

IEEE

PHOTONICS TECHNOLOGY LETTERS

OCTOBER 15, 2016

VOLUME 28

NUMBER 20

IPTLET

(ISSN 1041-1135)

PAPERS

Active Photonic Devices

High-Spectral-Contrast Symmetric Modes in Photonic Crystal Dual Nanobeam Resonators	S. Abbaslou, R. Gatdula, M. Lu, A. Stein, R. A. Soref, and W. Jiang	2137
Mushroom-Mesa Photodetectors Using Subwavelength Gratings as Focusing Reflectors	X. Duan, J. Wang, Y. Huang, K. Liu, Y. Shang, G. Zhou, and X. Ren	2273
2004-nm Ridge-Waveguide Distributed Feedback Lasers With InGaAs Multi-Quantum Wells	F. Xu, S. Luo, F. Gao, H.-M. Ji, Z.-R. Lv, X.-G. Yang, and T. Yang	2257
Laser Arrays With 25-GHz Channel Spacing Fabricated by Combining SAG and REC Techniques	J. Xu, S. Liang, L. Qiao, L. Han, S. Sun, H. Zhu, and W. Wang	2249
A Single Longitudinal Mode Fiber Ring Laser Based on Cascaded Microfiber Knots Filter	Y. Li, Q. Sun, Z. Xu, Y. Luo, and D. Liu	2172

Passive Devices and Waveguides

TE-Pass Polarizer Based on Epsilon-Near-Zero Material Embedded in a Slot Waveguide	T. Huang	2145
Packaged Optical Add-Drop Filter Based on an Optical Microfiber Coupler and a Microsphere	P. Wang, R. Madugani, H. Zhao, W. Yang, J. M. Ward, Y. Yang, G. Farrell, G. Brambilla, and S. Nic Chormaic	2277
Adiabatically Bent Waveguides on Silicon Nitride Photonics for Compact and Dense Footprints	J. H. Song, T. D. Kongnyuy, A. Stassen, V. Mukund, and X. Rottenberg	2164
High- <i>Q</i> and High-Order Side-Coupled Air-Mode Nanobeam Photonic Crystal Cavities in Silicon	P. Yu, H. Qiu, H. Yu, F. Wu, Z. Wang, X. Jiang, and J. Yang	2121
Novel Crosstalk Measurement Method for Multi-Core Fiber Fan-In/Fan-Out Devices	F. Ye, H. Ono, Y. Abe, M. Yamada, and T. Morioka	2269
Numerical Analysis on Ribbon-Array-Sheet Coupled Graphene Terahertz Absorber	R. Xing, C. Dong, B. Zhu, Y. Gao, and S. Jian	2207
Optimized Minimum-Forward Light Scattering by Dielectric Nanopillars	J. F. Algorri, B. García-Cámarra, A. Cuadrado Conde, J. M. Sánchez-Peña, and R. Vergaz Benito	2160
Impact of Non-Central Input in $N \times M$ Mid-IR Arrayed Waveguide Gratings Integrated on Si	A. Koskinbayeva, P. Barritault, S. Ortiz, S. Boutami, M. Brun, J.-M. Hartmann, P. Brianceau, O. Lartigue, F. Boulila, R. Orobouchouk, and P. Labeye	2191
A Low Crosstalk and Broadband Polarization Rotator and Splitter Based on Adiabatic Couplers	C. Sun, Y. Yu, G. Chen, and X. Zhang	2253
Tunable and Polarization-Independent Wedged Resonance Filter With 2D Crossed Grating	B. Sheng, H. Zhou, C. Tao, A. Zahid, Z. Ni, Y. Huang, R. Hong, and D. Zhang	2211
Second-Harmonic Generation in III-Nitride Quantum Wells Enhanced by Metamaterials	N. Nouri and M. Zavvari	2199
<i>Photonic Materials and Fabrication Technology</i>		
Beam Quality Analysis of Incoherent Beam Combining by a 7×1 All-Fiber Signal Combiner	X. Zhou, Z. Chen, Z. Wang, J. Hou, and X. Xu	2265

