yuting Zhou, Simeng Li, Feiyu Jiao, Yansong Du, Xun Guan</i>	
Next-Generation Optical Biochemical Sensing Using Frequency-Locked Resonators	349
<i>Judith Su</i>	
Design of Optical Limiter Using Nonlinear Kerr Effect for the “Far Ultraviolet-C” Band	351
<i>Uttara Biswas, Soibam Aruna Chanu, Shamshad Alam, Anas Ashraf, Ramesh Kumar Sonkar</i>	
Verilog-A Based Random Telegraph Signal Noise Modeling of Single-Photon Avalanche Diodes	353
<i>Yinglong Zhu, M. Jamal Deen, Wei Jiang</i>	
Experimental Investigation on Temperature Compensated High Spatial Resolution Distributed Strain Measurement for Pipe Monitoring	355
<i>Hailiang Zhang, Zhaowen Xu, Hui Dong, Yixin Wang, Varghese Paulose, Dora Juan Juan Hu</i>	
Span-Resolved Polarization Sensing in Submarine Telecom Cables with PDG and PDL	357
<i>Hui Dong, Hailiang Zhang, Dora Juan Juan Hu</i>	
Simulation of Barrier Layer Influence on the Performance of Ge-On-Si Single-Photon Avalanche Diodes	359
<i>Jau-Yang Wu, Chi-En Chen, Chao-Hsin Wu, Gong-Ru Lin</i>	
Silicon Photonics Sensing for Composite Aerostructure Production	361
<i>Georgios Syriopoulos, Evrydiki Kyriazi, Ioannis Pouloupoulos, Thenia Prousalidi, Jeroen Missinne Geert Van Steenberge, Charalampos Zervos, Dimitris Apostolopoulos, Hercules Avramopoulos</i>	
A Comprehensive Photon Detection Probability Model for CMOS Single-Photon Avalanche Diodes	363
<i>Xuanyu Qian, Zecheng Gao, Junle Chen, M. Jamal Deen, Wei Jiang</i>	
Semiconductor Laser with Mode-Locking and Single-Longitudinal Bifunctional Operation	365
<i>Xiao Sun, Yiming Sun, Zhibo Li, John H. Marsh, Stephen. J. Sweeney, Anthony E. Kelly, Lianping Hou</i>	
Electro-Optic Modulation Comb at Telecommunications Wavelengths Using Multi-Stage Silicon Modulators	367
<i>Tatsuto Okubo, Haruki Yaguchi, Guangwei Cong, Rai Kou, Yamato Kitamura, Xuejun Xu, Kenichi Hitachi Junia Nomura, Noritsugu Yamamoto, Katsuya Oguri, Koji Yamada, and Atsushi Ishizawa</i>	
Generation of 2/3-Octave Supercontinuum Light in the C-Band Using an Electro-Optic Modulation Comb at 25-GHz Repetition Rate	369
<i>Akihiro Nakano, Kenichi Hitachi, Rai Kou, Xuejun Xu, Naoya Sano, Mei Kuroiwa, Kodai Abe Junia Nomura, Guangwei Cong, Noritsugu Yamamoto, Haruki Sanada, Koji Yamada, Katsuya Oguri Atsushi Ishizawa</i>	
A Low-Repetition-Rate Broadband Mode-Locked Laser Utilizing Anti-Resonant Hollow-Core Fiber	371
<i>Laiyang Dang, Xin Zhang, Yinghui Zhuang, Shuyuan Zhu, Wenhao Zhu, Feng Li, Pu Wang Dongmei Huang</i>	

Frequency Measurement of a Semiconductor Laser Using a Single-Comb Vernier Method with an Electrooptic Modulation Comb	373
<i>Yusei Sato, Kenichi Hitachi, Akihiro Nakano, Yasunori Yoshida, Junia Nomura, Haruki Sanada Katsuya Oguri, Atsushi Ishizawa</i>	
Optical Frequency Combs Generation in Frequency-Shifting Loop Scheme Seeded by Soliton Microcomb	375
<i>S.N. Mantsevich, E.I. Kostyleva, N.Yu. Dmitriev</i>	
Reflective Metalens Architecture for Broadband Achromatic Performance in the LWIR Range	377
<i>Sani Mukhtar, Jaime Viegas</i>	
A Fiber-Compatible Millimeter-Scale Metasurface for Collimated Circularly Polarized Beam Generation	379
<i>Wenlin Luan, Xia Yu</i>	
Broadband Mid-IR Absorber Based on Grating-Coupled ENZ Polar Dielectrics	381
<i>S.P. Mahato, V. Rastogi</i>	
Analog Photonic RF Transport and Front-Ends for High-Capacity Satellites	383
<i>Metodi Belchovski, Benoit Benazet, Michel Sotom, Simon Rommel</i>	
Implementing Bidirectional LSTM Recurrent Neural Network for Addressing Multi-Interference in a Photonics-Based Radar System	385
<i>Zhijie Sun, S M Rezwanul Islam, T D Subash, Pankaj Raj Dawadi, Mohd Rashidi Che Beson, Shilong Pan Bikash Nakarmi</i>	
Interference Identification and Mitigation Using Selective Spectral Filtering in a Photonics Radar System	387
<i>S. M. R. Islam, S. Jhijie, S. Jha, T. D. Subash, M. R. C. Beson, S. Pan, B. Nakarmi</i>	
