

2015 IEEE Photonics Conference (IPC 2015)

**Reston, Virginia, USA
4–8 October 2015**



**IEEE Catalog Number: CFP15LEO-POD
ISBN: 978-1-4799-7466-5**

TABLE OF CONTENTS

SENSITIVITY AND RESOLUTION IN OPTICAL COHERENCE MICRO-ELASTOGRAPHY	1
<i>Lixin Chin ; Curatolo, Andrea ; Wijesinghe, Philip ; Kennedy, Kelsey M. ; McLaughlin, Robert A. ; Kennedy, Brendan F. ; Sampson, David D.</i>	
HIGH-THROUGHPUT INTRINSIC SINGLE-CELL PHENOTYPING BY QUANTITATIVE ASYMMETRIC-DETECTION TIME-STRETCH OPTICAL MICROSCOPY (Q-ATOM)	5
<i>Lau, Andy K.S. ; Chung, Bob M.F. ; Tang, Anson H.L. ; Yeung, Pan ; Wei, Xiaoming ; Chan, Barbara P. ; Wong, Kenneth K.Y. ; Shum, H.C. ; Tsia, Kevin K.</i>	
INTEGRATED III-V SEMICONDUCTOR FLOW CYTOMETER WITH CAPILLARY FILL MICRO-FLUIDICS	7
<i>Thomas, R. ; Holton, M. ; Sobiesierski, A. ; Gillgrass, S. ; Summers, H.D. ; Barrow, D. ; Snowton, P.M.</i>	
OPTICAL TIME-STRETCH IMAGING FLOW CYTOMETRY OF PHYTOPLANKTON	9
<i>Lai, Q.T.K. ; Lau, A.K.S. ; Wong, K.K.Y. ; Tsia, K.K.</i>	
INVITED SPEAKER - NO PAPER SUBMISSION	11
<i>N/A</i>	
POLARIZATION SENSITIVE OCT WITH NEEDLE PROBES	12
<i>Villiger, M. ; Lorensen, D. ; Quirk, B.C. ; Kirk, R.W. ; Lippok, N. ; Bouma, B.E. ; McLaughlin, R.A. ; Sampson, D.D.</i>	
IN VIVO MESOSCOPIC VOLTAGE-SENSITIVE DYE IMAGING OF BRAIN ACTIVATION	14
<i>Qinggong Tang ; Tsytsarev, V. ; Frank, A. ; Yalun Wu ; Chao-wei Chen ; Erzurumlu, R.S. ; Yu Chen</i>	
PHOTOACOUSTIC IMMUNOASSAY USING PLASMONIC NANOPARTICLES	16
<i>Zhao, Yunfei ; Huang, Yin ; McClelland, John F. ; Zhao, Xiangwei ; Lu, Meng</i>	
MULTI-PARAMETRIC PHOTOACOUSTIC MICROSCOPY OF PATHOLOGICAL REMODELING IN VASCULAR ANATOMY AND FUNCTION	18
<i>Song Hu</i>	
FOURIER PTYCHOGRAPHIC IMAGING	20
<i>Guoan Zheng</i>	
TUTORIAL ON III-NITRIDE SOLID STATE LIGHTING AND SMART LIGHTING	26
<i>Tansu, N. ; Chee-Keong Tan ; Wierer, J.J.</i>	
CONCEPT OF A GAN-LED-BASED POSITIONING SYSTEM USING STRUCTURED ILLUMINATION	28
<i>Herrnsdorf, J. ; Strain, M.J. ; Gu, E. ; Dawson, M.D.</i>	
TANDEM INGAN/GAN LIGHT-EMITTING DIODES	30
<i>Binbin Zhu ; Wei Liu ; Zi-Hui Zhang ; Swee Tiam Tan ; Xiao Wei Sun ; Demir, H.V.</i>	
HIGH AMBIENT CONTRAST RATIO OLED DISPLAY WITH MICROLENS ARRAY AND CRUCIFORM BLACK MATRICES	32
<i>Zong Qin ; Yen-Wei Yeh ; Yi-Pai Huang ; Shieh, H.-P.D. ; Kuo-Ch'ang Lee</i>	
FAST FLEXOELECTRIC LIQUID CRYSTAL SWITCHING BASED ON POLYMER-STABILIZED UNIFORM LYING HELIX	38
<i>Varanytsia, A. ; Liang-Chy Chien</i>	
OBJECTIVE EVALUATION OF 3D VISUAL FATIGUE BASED ON RDS RELATED TASKS	45
<i>Kena Li ; Yue Liu ; Yongtian Wang ; Yi Huang</i>	
CONTRAST RATIO ENHANCEMENT FOR THE HIGH EFFICIENCY DLP PROJECTION SYSTEM	47
<i>Jui-Wen Pan</i>	
LARGE-SCALE BRIGHTNESS ENHANCEMENT FILM WITH QUANTUM RODS ALIGNED IN POLYMERIC NANOFIBERS FOR HIGH EFFICIENCY WIDE COLOR GAMUT LED DISPLAY	49
<i>Kai Wang ; Jing Qin ; Junjie Hao ; Wei Chen</i>	
MONOLITHIC INTEGRATION OF HIGH EFFICIENCY III-NITRIDE LEDS AND HIGH BREAKDOWN SCHOTTKY BARRIER DIODES	51