(Contents Continued on Page 2116)

IEEE PHOTONICS TECHNOLOGY LETTERS (ISSN 1041-1135) is published semimonthly by the Institute of Electrical and Electronics Engineers, Inc. Responsibility for the contents rests upon the authors and not upon the IEEE, the Society/Council, or its members. **IEEE Corporate Office:** 3 Park Avenue, 17th Floor, New York, NY 10016-5997. **IEEE Operations Center:** 445 Hoes Lane, Piscataway, NJ 08854-4141. **NJ Telephone:** +1 732 981 0060. **Price/Publication Information:** Individual copies: IEEE Members \$20.00 (first copy only), nonmembers \$367.00 per copy. (Note: Postage and handling charge not included.) Member and nonmember subscription prices available upon request. Available in microfiche and microfilm. **Copyright and Reprint Permissions:** Abstracting is permitted with credit to the source. Libraries are permitted to photocopy for private use of patrons, provided the per-copy fee of \$31.00 is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. For all other copying, reprint, or republication permission, write to Copyrights and Permissions Department, IEEE Publications Administration, 445 Hoes Lane, Piscataway, NJ 08854-4141. Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc. All rights reserved. **Postmaster:** Send address changes to IEEE PHOTONICS TECHNOLOGY LETTERS, IEEE, 445 Hoes Lane, Piscataway, NJ 08854-4141. GST Registration No. 125634188. CPC Sales Agreement #40013087. Return undeliverable Canada addresses to: Pitney Bowes IMEX, P.O. Box 4332, Stanton Rd., Toronto, ON M5W 3J4, Canada. IEEE prohibits discrimination, harassment and bullying. For more information visit <http://www.ieee.org/nondiscrimination>. Printed in U.S.A.