6-GHz Bandwidth and Sub-0.01% Nonlinearity in 1.55- μ m DFB Laser for FMCW LiDAR Systems	389
<i>Yen-Wei Li, Te-Hua Liu, Chao-Hsin Wu</i>	
Silicon Photonics Enabled Tunable Multi-Band Dual-LFM Waveform Generation	391
<i>A. Viresh Bhan, B. Vadivukkarasi Jeyaselvan, C. Shankar Kumar Selvaraja</i>	
Energy Efficient AI-Computing Using VCSEL-Based Optical Communication System	393
<i>Siqi Wang, Jacopo Nanni, Giovanni Tartarini, Aziz Benlarbi-Delai</i>	
Ultra-Short Bessel Beam Enables High-Resolution Two-Photon Microscopic Imaging	395
<i>Xiaobin Weng, Qiannan Song, Jun Dong, Hongsen He</i>	
Low-Cost and Modular Broadband Light Sources for Fluorescence Microscopy	397
<i>Rachel Duff, Igor Roszczyk, Mahin Rahman, Yidan Zhang, Aone Mogorosi, Amanda Foust, Akhil Kallepalli</i>	
Wet Etching of Low Loss Lithium Tantalate Waveguides and Heterogeneous Lithium Tantalate Integration	399
<i>Patrick Nenezic, Jorik Withouck, Tom Vandekerckhove, Margot Niels, Valeria Bonito Oliva Maximilien Billet, Bart Kuyken</i>	
High-Efficiency Graphene Electro-Absorption Modulator on Silicon Nitride Photonic Platform	401
<i>Ashraful Islam Raju, Pawan Kumar Dubey, Rasuole Lukose, Daniele Capista, Anna Peczek Aleksandra Kroh, Christian Wenger, Andreas Mai, Mindaugas Lukosius</i>	

Compact Silicon Photonics PAM-4 Transmitter by Integrating Dual Parallel Electro-Absorption Modulators and 2D Grating Couplers	403
<i>Hung-Jui Chen, Wei-Cheng Feng, Rih-You Chen, Ya-Han Chang, Yi-Jen Chiu</i>	
650 Mbps Optical Wireless Communications Using Far-Ultraviolet-C Micro-Light-Emitting Diode Arrays	405
<i>J.J.D. McKendry, H. Zimi, S. Rajbhandari, J. Ruschel, J. Rass, S. Einfeldt, J. Herrnsdorf, M.D. Dawson</i>	
BIC Driven Chirality in Triple-Notch Bianisotropic Dielectric Metasurfaces	407
<i>Shubhanshi Sharma, Monica Pradhan, Shailendra Kumar Varshney</i>	
Miniaturized Spectrometer with Angle Retrieval Ability Using CMOS-Compatible Metasurface Filters	409
<i>Ram Prakash S, Mondher Besbes, Henri Benisty</i>	
Bianisotropic and Anapole-Governed Dielectric Metasurface Under Circularly Polarized Illumination	411
<i>Monica Pradhan, Shubhanshi Sharma, Shailendra Kumar Varshney</i>	
Inverse-Designed Silicon Nitride Wavelength Demultiplexers Bridging the Visible and Telecom Bands	413
<i>Aolong Sun, Yuqin Yuan, Junhui Hu, Xuyu Deng, Sizhe Xing, Junhao Zhao, Ouhan Huang, Ziwei Li Jianyang Shi, Chao Shen, Junwen Zhang, Nan Chi</i>	
Enhanced Receiver Operating Characteristics in Entanglement-Assisted LiDAR	415
<i>Georgios Papangelakis, Amr S. Helmy</i>	
Time Domain Physical Unclonable Functions in Silicon Nitride Ring Resonator Networks	417
<i>H. Sahoo, D. J. de Ruiter, L. van der Hoeven, D. Stellinga, M. C. Velsink, P. W. H. Pinkse</i>	
Experimental Analysis of Birefringence in Hollow-Core and Multi-Core Optical Fibers	419
<i>L. Palmieri, L.V. Romero Ponce, S. Zampato, M. Cappelletti, M. Stegmaier, T. Geisler, T. Hayashi C. Antonelli, A. Mecozzi, G. Guerra, A. Taranta, F. Poletti, M. Santagiustina, A. Galtarossa</i>	
Highly Scalable High-Speed Photonic Image Processor	421
<i>Hao Sun, Xinyi Zhu, José Azana</i>	
Non-Volatile Integrated Photonics for Reconfigurable Filtering Applications	423
<i>Kai Xu, Maoliang Wei, Yiting Yun, Weiquan Wang, Lan Li, Hongtao Lin</i>	
Benchmarking a Photonic Neural Network for Optical Signal Equalization	425
<i>G. v. Hünfeldt, M. Kaveh, D. Tariq, M. Aghaeipour, M. Karvar, C. Schubert, R. Freund</i>	
Estimation of Phase-Shift in Phase-Shifting Digital Holography Using Checkerboard Diffraction Grating	427
<i>T. Maeda, S. Yanase, H. Sotobayashi, K. Akahane</i>	
Pushing the Spatial Resolution Limit in Interferometric Quantitative Phase Microscopy	429
<i>Nansen Zhou, Jinsong Zhang, Jinlong Zhu, Renjie Zhou</i>	
Effects of Traditional Filtering Methods on Polarization Navigation in Adverse Weather	431
<i>Y. Li, X. Wang, M. Zhang</i>	
Robustness of Optical Topology Through Random Media	433