<i>Jian Xu ; Jie Liu ; Li Wang ; Zhenyu Jiang</i>	
HIGH-EFFICIENCY HIGH-QUALITY STREET LIGHTING WITH COLLOIDAL QUANTUM DOT NANOPHOSPHORS	53
<i>Erdem, T. ; Kelestemur, Y. ; Soran-Erdem, Z. ; Yun Ji ; Demir, H.V.</i>	
BISTABLE, MULTI-COLOR ELECTROWETTING DISPLAYS	55
<i>Charipar, K.M. ; Charipar, N.A. ; Pique, A.</i>	
FUTURE PROSPECTS FOR FOPA (FREQUENCY DOMAIN OPTICAL PARAMETRIC AMPLIFICATION)	57
<i>Lassonde, P. ; Thire, N. ; Arissian, L. ; Ernotte, G. ; Ozaki, T. ; Laramée, A. ; Ibrahim, H. ; Legare, F. ; Schmidt, B.E.</i>	
MULTI-GEV EXPERIMENTS WITH THE PETAWATT CLASS BELLA LASER	59
<i>Leemans, W.P. ; Gonsalves, A.J. ; Nakamura, K. ; Mao, H.-S. ; Toth, C. ; Daniels, J. ; Mittelberger, D. ; Schroeder, C.B. ; Benedetti, C. ; Bulanov, S.S. ; Vay, J.-L. ; Geddes, C.G.R. ; Esarey, E.H.</i>	
ENERGY SCALABLE HIGH POWER INFRARED FEMTOSECOND PULSES BY DUAL-CHIRPED OPTICAL PARAMETRIC AMPLIFICATION	61
<i>Yuxi Fu ; Takahashi, E.J. ; Midorikawa, K.</i>	
SINGLE-PASS, MULTI-WATT SECOND-HARMONIC-GENERATION IN CONGRUENT AND STOICHIOMETRIC LITAO₃	63
<i>Shukla, M.K. ; Kumar, S. ; Das, R.</i>	

HIGH INTRACAVITY POWER THIN-DISK LASERS FOR CONTINUOUS-WAVE STRONG ALIGNMENT OF MOLECULES	65
<i>Deppe, B. ; Huber, G. ; Krankel, C. ; Kupper, J.</i>	
CARRIER-ENVELOPE PHASE STABILIZATION OF A 10-HZ HIGH-ENERGY TI:SAPPHIRE LASER SYSTEM	67
<i>Takahashi, E.J. ; Fu, Y. ; Midorikawa, K.</i>	
RECENT PROGRESS OF THE SG-II UPGRADE PETAWATT LASER BEAMLINE	69
<i>Wang Tao ; Cui Yong ; Zhu Jian ; Xu Guang ; Hua Neng ; Yu Jianwei</i>	
DESIGN AND FABRICATION OF 100 KW PEAK POWER PICOSECOND FIBER LASER FOR EFFICIENT LASER MARKING AND DRILLING	70
<i>Meng Zhang, B. ; Meng Liu ; Ping Shum, P. ; Xiaohui Li ; Xueping Cheng</i>	
HIGH PHOTON FLUX AND REPETITION RATE TABLE-TOP EUV SOURCES BASED ON ULTRASHORT PULSE FIBER LASERS	72
<i>Hadrich, S. ; Rothhardt, J. ; Krebs, M. ; Demmler, S. ; Limpert, J. ; Tunnermann, A.</i>	
AMPLIFICATION OF 126 NM FEMTOSECOND PULSES IN OPTICAL-FIELD-INDUCED AR PLASMA FILAMENTATION	76
<i>Kubodera, S. ; Kaku, M. ; Deshimaru, N. ; Katto, M.</i>	
DEVELOPMENT OF SHORT PULSE CO₂ LASER FOR EFFICIENT RARE EARTH PLASMA EXTREME ULTRAVIOLET SOURCES	78
<i>Amano, R. ; Dinh, T.-H. ; Sasanuma, A. ; Arai, G. ; Fujii, Y. ; Nanto, K. ; Takahashi, A. ; Nakamura, D. ; Okada, T. ; Makimura, T. ; Miura, T. ; Endo, A. ; Mocek, T. ; Dunne, P. ; O'Sullivan, G. ; Higashiguchi, T.</i>	
SPECTRAL AND TEMPORAL BEHAVIOR OF MULTIPLY IONIZED HIGH-Z PLASMAS IN THE WATER WINDOW SOFT X-RAY SPECTRAL REGION	80
<i>Thanh-Hung Dinh ; Suzuki, Y. ; Arai, G. ; Nishikino, M. ; Hasegawa, N. ; Kawachi, T. ; Dunne, P. ; O'Sullivan, G. ; Higashiguchi, T.</i>	
OBSERVATION OF CHARGE MIGRATION IN AMINO ACIDS	82
<i>Calegari, F. ; Ayuso, D. ; Belshaw, L. ; Trabattoni, A. ; Anumula, S. ; De Camillis, S. ; Frassetto, F. ; Poletto, L. ; Palacios, A. ; Declava, P. ; Greenwood, J. ; Martin, F. ; Nisoli, M.</i>	
IMAGING MOLECULAR STRUCTURE AND DYNAMICS UTILIZING X-RAY FREE-ELECTRON-LASER SOURCES	84