An InGaN-Based Solar Cell Including Dual InGaN/GaN Multiple Quantum Wells	2117
..... Z. Bi, J. Zhang, Q. Zheng, L. Lv, Z. Lin, H. Shan, P. Li, X. Ma, Y. Han, and Y. Hao	
Solution-Processable MoO _x for Efficient Light-Emitting Diodes Based on Giant Quantum Dots	2156
..... H.-T. Vu, Y.-K. Su, R.-K. Chiang, C.-Y. Huang, C.-J. Chen, and H.-C. Yu	
Hot Electrons in Microscale Thin-Film Schottky Barriers for Enhancing Near-Infrared Detection	2241
..... A. I. Nusir, G. P. Abbey, A. M. Hill, O. Manasreh, and J. B. Herzog	
<i>Optical Sensors and Measurement Systems</i>	
Quadrature Mode of Photogalvanic Autocorrelation of Ultra-Short Laser Pulses	2221
..... R. V. Romashko, A. I. Grachev, Y. N. Kulchin, and A. A. Kamshilin	
Enhanced Phase Sensitivity in Plasmonic Refractive Index Sensor Based on Slow Light	2187
..... R. Zafar and M. Salim	
Interferometric Fiber-Optic Tilt Sensor Exploiting Taper and Lateral-Offset Fusing Splicing	2225
..... M. Deng, Y. Zhao, F. Yin, and T. Zhu	
Localized Surface Plasmon Resonance-Based Micro-Capillary Biosensor	2195
..... S. Chen, Y. Liu, Q. Liu, and W. Peng	
Study on Feature Selective Validation Technology in Measurement of Laser Scattering Properties	2125
..... J. Zhao, Q. Wang, B. Shan, X. Li, Y. Gong, Z. Peng, and L. Liu	
High Precision and Large Range Timing Jitter Measurement and Control of Ultrashort Laser Pulses	2215
..... Y. Cui, Y. Gao, Z. Zhao, D. Rao, Z. Xu, N. An, J. Shan, D. Li, J. Yu, T. Wang, G. Xu, W. Ma, and Y. Dai	
GaMnAs for Mid-Wave Infrared Photodetection	2261
..... Y.-F. Lao, A. G. U. Perera, H. L. Wang, and J. H. Zhao	
Microcavity Mach-Zehnder Interferometer Sensors for Refractive Index Sensing	2285
..... X.-R. Dong, X.-Y. Sun, D.-K. Chu, K. Yin, Z. Luo, C. Zhou, C. Wang, Y.-W. Hu, and J.-A. Duan	
High-Resolution AWG-Based Fiber Bragg Grating Interrogator	2203
..... D. Pustakhod, E. Kleijn, K. Williams, and X. Leijtens	
Bidirectional Soft Silicone Curvature Sensor Based on Off-Centered Embedded Fiber Bragg Grating	2237
..... J. Ge, A. E. James, L. Xu, Y. Chen, K.-W. Kwok, and M. P. Fok	
High-Temperature Properties of a Thin-Core Fiber MZI With an Induced Refractive Index Modification	2245
..... W. Bao, N. Hu, X. Qiao, Q. Rong, R. Wang, H. Yang, T. Yang, and A. Sun	
<i>Photonic Subsystems (optical, digital, RF, and THz)</i>	
Coherent Polarization Beam Combination by Microcontroller-Based Phase-Locking Method	2129
..... K. Yang, G. Zhu, Q. Hao, K. Huang, J. Laurat, W. Li, and H. Zeng	
Distributed Nonlinearity Compensation of Dual-Polarization Signals Using Optoelectronics	2141
..... B. Foo, B. Corcoran, C. Zhu, and A. J. Lowery	
<i>Free Space Transmission Systems (Optical, RF, and THz)</i>	
Improving Lighting Quality and Capacity of OFDM-Based WDM-VLC Systems	2149
..... D. Karunatilaka, V. Kalavally, and R. Parthiban	
Underwater Laser Communication Using an OFDM-Modulated 520-nm Laser Diode	2133
..... J. Xu, A. Lin, X. Yu, Y. Song, M. Kong, F. Qu, J. Han, W. Jia, and N. Deng	
Experimental Demonstration of IFDMA for Uplink Visible Light Communication	2218
..... B. Lin, X. Tang, H. Yang, Z. Ghassemlooy, S. Zhang, Y. Li, and C. Lin	
<i>Optical Fiber Networks and Transmission Systems</i>	
Remote Coding Scheme Using Cascaded Encoder for PON Monitoring	2183
..... X. Zhang, S. Chen, F. Lu, X. Zhao, M. Zhu, and X. Sun	
Multiband LTE-A and 4-PAM Signals Over Large-Core Plastic Fibers for In-Home Networks	2281
..... F. Forni, Y. Shi, H. van den Boom, E. Tangdiongga, and T. Koonen	
Unrepeated Transmission of 10×400G Over 370 km via Amplification Map Optimization	2289
..... J. C. S. S. Januário, S. M. Rossi, S. M. Ranzini, V. E. Parahyba, V. N. Rozental, A. L. N. de Souza, A. C. Bordonalli, J. R. F. de Oliveira, and J. D. Reis	
Multiplier-Free Carrier Phase Estimation for Optical Coherent Systems	2168
..... J. Han, W. Li, Z. He, Q. Hu, and S. Yu	
Integrated 16-ps Pulse Generator Based on a Reflective SOA-EAM for UWB Schemes	2180
..... V. Moreno, M. J. Connelly, J. Romero-Vivas, L. Krzczanowicz, J. Mora, M. A. Muriel, and J. Capmany	
Sliding Window Aided Phase Noise Suppression Method for Coherent Nyquist-WDM-PON	2229
..... Z. Xu, Z. Tan, and C. Yang	
Theoretical Studies on TM-Polarized Light Emission for Ultraviolet AlGaN/AlN Optoelectronic Devices	2153
..... S.-H. Park and D. Ahn	
336 Gb/s in Direct Detection Below KP4 FEC Threshold for Intra Data Center Applications	2233
..... M. Chagnon, S. Lessard, and D. V. Plant	
Transmission of a 120-GBd PM-NRZ Signal Using a Monolithic Double-Side EML	2176
..... K. Zhong, X. Zhou, Y. Wang, Y. Wang, W. Zhou, W. Chen, L. Zeng, L. Wang, A. P. T. Lau, and C. Lu	