<i>T. Kleine, K. Everts, C. Peters, P. Ornelas, A. Forbes</i>	

Multiple-Layered Colloidal-Quantum-Dot Color Conversion Layers for Solar Cell Enhancement	435
<i>Yu-Ting Hsieh, Bo-Ming Huang, Yan-Ke Chen, Chin-I Chen, Tao Deng, JyunWei Ji, SungYu Chen Chien-Chung Lin</i>	
Monolithically-Integrated Quantum Dot Optical Power Monitor	437
<i>J. Baker, F. Albeladi, S. Gillgrass, D. Qiao, C. P. Allford, P. M. Smowton</i>	
Single-Output InAs Quantum Dot DFB Laser Using Integrated MMIR for Photonic Applications	439
<i>F. Albeladi, S. Gillgrass, N. Albittar, S. Power, B. Salmond, C. P. Allford, P. M. Smowton</i>	
Agile Quantum-Dash Comb Laser with Phase-Tuned Optical Feedback	441
<i>Youcef Driouche, Mourad Azhar, Abderrahim Ramdane, Kamel Merghem</i>	
Hybrid Upconversion-Nanocrystal/Quantum-Dot Supraparticles for Stokes and Anti-Stokes Emission	443
<i>E. McCormick, C. J. Eling, N. Laurand</i>	
Reduced Laser Thresholds in Colloidal Quantum Dot Supraparticles Via Ligand Engineering	445
<i>C. J. Eling, N. Laurand</i>	
Superabsorbing Metasurfaces and Machine Learning for Real-Time Fentanyl Detection in Heroin	447
<i>Yingkun Zhu, Murali Gedda, Qiaoqiang Gan</i>	
Low-Cost SERS Substrates via AuNP-Decorated Carbonized Polyimide Films for Fluorescence-Quenched Raman Sensing	449
<i>S. Genc, G. A. Khan, D. Tuzel, S. Kina, A. Bek, K. Cinar</i>	
MoS ₂ Quantum Dots for Mercury Detection and Fluorescence Resonant Energy Transfer	451
<i>Shubhankar Bandekar, Sudhir Cherukulappurath</i>	
Nanophotonic Resistive Switching in Ag-ITO-SiO ₂ on Si: A Pathway to High-Density Optical Storage	453
<i>Santosh Kumar, Ashutosh Kumar, Rahul Dev Mishra, Mukesh Kumar</i>	
Turbulence-resilient PIC-To-PIC Free Space Optical Communication Link	455
<i>A. Martinez, A. Di Tria, F. Zanetto, F. Morandi, A. Milani, L. Resteghini, F. Morichetti, A. Melloni</i>	
Optical Streaming Links: A New Architecture for Chiplet to Chiplet Communication	457
<i>K.E. Lee, D.L. Lepkowski, S.B. Chiah, J. Niu, C.Y. Wong, E.A. Fitzgerald, A.Y. Kim</i>	
VCSEL-Based Photonic Interposer Chips	459
<i>Sahnggi Park, Kyungeun Kim, Namki Kim, Hyunjong Park</i>	
MAVRIC: Enabling Vertical Link Misalignment Tolerance in 2.5D Photonic Interposer Networks	461
<i>Mohammad Amin Mahdian, Ebadollah Taheri, Mahdi Nikdast</i>	
Microwave Photonic Probe for Magnetic Field Sensing	463
<i>Kai Pan, Junkai Dong, Chujun Wu, Liwei Li, Xiaoyi Tian, Linh Nguyen, Xiaoke Yi</i>	
Improving TS-PDV Accuracy Through Systematic Non-Ideality Quantification and Mitigation	465
<i>Deenabandhan, Mandeep Singh, Lakshmi Narasimhan Theagarajan, Deepa Venkitesh</i>	
Asynchronous Quasi-Millimeter-Wave Electro-Optic Imaging System Using Polarization Image Sensor	467
<i>Ryoma Okada, Maya Mizuno, Hironari Takehara, Makito Haruta, Hiroyuki Tashiro, Jun Ohta Kiyotaka Sasagawa</i>	
Signal Power Dependant Performance of SiN Resonator Based Microwave Photonic Filters	469
<i>Anushka Tiwari, Ashitosh Velamuri, Arnab Goswami, Bijoy Krishna Das</i>	

50,000-Spin Count Integrated Photonic Chip Ising Solver	471
<i>Yuan Gao, Guanyu Chen, Wujie Fu, Jianing Wang, Anil Prabhakar, Aaron Danner</i>	
Photonic Ising Machine Based on Second Harmonic Generation	473
<i>Wujie Fu, Xiaodong Shi, Lei Shi, Di Zhu, Aaron Danner</i>	
Multimode-Fibre Loop Reservoir Computer	475
<i>Christopher R. Rawlings, Mitchell A. Cox</i>	
Photonic Spiking Neural Network with Coupled Passive Silicon Microring Resonators	477
<i>G. Donati, S. Biasi, L. Pavesi, A. Hurtado</i>	
Inhibition in an Integrated Spiking Laser Neuron Using an Intra-Cavity Phase Shifter	479
<i>L. Puts, J. Borms, W. Yao</i>	
Design of a Novel Micro-Ring Laser for Low-Power All-Optical Spiking Neural Networks	481
<i>J. Borms, L. Puts, W. Yao</i>	
Real-time Unsupervised Denoising for Ophthalmic Robotic Optical Coherence Tomography	483
<i>Renxiong Wu, Guangming Ni</i>	