<i>Kupper, J.</i>	
CHARACTERIZING INNER-SHELL TRANSITION INDUCED BY ISOLATED ATTOSECOND PULSE	86
<i>Mashiko, H. ; Yamaguchi, T. ; Oguri, K. ; Suda, A. ; Gotoh, H.</i>	
MAKER FRINGES OF DIFFERENT QUANTUM PATHS IN HIGH-ORDER HARMONIC GENERATION	88
<i>Pengfei Lan ; Lixin He ; Qingbin Zhang ; Chunyang Zhai ; Feng Wang ; Wenjing Shi ; Peixiang Lu</i>	
VERY LOW VOLTAGE INGAALAS/INALAS MQW CORE ELECTRO-OPTIC MODULATORS FABRICATED WITH CONVENTIONAL PROCESSING	92
<i>Nak Ki Kim ; Bhasker, P. ; Dogru, S. ; Dagli, N.</i>	
LOW-LOSS AND HIGH-SPEED ELECTROABSORPTION MODULATOR USING INGAASP/INALGAAS MULTIPLE QUANTUM WELLS	94
<i>Sheng-An Yang ; Po-Yun Wang ; Cong-Long Chen ; Yi-Jen Chiu</i>	
JITTER AND SKEW MEASUREMENTS IN OPTICAL CLOCK DISTRIBUTION NETWORKS IN SILICON PHOTONICS	96
<i>Krune, E. ; Voigt, K. ; Zimmermait, L. ; Petermann, K.</i>	
GENERATION OF HIGHLY STABLE MILLIMETER WAVES WITH LOW PHASE NOISE AND NARROW LINEWIDTH	98
<i>Al-Taiy, H. ; Preussler, S. ; Bruckner, S. ; Schoebel, J. ; Schneider, T.</i>	
BROADBAND OPTICALLY PHASE MODULATED DOWNCONVERTING W-BAND WIRELESS RECEIVER	102
<i>Kalkavage, J.H. ; McKenna, T.P. ; Nanzer, J.A. ; Clark, T.R.</i>	
OPTICAL FEEDING AND STEERING OF A MILLIMETER-WAVE PHASED ARRAY ANTENNA USING A HYBRID MODE-LOCKED LASER	104
<i>Aldaya, I. ; Campuzano, G. ; Gosset, C. ; Gonzalez, R. ; Castanon, G.</i>	
PHOTONICS FOR MILLIMETER-WAVE SYSTEMS	106
<i>McKenna, T.P. ; Kalkavage, J.H. ; Nanzer, J.A. ; Clark, T.R.</i>	
ULTRA-WIDEBAND "RAINBOW" RF SPECTRAL ANALYZER	108
<i>Berger, P. ; Schwarz, M. ; Molin, S. ; Dolfi, D. ; Morvan, L. ; Louchet-Chauvet, A. ; Chaneliere, T. ; Le Gouet, J.-L.</i>	
INTERFERENCE MITIGATION VIA THE NONLINEAR TRANSFER FUNCTION OF ANGLE-MODULATED OPTICAL LINKS	110
<i>McKinney, J.D. ; Urick, V.J. ; Diehl, J.F. ; Williams, K.J.</i>	
GENERATING 6TH ORDER GAUSSIAN DERIVATIVE FOR UWBOF USING DIRECTLY MODULATED LASER AND ACCUMULATIVE CHROMATIC DISPERSION OF FIBER	112
<i>Malekizandi, M. ; Le, Q.T. ; Emsia, A. ; Kuppens, F.</i>	
GENERATION AND DETECTION OF CONTINUOUS THZ-WAVE RADIATION BY DIODE TECHNOLOGIES	116
<i>Ishibashi, Tadao ; Muramoto, Yoshifumi ; Yoshimatsu, Toshihide ; Ito, Hiroshi</i>	
ELECTRO-OPTIC W-BAND POWER SENSING SYSTEM	118
<i>Seok Kim ; Du-Ri Song ; No-Weon Kang ; Dong-Joon Lee</i>	

CO-DESIGN AND CONSTRUCTION OF NOVEL ANTENNA ARRAY AND HIGH-POWER PHOTODIODE PACKAGING	120
<i>Hughes, S. ; Chan, H. ; Landgren, D. ; Cook, K. ; King, M. ; Swank, D. ; Ward, C. ; Wagner, B. ; Campbell, J. ; Beling, A. ; Stark, A.J.</i>	
MODELING NONLINEARITY IN A MODIFIED UNI-TRAVELING-CARRIER (MUTC) PHOTODETECTOR	122
<i>Yue Hu ; Carruthers, T.F. ; Menyuk, C.R. ; Hutchinson, M. ; Urick, V.J. ; Williams, K.J.</i>	
HIGH-POWER, HIGH-SPEED FOR RF PHOTONICS APPLICATIONS	124
<i>Campbell, J.C.</i>	
TOWARDS A COUPLED OPTO-ELECTRONIC OSCILLATOR WITH INDEPENDENTLY STABILIZED FREQUENCY AND REPETITION RATE	126
<i>Klee, A. ; Bagnell, K. ; Delfyett, P.J.</i>	