2D Spatial Phase-Resolved Optical Coherence Microscopy for Extended Depth Ocular Tissue Imaging	485
<i>Shrivatsan Rajagopalan, Ansel Chen, Jun Song, Shuichi Makita, Yoshiaki Yasuno, Joanne Matsubara Sonia Yeung, Pierre Lane, Myeong Jin Ju</i>	
Ultrahigh-resolution Spectral-domain OCT for Volumetric Skin Imaging Using A Supercontinuum Laser	487
<i>Heng-Tsung Cheng, Bo-Huei Haung, Tai-Ang Wang, Meng-Tsan Tsai</i>	
Sb-Based Lasers Epitaxially Grown on Si(001) for Mid-Infrared Applications	489
<i>L. Cerutti, D. A. Díaz-Thomas, M. Fagot, A. Gilbert, M. Paparella, A. Remis, A.N. Baranov, Z. Loghmari Y. Rouillard, J.B. Rodriguez, R. Teissier, E. Tournié</i>	
Tensile-Strained InGaAs Quantum Dots With Interband Emission in the Mid-Infrared	490
<i>K. D. Vallejo, T. A. Garrett, C. I. Cabrera-Perdomo, M. D. Nordstrom, B. Liang, K. A. Grossklau Paul J. Simmonds</i>	
Full-Chip Afterpulsing Behavior in a SWIR SPAD Array	492
<i>Chi-En Chen, Shih-Min Huang, Pi-Ju Cheng, Ming-Chieh Hsu, Tzu-Jui Wang, Jau-Yang Wu, Chao-Hsin Wu</i>	
Tuning Photon Number Resolution Via Frequency Adjustment in Sinusoidally Gated Single-Photon Avalanche Diodes	494
<i>Yi-Shan Lee</i>	
AlInAsSb on GaSb Avalanche Photodiodes for eSWIR Detection	496
<i>Yang Zhao, Xiao Jin, Wenguang Zhou, Xin Yi, Qingyu Tian, Xiaofeng Tao, Adam Craig, Fiona Fleming Mrudul Modak, Andrew Marshall, Yingqiang Xu, Guowei Wang, Gerald S. Buller, John P. R. David</i>	
Dynamic Bias Characteristics of InGaAs/INP Avalanche Photodiodes Under Linear Mode Operation	498
<i>Erum Jamil, Chadi Harmouche, Nicholas Gabaldon, Payman Zarkesh-Ha, Marek Osiński</i>	
$\text{ScAlN} / \text{Si}_{\text{3}}\text{N}_{\text{4}}$ for an Ultralow Loss, Multi-Functional Quantum Photonic Integration Platform	500
<i>Jiangnan Liu, Shuai Liu, Abdur-Raheem Al-Hallak, Abdulkarim Hariri, Huabin Yu, Yuheng Zhang Zheshen Zhang, Zetian Mi</i>	

Room-Temperature Ultrafast Qubit Gates from Free Electrons and Quantum Recoil	502
<i>Lee Wei Wesley Wong, Suraj Kumar, Liang Jie Wong</i>	
Controllable Integrated Photonic Devices Based on Nematic Liquid Crystals and Gold Nanorods	504
<i>Carlo Santini, Maria Laura Sforza, Federica Zaccagnini, Francesca Petronella, Luciano De Sio Antonio d'Alessandro</i>	
Nir-Responsive Hyperbolic Metamaterial Sensor for Efficient Salinity Detection	506
<i>Arpan Sur, Sudipta Saha, Ahmed Zubair</i>	
SERS and Advanced Computational Chemistry Integration for Ultrasensitive Agrochemical Detection	508
<i>H. J. S. Graves, H.C. S. Junior, A.R. Hirdes, E.C. Moreira</i>	
OAM Generation from Asymmetric Hollow Nanowires Using Non-Hermitian Perturbation	510
<i>M. Takiguchi, X. Lim, R. Kuruma, H. Sumikura, M. Notomi</i>	
Temperature and Acoustic Modulation of Excitonic Photoluminescence in WSe_2	512
<i>Yueyi Sun, Siming Liu, Changjian Zhou</i>	
25-Gbps All-Optical Priz-Ook Inversion Modulation Via Two-Photon-Absorption-Induced Free-Carrier-Absorption Effect in SiC Micro-Ring	514
<i>Chih-Hsien Cheng, Atsushi Matsumoto, Naokatsu Yamamoto, Gong-Ru Lin, Kouichi Akahane</i>	
On-Chip Polarization Splitter-Rotator Based on Lithium Niobate	516
<i>Chijun Li, Geng Chen, Zong Wang, Cheng Zeng, Jinsong Xia</i>	
Broadband and Low-Loss Silicon Polarization Splitter-Rotator Based on All-Rib Waveguides	518
<i>Yuki Ueda, Takanori Sato, Taichi Muratsubaki, Kunimasa Saitoh</i>	
Wavelength Characteristics of Disk-Ring Coupled Resonators for TE-Mode Isolators	520
<i>Akira Endo, Ibuki Furuya, Yoshiki Hayama, Katsumi Nakatsuhara</i>	
A Compact Waveguide-Based Integrated Polarization Controller Using an Optimized Differential Phase Shifter	522
<i>K. Mehrabi, F. J. Pronk, J. J. G. M. Tol van der, W. Yao</i>	
Impact of Distributed Raman Amplification on OSNR in Unrepeated ESCL Transmission	524
<i>D. A. Shaji, B. J. Puttnam, R. S. Luís, D. Orsuti, N. Fontaine, M. Mazur, L. Dallachiesa, G. Di Sciullo L. A. Zischler, R. Ryf, D. Neilson, L. Palmieri, A. Mecozzi, C. Antonelli, H. Furukawa</i>	
Characterization of Inter- and Intrachannel Nonlinear Effects Under Different Channel Loading Conditions	526
<i>Joana Girard-Jollet, Lina Shi, Fabien Boitier, Patricia Layec, Jean-Christophe Antona</i>	
Wafer-Scale Double-Flip Fusion Bonding for InP Epitaxial Membrane on SI	528
<i>T. Aggarwal, A. Zozulia, M. Dornetshumer, M. Mayr, M. Heck, Y. Jiao</i>	
Thermal Crosstalk in a 6×6 Photonic Multiplier	530
<i>Anagha Gayathri, Jayaharish R, GopalaKrishnan, Gao Yuan, Aaron Danner, Anil Prabhakar</i>	
Laser Speckle Contrast Imaging Reveals Curcumin Antibacterial Activity	532
<i>Kavini V., Kiran Philip Isaac, Sujatha Narayanan Unni</i>	

Infrared Chemical Imaging of Oral Pre-Cancerous Lesions	534
<i>Pranab Jyoti Talukdar, Kartikeya Bharti, Sanjeet Kumar Das, Mousumi Pal, Ranjan Rashmi Paul</i> <i>Pooja Lahiri, Basudev Lahiri</i>	
Demonstration of Residual Tumour Thickness Prediction Using Deep Learning Assisted In-Silico Mueller Matrix Polarimetry	536
<i>Janaki Ramkumar, Sujatha Narayanan Unni</i>	
Optical Characterization of Oral Tissues Using High Wavenumber Raman Spectroscopy	538
<i>Elumalai Brindha, Ramu Rajasekaran, Malini Madhavan, Ganesan Bharanidharan, Prakasarao Aruna</i> <i>Singaravelu Ganesan</i>	
High-Gain, Low-Noise Ge-On-Si Short-Wave Infrared Avalanche Photodiodes Linear Arrays	541
<i>J. Kirdoda, M.A. Mirza, M. Modak, X. Yi, Q. Tian, L. Saalbach, F. Fleming, D.C.S. Dumas, C.K. Smith</i> <i>X. Jin, L. Tegg, S. Aminorroaya Yamini, J.P.R. David, D.J. Paul, G.S. Buller, R.W. Millar</i>	
Highly Sensitive Chalcogenide Glass Waveguide Photothermal Spectroscopy Sensor Chip	543
<i>Qingyang Du, Kaiyuan Zheng, Fengbo Han, Hanyu Liao, Yan Zhang, Wei Jin</i>	
Inverse Design of Mid-Wavelength Infrared Photodetector Based on Multi-Diameter InSb Nanowire Array	545
<i>Zeyu He, Yitao Yang, Yuxin Yang, Yuepeng Luo, Weiqi Jin, Ziyuan Li</i>	
Si-Based Mid-Infrared Photodetectors Utilizing Strain-Relaxed GeSn Alloys Grown by MBE	547
<i>Ping-Chien Hsieh, Kuo-Chih Lee, Yue-Tong Jheng, Pavels Onufrijevs, Jun-Yu Ou, Yoshishige Tsuchiya</i> <i>Hung-Hsiang Cheng, Guo-En Chang</i>	
Sub-Hertz-Linewidth and Isolator-Free External-Cavity-Locked Laser	549
<i>Bozhang Dong, Warren Jin, Artem Prokoshin, Weng W. Chow, Yating Wan, John E. Bowers</i>	
Design of Bandwidth-Enhanced Facet Reflection Tolerant Directly Modulated Membrane Distributed Feedback Lasers with Wire-Like Active Region	551
<i>C. Zhang, K. Takahata, T. Hiraki, T. Aihara, S. Matsuo, T. Kakitsuka</i>	
Verification of Linewidth Variation With Rear Facet Phase in High-Power Pcg-Dfb Lasers	553
<i>H.C. Chou, S. Sulikhah, S.L. Lee</i>	
Proposal of Novel Multi-Wavelength DFB Lasers for Data Center Applications	555
<i>Zih-Jie Sun, Alfred Albert, Ika Novitasari, Akihiko Kasukawa, San-Liang Lee</i>	
Ultra-Dense and Efficient 98-Channel Fiber-to-Chip Connectivity with Polarization Diversity	557
<i>Yiou Cui, Wu Zhou, Yeyu Tong</i>	
Polarization-Demultiplexing Functional Coupler for MCF and SiN PIC using Double-Sided Dielectric Metasurface	559
<i>Yusuke Tsubai, Go Soma, Chun Ren, Takuo Tanemura</i>	
Coarse Wavelength Division (De)Multiplexer Based on Sin Cascaded Mach-Zehnder Interferometers with Low-Loss Waveguide Bends and Directional Couplers	561
<i>Chih-Hsien Chen, Zong-Ming Chang, Po-Chou Hung, Yung-Jr Hung</i>	
Waveguide Grating on Lithium Niobate on Insulator for Electrically Modulated Filter	563
<i>Zhibo Li, Xiao Sun, John H. Marsh, Lianping Hou, Anthony E. Kelly, Marc Sorel</i>	

Fabrication of Si Micro-Ring Resonators Crossbar Array with Liquid Crystal Cladding for Tunable Wavelength Selective Circuits	565
<i>H. Kinoshita, Y. Shimamura, Y. Hayama, K. Nakatsuhara</i>	
Scalable, Low-Loss, High-Precision-Alignment 3D Photonic Interposer Fabricated Using 3D Ultrafast Laser Inscription on Multilayer Silicon Photonics	567