VANADIUM DIOXIDE BASE PICOSECOND ELECTROMAGNETIC PULSE GENERATOR	128
<i>Charipar, N.A. ; Kim, H. ; Mathews, S.A. ; Pique, A.</i>	
PHOTONIC INTEGRATED CIRCUIT FOR MILLIMETER-WAVE SIGNAL GENERATION BY FREQUENCY MULTIPLICATION	130
<i>Maldonado-Basilio, R. ; Nabavi, N. ; Aulakh, K. ; Hasan, M. ; Hall, T.J.</i>	
MICROWAVE SIGNAL GENERATION USING A 1550 NM VCSEL SUBJECT TO DUAL-BEAM PARALLEL OPTICAL INJECTION	132
<i>Quirce, A. ; Perez, P. ; Valle, A. ; Pesquera, L. ; Hong, Y. ; Thienpont, H. ; Panajotov, K.</i>	
HIGH CARRIER-TO-NOISE RATIO MICROWAVE PHOTONIC MIXER USING BIDIRECTIONAL PHASE MODULATION	134
<i>Tianwei Jiang ; Song Yu ; Qian Xie ; Wanyi Gu</i>	
ANALOG SIGNAL TRANSMISSION BY FPGA-BASED PSEUDO-DELTA-SIGMA MODULATOR	136
<i>Kanno, A. ; Kawanishi, T.</i>	
PRE-EQUALIZING ELECTRO-OPTIC MODULATOR UTILIZING VELOCITY-MISMATCHED TRAVELING-WAVE ELECTRODE AND POLARIZATION-REVERSED STRUCTURES	138
<i>Mitsubo, T. ; Ohno, T. ; Murata, H. ; Okamura, Y.</i>	
A LINEARIZED INTENSITY MODULATOR FOR ANALOG OPTICAL LINKS USING A THREE-SECTION MODE-LOCKED LASER	140
<i>Sarailou, E. ; Delfyett, P.J.</i>	
CORRELATION OF DOUBLE RAYLEIGH SCATTERING IN SINGLE-MODE OPTICAL FIBERS	142
<i>Cahill, J.P. ; Weimin Zhou ; Menyuk, C.R.</i>	
20 GHZ ANALOG PHOTONIC LINK WITH 16 DB GAIN BASED ON A HIGH-POWER BALANCED PHOTODIODE	144
<i>Zhanyu Yang ; Xiaojun Xie ; Qinglong Li ; Campbell, J.C. ; Beling, A.</i>	
POLARIZATION MODULATION TECHNIQUES FOR INTENSITY MODULATED LINKS	146
<i>Hutchinson, M.N. ; Urick, V.J. ; Frigo, N.J.</i>	
OPTICAL FREQUENCY-INTERLEAVING FULL-DUPLEX TRANSMISSION OF 96-GHZ-BAND FREQUENCY-MODULATED CONTINUOUS-WAVE DOWNLINK SIGNAL AND 10-GB/S ON-OFF-KEYING UPLINK SIGNAL	148
<i>Kuri, T. ; Kanno, A. ; Kawanishi, T.</i>	
STRAIN-TUNABLE TWO-DIMENSIONAL PLASMONIC CRYSTALS	152
<i>Yifei Wang ; Longju Liu ; Qiugu Wang ; Weikun Han ; Meng Lu ; Liang Dong</i>	
PHASE CHANGE DISPERSION DURING SURFACE PLASMON COUPLING VIA NANO-OBJECTS	154
<i>Zeng, Xie ; Hu, Haifeng ; Gao, Yongkang ; Ji, Dengxin ; Zhang, Nan ; Song, Haomin ; Liu, Kai ; Gan, Qiaoqiang</i>	
PLASMONIC 2D NANOPILLAR ARRAYS IN HIGH INDEX AND GRADIENT INDEX MEDIUM FOR SUBTRACTIVE OPTICAL FILTERING	156
<i>Bingi, J. ; Vadakke Matham, M.</i>	
ASYMMETRICAL STEPPED-JUNCTION NANOANTENNAS	158
<i>Jun Ding ; Longju Liu ; Arigong, B. ; Yuankun Lin ; Meng Lu ; Hualiang Zhang</i>	
INVERSE DESIGN AND IMPLEMENTATION OF NANOPHOTONIC DEVICES	160
<i>Piggott, A.Y. ; Lu, J. ; Lagoudakis, K.G. ; Petykiewicz, J. ; Babinec, T.M. ; Vuckovic, J.</i>	
TOPOLOGY OPTIMIZED DESIGN FOR SILICON-ON-INSULATOR MODE CONVERTER	162
<i>Frellsen, L.F. ; Frandsen, L.H. ; Yunhong Ding ; Elesin, Y. ; Sigmund, O. ; Yvind, K.</i>	
FREE CARRIER EFFECTS AS A COMPLICATING VARIABLE IN THE ANALYSIS OF STRAINED SILICON	164
<i>Sharma, R. ; Puckett, M.W. ; Hung-Hsi Lin ; Vallini, F. ; Fainman, Y.</i>	
IMPACTS OF TAPERED SIDEWALL PROFILES WITH HIGH ASPECT RATIO ON SUBWAVELENGTH GRATING STRUCTURE	166