<i>S. -H. Lee, Y. -C. Ling, G. Charalampous, Y. Zhang, S.J. Ben Yoo</i>	
Bidirectional 5G Radio Over WDM-FSO Enabled by Compact Optical Terminals	569
<i>H. Ono, J. Nishioka, S. Nimura, M. Hayama, T. Akamatsu, T. Akiyama, K. Mochizuki, K. Tanaka, R. Inohara T. Tsuritani, M. Noda</i>	
Convergence of Beam Propagation Through Turbulent Air Modelling Using Full-3D Statistics	571
<i>K.R.H Bottrill, D. Majumder, S. Liang, P. Petropoulos</i>	
Statistical Beam Strategies for Power-Efficient and Reliable Optical Links in Turbulence	573
<i>Aniceto Belmonte</i>	
Phase Modulation Enabled Dual-Carrier Modular Phased Array Architecture for Scalable Chip-Scale Wireless Communication	575
<i>K. Herath, M. Premaratne, S. Gunathilake, A. Nirmalathas</i>	
Exponential SPGD Algorithm for Adaptive Optics Systems in UOWC	577
<i>Sara Torres-Valenzuela, Pedro Salcedo-Serrano, José María Garrido-Balsells, Antonio Puerta-Notario Rubén Boluda-Ruiz, Beatriz Castillo-Vázquez, Antonio García-Zambrana</i>	
Terahertz Demethylation for Cancer Therapy	579
<i>Joo-Hiuk Son</i>	
Elucidating Phenotypic Changes in Cardiomyocytes Via Simultaneous Electrical and Optical Recording	581
<i>Louis Hanqiang GAN, Jun XIE, Tong LING</i>	
FPGA-Accelerated Computational Photon Counting	583
<i>Chiby Onyeador, Janet E. Sorrells</i>	
Ln-Sin Hybrid Microring Resonators for Nonlinear Applications	585
<i>Md Saiful Islam Sumon, Samir Ghosh, Artem S. Vorobev, Nicola Maraviglia, Fatih Bilge Atar Ganga Chinna Rao Devarapu, Chiranjeevi Maddi, Imad I. Faruque, Sarvagya Dwivedi, Robert Bowman Liam O'Faolain, Brian Corbett, Shamsul Arafin</i>	
Octave-Spanning Supercontinua Generation from a Sub-Millimeter-Length Gallium Phosphide Waveguide	587
<i>Xucheng Zhang, Weiren Cheng, Chunxue Wang, Ning Ding, Qiancheng Zhao, Xingchen Ji, Yikai Su</i>	
Unveiling the Critical Role of Extinction Ratio in Four Wave Mixing Generation for GaP-OI Microresonators	589
<i>Ning Ding, Weiren Cheng, Xucheng Zhang, Xingyu Tang, Naiqin Bu, Zhenyu Liu, Mingjian You, Zhengqi Li Ziming Zhang, Jiabin Hou, Junke Zhou, Xingchen Ji, Qiancheng Zhao</i>	
Cherenkov Radiation in an Ultra-Silicon-Rich Nitride Bragg Grating	591
<i>Amdad Chowdury, Benjamin J. Eggleton, Dawn T.H. Tan</i>	
Reinforcement Learning for Soliton Generation in Micro-Ring Resonators	593
<i>Viswanathan Sankar, Christophe Peucheret, Darko Zibar</i>	

Generation of Ultra-Broadband Soliton Microcombs Using Resonant Couplers	595
<i>Kaixuan Zhu, Xinrui Luo, Yuanlei Wang, Ze Wang, Tianyu Xu, Du Qian, Yinke Cheng, Junqi Wang</i>	
<i>Haoyang Luo, Yanwu Liu, Xing Jin, Xin Zhou, Min Wang, Jian-Fei Liu, Xuening Cao, Ting Wang</i>	
<i>Qihuang Gong, Bei-Bei Li, Qi-Fan Yang</i>	
Carbon Dioxide Detection Using Dual-Wavelength FMCW LiDAR Based on an InP Integrated Tunable Laser	597
<i>Yu Han, Limeng Zhang, Victor Dolores Calzadilla</i>	
Interrogating Optomechanical Ultrasound Sensor with On-Chip Tunable Distributed Bragg Reflector Laser	599
<i>Liwang Liu, Tangla David Kongnyuy, Ana Lebanov, John O'Callaghan, Xin Guo, Biwei Pan, Jing Zhang</i>	
<i>Cedric Pieters, Fabrice-Roland Lamberti, Gunther Roelkens, Hilde Jans, Xavier Rottenberg, Jon Kjellman</i>	
Demonstration of Beam Steering Using an SOA-Based Optical Phased Array on InP	601
<i>M.P.F. Wopereis, M. Gagino, M.J.R. Heck, V. Dolores-Calzadilla</i>	
TE_{40} -Based Multimode Interferometer for Optical Refractive Index Sensors	603
<i>Freddy Jara-Poma, Luana De-Moraes, Ten Salinas, Ruth Rubio-Noriega, Maria Armas-Alvarado</i>	
<i>Yuri Hayashi Isayama, Hugo E. Hernandez-Figueroa</i>	
Modelling and Experimental Study of Polarization Switching in Multimode VCSELs and its Impact on Noise Performance	605
<i>Marco Novarese, Cristina Rimoldi, Lorenzo L. Columbo, Sebastian Romero Garcia, Christian Raabe</i>	
<i>Mariangela Gioannini</i>	
Reliability Issues of GaAs-Based Laser Diodes Emitting at 730 Nm and 808 Nm for Quantum-, Communication and Sensing Applications	607
<i>J. Glaab, K. Häusler, H. Christopher, C. Netzel, A. Maaßdorf, P. Della Casa, J. Fricke, A. Knigge</i>	
Lateral MOCVD Growth of stacked III-V Membranes on Double-Layer SOI	609
<i>Zhiwei Liang, Donghui Fu, Yingzhi Zhao, Yunjiang Jin, Siyuan Yu, Yu Han</i>	
Speckle Reduction Using a 1D Optical Phased Array Edge-Coupled to a Multi-Mode Fiber	611
<i>Bernat Molero Agudo, Irwan D. Setija, Martijn J. R. Heck</i>	
Transfer Matrix Surrogate Modeling for Efficient Prediction of Bragg Grating Optical Response	613
<i>Yasmin Rahimof, Igor A. Nechepurenko, M. R. Mahani, Andreas Wicht</i>	
Enhanced Silicon Thermal Emission through Photonic Crystal Integration	615
<i>Huanhuan Wang, Leh Woon Lim, Doris Keh Ting Ng, Landobasa Tobing, Hazwani Khairy</i>	
<i>Norhanani Jaafar, Andrew Whye Keong Fong</i>	
Programmable all-Optical Nonlinearity using Saturable Absorbers on A Generic Inp Platform	617
<i>Rajib Ratan Ghosh, Lukas Puts, Julian Konig, Weiming Yao</i>	
Neuromorphic Photonics-Enabled Near-Field RF Sensing with Residual Signal Recovery and Classification	619
<i>Eric Blow, Lei Xu, Yusuf Jimoh, Paul Prucnal, Ting Wang</i>	
Scalable Photonic Neurons for High-Speed Automatic Modulation Classification	621
<i>Yuxin Wang, Weipeng Zhang, Eric C. Blow, Joshua C. Lederman, Bhavin J. Shastri, Paul R. Prucnal</i>	
A Versatile and Resource-Efficient Optical Neural Network with High Algorithm-Precision	623
<i>Yuanjia Wang, Xin Dong, Yi Zhou, Kenneth Kin-Yip Wong</i>	

Identification of Intra-Span Hybrid Fiber Types Using Longitudinal Power Profile Estimation in Optical Networks	625
<i>Choloong Hahn, Zhongqiu Zhong, Zhiping Jiang</i>	
100 Gb/s PAM-4 and Low-Chirp Silicon Photonics SiGe Electro-Absorption Modulator for Short-reach Data Transmission	627
<i>Ya-Han Chang, Rih-You Chen, Yi-Jen Chiu</i>	
Net 254 Gb/s IM/DD Transmission in C-Band Over 3.1 km NANF Using Silicon Photonics TW-MZM	629
<i>Darja Cirjulina, Suttikarn Wantee, Armands Ostrovskis, Hao Liu, Kyle R.H. Bottrill, Gregory T. Jasion Hesham Sakr, John R. Hayes, Vjaceslavs Bobrovs, Francesco Poletti, Xiaodan Pang, Periklis Petropoulos Oskars Ozolins</i>	
Traveling-Wave SiP Mach-Zehnder Modulator for Beyond Net 263 Gb/s Transmission in O-Band	631
<i>Armands Ostrovskis, Darja Cirjulina, Toms Salgals, Minkyu Kim, Michael Koenigsmann, Benjamin Krüger Fabio Pittalà, Lu Zhang, Xianbin Yu, Richard Schatz, Markus Gruen, Hadrien Louchet, Robert Jahn Kazuo Yamaguchi, Vjaceslavs Bobrovs, Peter De Heyn, Xiaodan Pang, Oskars Ozolins</i>	
Quantum Information Processing Using Superconducting Bosonic Elements	633
<i>Yvonne Y. Gao</i>	
Ultraviolet Micro-Light-Emitting Diodes for Satellite Quantum Key Distribution	634
<i>J.J.D. McKendry, J. Gray, J. Hill, E. Xie, H. Willett, J. Sagar, C. Jones, S. Joshi, J.G. Rarity, D.K.L. Oi J. Herrnsdorf</i>	
Progress in Chip-Based Quantum Key Distribution	636
<i>T.K. Paraíso, A. Khurana, H. Du, J. A. Dolphin, L. Wells, R.M. Stevenson</i>	
Quantum Key Distribution in the Field: Deployment of the Eindhoven Testbed	638
<i>Tommy van Duijn, Catalina Stan, María Álvarez Roa, Idelfonso Tafur Monroy, Simon Rommel</i>	
Ultra-Low Threshold GeSn-on-Insulator Laser Monolithically Grown by Rapid Melting Technique	640
<i>M. Chen, Z. Liu, X. Liu, Q. Huang, Y. Zhu, Y. Zuo, Z. Ikonc, B. Cheng, D. Nam, J. Zheng</i>	
Silicon Nanomembrane Photodetectors on GaAs Enabled by Epitaxial Lift-Off and Grafting	642
<i>Yara Banda, Wenqing Niu, Yue Wang, Wenbo Yan, Yi Lu, Zhenqiang Ma, Tien Khee Ng, Boon S. Ooi</i>	
Inverse-Designed Ultra-Wideband and Compact SU-8 Polymer Waveguide Crossing	644
<i>Yuting Zhou, Feiyu Jiao, Yansong Du, Yuxuan Liu, Simeng Li, Jian Song, Xun Guan</i>	
Complementary Transmission in a Racetrack Resonator With Dual-Bus Waveguides	646
<i>Taewon Kim, Mehedi Hasan, Yu Sung Choi, Jae Woong Yoon, Sangsik Kim</i>	