<i>Yu, W.X. ; Wu, D.C. ; Yi, Y.</i>	
TELECOM-BAND SUB-WAVELENGTH NANOWIRE LASERS ON SI PHOTONIC CRYSTAL PLATFORM	168
<i>Takiguchi, M. ; Yokoo, A. ; Birowosuto, M.D. ; Tateno, K. ; Zhang, G. ; Kuramochi, E. ; Shinya, A. ; Notomi, M.</i>	
ALLOYED-CORE COLLOIDAL QUANTUM DOT DFB LASER WITH ENCAPSULATED GAIN REGION	170
<i>McLellan, L. ; Guilhaert, B. ; Laurand, N. ; Dawson, M.D.</i>	
LARGE SPONTANEOUS EMISSION RATE ENHANCEMENT FROM AN ELECTRICALLY-INJECTED NANOLED COUPLED TO AN OPTICAL ANTENNA	172
<i>Fortuna, S.A. ; Eggleston, M.S. ; Messer, K. ; Yablonovitch, E. ; Wu, M.C.</i>	
ELECTRIFYING PHOTONIC METAMATERIALS FOR TUNABLE NONLINEAR OPTICS AND UNCONVENTIONAL PHASE MATCHING SCHEMES	174
<i>Wenshan Cai</i>	

EXCITON TRANSFER AND POLARIZED EMISSION IN COLLOIDAL QUANTUM DOT - ANTHRACENE CRYSTALS	176
<i>Soran-Erdem, Z. ; Erdem, T. ; Hernandez-Martinez, P.L. ; Akgul, M.Z. ; Gaponik, N. ; Demir, H.V.</i>	
LOCALIZED SURFACE PLASMON-INDUCED PHOTOLUMINESCENCE ENHANCEMENT OF AMORPHOUS SILICON QUANTUM DOTS LIGHT EMITTERS WITH AG/SIO₂:A-SI QDS/AG SANDWICH NANOSTRUCTURES	178
<i>Tsung-Han Tsai ; Wing-Kit Choi ; Hoang Yan Lin</i>	
POLARIZATION CONTROLLED OUTPUT OF ELECTROHYDRODYNAMIC JET PRINTED QUANTUM DOT EMBEDDED PHOTONIC CRYSTALS FOR DISPLAY APPLICATIONS	180
<i>See, G.G. ; Lu Xu ; Sutanto, E. ; Alleyne, A.G. ; Nuzzo, R.G. ; Cunningham, B.T.</i>	
ACID-FREE SOL-GEL FABRICATION OF QUANTUM-DOT THIN FILMS FOR ULTRAFAST NANOPHOTONICS RESEARCH	182
<i>Jani, H. ; Lingze Duan</i>	
PLASMONICS ENHANCED AVERAGE BROADBAND ABSORPTION OF MONOLAYER MOS₂	184
<i>Mukherjee, B. ; Simsek, E.</i>	
GRAPHENE ABSORPTION ENHANCEMENT USING SILICON SLOT WAVEGUIDES	186
<i>Zhenzhou Cheng ; Jiaqi Wang ; Bingqing Zhu ; Ke Xu ; Wen Zhou ; Hon Ki Tsang ; Shu, C.</i>	
THEORY AND APPLICATIONS OF STRONGLY BOUND EXCITONS IN LAYERED TRANSITION-METAL DICHALCOGENIDES	188
<i>Tseng, F. ; Gunlycke, D. ; Simsek, E.</i>	
DISPERSION ENGINEERED HETERO-SLOT WAVEGUIDES FOR BROADBAND ON-CHIP SECOND-HARMONIC PHASE-MATCHING	190
<i>Sangsik Kim ; Minghao Qi</i>	
SURFACE LATTICE RESONANCE-ENHANCED MAGNETO-OPTICAL EFFECTS IN NI NANOPARTICLE ARRAYS	192
<i>Kataja, M. ; Hakala, T.K. ; Julku, A. ; Huttunen, M.J. ; van Dijken, S. ; Torma, P.</i>	
DESIGN AND ANALYSIS OF PLASMONICS SUBWAVELENGTH CROSSED METALLIC GRATING IN AG/SIO₂/AG SANDWICH NANOSTRUCTURES AS ULTRATHIN PLASMONIC SUPER ABSORBERS	194
<i>Tsung-Han Tsai ; Wing-Kit Choi ; Hoang Yan Lin</i>	
EFFICIENT SINGLE PHOTON COLLECTION USING TUNABLE MICROFIBER-COUPLED PHOTONIC CRYSTAL CAVITY	196
<i>Chang-Min Lee ; Hee-Jin Lim ; Schneider, C. ; Maier, S. ; Hofling, S. ; Kamp, M. ; Yong-Hee Lee</i>	
BLOCH SURFACE WAVES BASED PLATFORM FOR INTEGRATED OPTICS	200
<i>Dubey, R. ; Barakat, E. ; Herzig, H.P.</i>	
ACHROMATIC METASURFACES BY DISPERSIVE PHASE COMPENSATION	202
<i>Aieta, F. ; Kats, M.A. ; Genevet, P. ; Khorasaninejad, R. ; Capasso, F.</i>	
POLARIZATION-SELECTIVE SWITCHING OF EXTRAORDINARY OPTICAL TRANSMISSION THROUGH A METASURFACE	204
<i>Pelzman, C. ; Sang-Yeon Cho</i>	
FEW-OPTICAL-CYCLE PULSES FROM NEAR-IR TO UV BY NON LINEAR FREQUENCY CONVERSION	206
<i>Manzoni, C. ; Cerullo, G.</i>	
DYNAMIC SPECTRA OF SOLITON PAIRS IN A MODE-LOCKED FIBER LASER	208
<i>Xin Zou ; Ming Li ; Jifang Qiu ; Jindan Shi ; Jian Wu</i>	
TM/HO CO-DOPED FEMTOSECOND FIBER LASER CORE-PUMPED WITH 790 NM	210
<i>Akosman, A.E. ; Wesseler, M.F. ; Bezuk, J.E. ; Sander, M.Y.</i>	
LOCALIZED SURFACE PLASMON EFFECTS IN ZNO SANDWICHED GOLD NANOPARTICLES UNDER FS PUMPING	212
<i>Bongu, S.R. ; Bisht, P.B. ; Nambodri, R.C.K. ; Ali, S.A. ; Kelly, T.J. ; Costello, J.T. ; Patra, A. ; Kasiviswanathan, S.</i>	
NEARLY-DEGENERATE TWIN SIGNALS GENERATED BY OPTICAL PARAMETRIC OSCILLATOR IN INVERTED KTA TWIN CRYSTALS	214
<i>Pengda Hong ; Da Li ; Xingquan Zou ; Ding, Y.J. ; Zhaojun Liu</i>	
SCALING OF A 2μM FEW-CYCLE OPCPA SYSTEM TO 100 KHZ REPETITION RATE AND HIGH AVERAGE POWERS	216
<i>Shamir, Y. ; Rothhardt, J. ; Hadrich, S. ; Demmler, S. ; Tschernajev, M. ; Limpert, J. ; Tunnermann, A.</i>	
DEMONSTRATION OF INPUT-TO-OUTPUT GAIN IN A TALBOT AMPLIFIER	220
<i>Maram, R. ; Van Howe, J. ; Azana, J.</i>	
IMAGE RESTORATION BASED ON PHASE CONJUGATION IN SECOND ORDER NONLINEAR COMPOSITE UNDER REFLECTION CONFIGURATION	222
<i>Pengda Hong ; Xingquan Zou ; Da Li ; Ruolin Chen ; Liang Gao ; Ding, Y.J. ; Zhaojun Liu</i>	
STRONG TERAHERTZ FIELD GENERATION AT HIGH REPETITION RATES	224
<i>Ki-Yong Kim</i>	
RESONANT METALLIC NANOSTRUCTURES FOR ENHANCED TERAHERTZ SPECTROSCOPY	226
<i>Toma, A. ; Tuccio, S. ; Prato, M. ; De Donato, F. ; Perucchi, A. ; Di Pietro, P. ; Marras, S. ; Liberale, C. ; Zaccaria, R.P. ; De Angelis, F. ; Manna, L. ; Lupi, S. ; Di Fabrizio, E. ; Razzari, L.</i>	
TERAHERTZ POLARIZATION DETERMINATION BY PASSIVE CONTROL OF VECTORIAL VORTEX BEAM	228
<i>Wakayama, T. ; Yonemura, M. ; Higashiguchi, T. ; Oikawa, H. ; Sakaue, K. ; Washio, M. ; Yoshizawa, T. ; Tyo, J.S. ; Otani, Y.</i>	
TERAHERTZ GENERATION FROM CYLINDRICALLY FOCUSED TWO-COLOR LASER PULSES IN AIR	230
<i>Yung-Jun Yoo ; Donghoon Kuk ; Rosenthal, E. ; Jhajj, N. ; Milchberg, H. ; Ki-Yong Kim</i>	

LINEARLY POLARIZED NARROW LINEWIDTH SINGLE MODE FIBER LASER AND NONLINEAR PHENOMENA	232
<i>Wei Shi ; Qiang Fang ; Jingli Fan ; Ting Qu ; Xiangjie Meng</i>	
ALL-NORMAL-DISPERSION DISSIPATIVE SOLITON YTTERBIUM-DOPED FIBER LASER WITH MULTILAYER GRAPHENE SATURABLE ABSORBER	234
<i>Yang, Y. ; Liu, H.H. ; Chow, K.K.</i>	
III-NITRIDE DEEP UV LASER ON SAPPHIRE SUBSTRATE	236
<i>Xiao-Hang Li ; Detchprohm, T. ; Dupuis, R.D. ; Tsung-Ting Kao ; Shyh-Chiang Shen ; Mahbub Satter, M. ; Yoder, P.D. ; Shuo Wang ; Wei, Y.O. ; Hongen Xie ; Fischer, A. ; Ponce, F.A. ; Wernicke, T. ; Reich, C. ; Martens, M. ; Kneissl, M.</i>	
MOVING GAP SOLITONS IN COUPLED BRAGG GRATINGS WITH CUBIC-QUINTIC NONLINEARITY	238
<i>Jahedul Islam, M. ; Atai, J.</i>	
ACTIVE PLASMONICS WITH SURFACE ACOUSTIC WAVES	240
<i>Betz, M.</i>	