Low-loss Euler Waveguide Bends in Silicon Nitride Photonic Integrated Circuits	648
<i>Landobasa Y M Tobing, Yanmei Cao, Chen Lau, Suan Neng Foo, Yeow Teck Toh, Jae Ok Yoo Goh Jia Sheng, Leh Woon Lim, Xianshu Luo</i>	
Systematic Study of Sin Films Towards Cost-Effective and Low-Loss Photonic Applications	650
<i>Landobasa Y M Tobing, Yanmei Cao, Chen Lau, Peng Liu, Yat Fung Tsang, Binni Varghese, Minghua Li Yeow Teck Toh, Steven Hou Jang Lee, Jae Ok Yoo, Xianshu Luo</i>	
A Bioinspired GaN-Based Optoelectronic Neuromorphic Device for Associative Learning	652
<i>Teng Zhan, Xiaoyan Yi</i>	

Meningeal Lymphatic Vessels are an Important Target for Phototherapy of Brain Diseases	654
<i>O. Semyachkina-Glushkovskaya</i>	
Bending Effect of Imaging Fiber Bundle Bending on Image Contrast in High-Resolution Microendoscopy (HRME)	656
<i>Anjanaa S, Karthika J, Sreelakshmi Pyarilal, Sreelakshmi Sreekumar, Arpitha Anantharaju, Uttam M. Pal</i>	
Validation of Spatially Offset High-Resolution Microendoscopy (HRME) for Visualization of Cellular Morphology	658
<i>Anjanaa S, Karthika J, Sreelakshmi Pyarilal, Sreelakshmi Sreekumar, Milind Lal, Arpitha Anantharaju Aravind Krishnamurthy, Uttam M. Pal</i>	
Non-Hermitian Time Topology from Complex Momentum Bands	660
<i>A. Steinfurth, J. Feis, J. Görsch, T. Sheppard, H. M. Price, A. Szameit, S. Weidemann</i>	
Nonlinear Optical Response of Topological Materials	662
<i>L. Di Mauro Villari, A. Principi, A. Marini</i>	
Thermo-Optic Tuning of Nonlinear Parametric Processes in Integrated Bragg Gratings	664
<i>X. Wang, J. W. Choi, G. F. R. Chen, D. K. T. Ng, B. J. Eggleton, D. T. H. Tan</i>	
Single-Branch Detection of Carrier-Envelope Offset and Beat Note for Strontium Optical Lattice Clocks Network Using a Dual-Pitch Waveguide	666
<i>Kenichi Hitachi, Hiromitsu Imai, Kota Nishiyama, Tomoya Akatsuka, Haruki Sanada, Katsuya Oguri</i>	
Gas Spectroscopy Powered by Broadband and Flat Supercontinuum Generation in Tantalum Pentoxide Waveguides	668
<i>Zhenyu Liu, Mingjian You, Xingyu Tang, Zhengqi Li, Weiren Cheng, Ning Ding, Junke Zhou, Jiaxin Hou Ziming Zhang, Qiancheng Zhao</i>	
Provably Covert and Secure Communication via Non-Classical Correlations and Nonlocal Effects	670
<i>G. Papangelakis, B. Kuzaka, Z. Wu, M. Iu, A.S. Helmy</i>	
Bow-Tie Cavity Realization for Power Enhancement of the Excitation Laser in Photoacoustic Spectroscopy	672
<i>Savda Sam, Johannes P. Waclawek, Harald Moser, Iskander Gazizov, Liam O'Faolain, Bernhard Lendl</i>	
Integrated, Heat Resistant, Glass Waveguides with 0.01 dB/cm Bend Loss for $50\text{-}\mu\text{m}$ Pitch Conversion in High-Density Optical Interconnects	674
<i>Jorge A. Holguín-Lerma, Lars Brusberg, Matthew Dejneka, Lucas Yeary, Betsy J. Johnson Chad C. Terwilliger, Charisse Spier, Jonathan E. Walter, Qiumei Bian, Katerina Rousseva</i>	
300 Tb/s $\text{O}+\text{S}+\text{C}+\text{L}$ -Band Deployed Fibre Transmission	676
<i>Jiaqian Yang, Romulo Aparecido, Eric Sillekens, Mindaugas Jarmolovičius, Ruben S. Luís, Zelin Gan Ronit Sohanpal, Vitaly Mikhailov, Jiawei Luo, David J. DiGiovanni, Polina Bayvel, Robert I. Killey</i>	
Image Processing at 100 GBaud (10 ps/pixel) Using a Spiking Membrane Laser Neuron	678
<i>N. P. Diamantopoulos, T. Fujii, T. Tsurugaya, H. Nishi, T. Sato, S. Matsuo</i>	
Bragg Scattering by Grating Moving at Relativistic Speeds, Created by Backward SRS in H_2	680
<i>Wenhong Lai, Jiapeng Huang, Philip.St.J. Russell</i>	
Single-Frequency Ultraviolet Laser Diode	682
<i>Omar Alkhazragi, Minming He, Jiangnan Liu, Yuanpeng Wu, Reddeppa Maddaka, Zetian Mi, Di Liang</i>	

Axially Parallel Excitation with Depth Encoding in Multiphoton Microscopy Enables High-Speed, High-Contrast 3D Imaging of Brain Neurons	684
<i>Hongsen He, Minghui Shi, Beth Wing Lam So, Qiyu Zheng, Yuanjia Wang, Cora S. W. Lai, Kevin K. Tsia Xin Dong, Kenneth K. Y. Wong</i>	