GERMANIUM-ON-SILICON PLATFORMS FOR NONLINEAR PHOTONICS IN THE MID-INFRARED	242
<i>Peacock, A.C. ; Shen, L. ; Healy, N. ; Mitchell, C.J. ; Penades, J.S. ; Nedeljkovic, M. ; Mashanovich, G.Z.</i>	
COLLISIONS OF BRAGG GRATING SOLITONS IN A SEMILINEAR DUAL-CORE SYSTEM WITH DISPERSIVE REFLECTIVITY	244
<i>Saddam Chowdhury, S.A.M. ; Atai, J.</i>	
A SPECTRALLY EFFICIENT UNIPOLAR PAM SINGLE CARRIER FREQUENCY DOMAIN EQUALIZATION FOR IM/DD SYSTEMS	246
<i>Mohammed, M.M.A. ; El-Sahn, Z.A.</i>	
COEXISTENCE OF A QUANTUM CHANNEL AND CLASSICAL CHANNELS IN PASSIVE OPTICAL NETWORKS	248
<i>Xun Wang ; Il-Pyeong Hwang ; Seung-Hyeon Ahn ; Chang-Hee Lee</i>	
COMPACT OPTICAL STEGANOGRAPHY BASED ON AMPLIFIED SPONTANEOUS EMISSION NOISE	250
<i>Ben Wu ; Chang, M.P. ; Shastri, B.J. ; Tait, A.N. ; Prucnal, P.R.</i>	
A NOVEL PHASE SENSITIVE AMPLIFIER BASED QPSK REGENERATOR WITHOUT ACTIVE PHASE-LOCKING	252
<i>Kjoller, N.K. ; Da Ros, F. ; Roge, K.M. ; Guan, P. ; Galili, M. ; Oxenlowe, L.K.</i>	
HIGH-SPEED BPSK MODULATION USING A SILICON MODULATOR	254
<i>Qi Li ; Ran Ding ; Yang Liu ; Baehr-Jones, T. ; Hochberg, M. ; Bergman, K.</i>	
NONLINEAR PROPAGATION IN SPACE-DIVISION MULTIPLEXED FIBER-OPTIC TRANSMISSION	256
<i>Antonelli, C. ; Mecozzi, A. ; Shtaiif, M.</i>	
HIGH CAPACITY DENSE SDM TRANSMISSION USING MULTI-CORE FEW-MODE FIBER	259
<i>Mizuno, T. ; Takara, H. ; Sano, A. ; Miyamoto, Y.</i>	
SLM-BASED MODE DIVISION MULTIPLEXING SYSTEM WITH 6×6 SPARSE EQUALIZATION	261
<i>Kai Shi ; Feng Feng ; Gordon, G.S.D. ; Wilkinson, T.D. ; Thomsen, B.C.</i>	
TIME RESOLVED CHIRP MEASUREMENT BASED ON A POLARIZATION-MAINTAINING FIBER	267
<i>Chaibi, M.E. ; Hoang Trung Nguyen ; Gosset, C. ; Grillot, F. ; Erasme, D.</i>	
AMBIGUITY ELIMINATION OF INDEPENDENT COMPONENT ANALYSIS FOR POLARIZATION CHANNEL ALIGNMENT TRACKING	271
<i>Nabavi, N. ; Hall, T.J.</i>	
MPI MEASUREMENTS OF QUASI-SINGLE-MODE FIBERS	273
<i>Downie, J.D. ; Hurlley, J. ; Roudas, I. ; Koreshkov, K. ; Mlejnek, M.</i>	
PENALTIES ASSOCIATED WITH DISPERSION PARAMETER MISMATCH AND LIMITED STEPS-PER-SPAN IN TRANSMISSION-SIDE DIGITAL BACK PROPAGATION	275
<i>Temprana, E. ; Myslivets, E. ; Kuo, B.P.-P. ; Alic, N. ; Radic, S.</i>	
COMPUTATIONAL COMPLEXITY OF NONLINEAR TRANSFORMS APPLIED TO OPTICAL COMMUNICATIONS SYSTEMS WITH NORMAL DISPERSION FIBERS	277
<i>Lima, I.T. ; Grigoryan, V.S. ; O'Sullivan, M. ; Menyuk, C.R.</i>	
NOVEL FORWARD ERROR CORRECTION CONCEPTS FOR COHERENT OPTICAL COMMUNICATIONS	279
<i>Schmalen, L.</i>	
SILICON PHOTONICS BASED SWITCHING TECHNOLOGY FOR TELECOM, DATACOM AND COMPUTERCOM	281
<i>Ikedo, K. ; Suzuki, K. ; Tanizawa, K. ; Guangwei Cong ; Namiki, S. ; Kawashima, H.</i>	
A 2.5-GB/S PER CHANNEL DWDM-PON WITH A PULSED-ASE SEED LIGHT SOURCE	283
<i>Quoc-Hoai Tran ; Sang-Hwa Yoo ; Sang-Rok Moon ; Chang-Hee Lee</i>	
WIDELY LINEAR EDFA FOR ANALOG RADIO-OVER-FIBER TRANSMISSION OVER A PASSIVE OPTICAL NETWORK CONFIGURATION	285
<i>Shiraiwa, M. ; Kanno, A. ; Awaji, Y. ; Wada, N. ; Kawanishi, T. ; Kitayama, K.-I.</i>	
AN INNOVATIVE SELF-COHERENT REFLECTIVE FDMA-PON: REAL-TIME TRANSMISSION EXPERIMENTS	287
<i>Abrate, S. ; Savio, P. ; Gaudino, R. ; Straullu, S. ; Nespola, A. ; Ferrero, V.</i>	
RECOVERING SYMMETRY IN OPTICAL DIGITAL COHERENT POLARIZATION DIVERSITY RECEIVER	289
<i>Nabavi, N. ; Hall, T.J.</i>	
STUDY OF CHROMATIC DISPERSION EFFECT ON 16QAM PHASE SENSITIVE AMPLIFICATION	291
<i>Akasaka, Y. ; Yang, J.-Y. ; Ikeuchi, T. ; Sekiya, M. ; Takasaka, S. ; Sugizaki, R. ; Mohajerin-Ariaei, A. ; Ziyadi, M. ; Almatian, A. ; Cao, Y. ; Willner, A.E.</i>	

CAVITY-LESS SUB-PICOSECOND PULSE GENERATION FOR THE DEMULTIPLEXING OF A 640 GBAUD OTDM SIGNAL	293
<i>Kong, D. ; Guan, P. ; Hu, H. ; Galili, M. ; Mulvad, H.C.H. ; Roge, K.M. ; Oxenlowe, L.K. ; Jian Wu</i>	
ALL-OPTICAL SQUARE-WAVE CLOCK GENERATION	295
<i>Davoudzadeh, N. ; Sayeh, M.R.</i>	
DESIGN OF PHOTONIC HILBERT TRANSFORMERS BASED ON IMPULSIVE RESPONSE SPECIFICATIONS	297
<i>Carballar, A. ; Fernandez-Ruiz, M.R. ; Azana, J.</i>	
COMPARISON OF DELAY-INTERFEROMETER AND TIME-LENS-BASED ALL-OPTICAL OFDM DEMULTIPLEXERS	299
<i>Lillieholm, M. ; Mulvad, H.C.H. ; Galili, M. ; Oxenlowe, L.K.</i>	
CHARACTERIZATION OF SPECTRAL COMPRESSION OF OFDM SYMBOLS USING OPTICAL TIME LENSES	303
<i>Roge, K.M. ; Guan, P. ; Kjoller, N.K. ; Lillieholm, M. ; Galili, M. ; Morioka, T. ; Oxenlowe, L.K.</i>	
PERFORMANCE OF CLADDING-PUMPED FEW-MODE EDFAS IN OPTICAL SPACE-DIVISION MULTIPLEXED SYSTEMS	305
<i>Youssef, H.A. ; El-Sahn, Z.A.</i>	
COMBINED DATA DETECTION SCHEME FOR ZERO PADDED OFDM SIGNALS IN MMF LINKS	307
<i>Medina, P. ; Almenar, V. ; Corral, J.L.</i>	
BREAKTHROUGHS IN SUBMARINE TRANSMISSION CAPACITY	309
<i>Foursa, D.G.</i>	
PHASE-SENSITIVE AMPLIFIERS FOR LONG-HAUL TRANSMISSION SYSTEMS	310
<i>Andrekson, P.A.</i>	
HOLLOW-CORE PHOTONIC-CRYSTAL FIBRES FOR VACUUM-ULTRAVIOLET NONLINEAR OPTICS IN GASES	312
<i>Travers, J.C. ; Belli, F. ; Ermolov, A. ; Abdolvand, A. ; St J.Russell, P.</i>	
MULTIHETERODYNE MEASUREMENT OF ACOUSTICALLY INDUCED PHASE NOISE IN FIBER-OPTIC TRANSFER OF AN OPTICAL FREQUENCY COMB	313
<i>Gollapalli, R.P. ; Changjun Hu ; Lin Yang ; Lingze Duan</i>	
CHARACTERIZATION OF THE ZERO-DISPERSION WAVELENGTH VARIATION IN A STRAINED HIGHLY NONLINEAR FIBER	315
<i>Lillieholm, M. ; Galili, M. ; Oxenlowe, L.K.</i>	
COMPONENTS AND DEVICES FOR SPACE-DIVISION MULTIPLEXED SYSTEMS	317
<i>Fontaine, N.K.</i>	
FEW-MODE FIBER BASED OPTICAL SENSORS	319
<i>An Li ; Yifei Wang ; Shieh, W.</i>	
HO:YAG ROD AMPLIFIER FOR VORTEX BEAMS	321
<i>Yuan Li ; Zeyu Zhang ; Miller, J.K. ; Johnson, E.</i>	
MODE AREA SCALABILITY IN RECTANGULAR CORE FIBER	323
<i>Yoo, S. ; Ji, J. ; Wu, X. ; Raghurman, S. ; Ho, D. ; Xia, N. ; Sahu, J. ; Nilsson, J.</i>	
LASERS FROM NON-SILICA OPTICAL FIBER AND THEIR APPLICATIONS	325
<i>Jihong Geng ; Shibin Jiang</i>	
GRAPHENE-BASED PASSIVELY Q-SWITCHED TM³⁺:ZBLAN FIBER LASER AT 1480 NM	326
<i>Chenglai Jia ; Shastri, B.J. ; Rochette, M. ; Chen, L.R. ; Saad, M.</i>	
LOW-INSERTION LOSS SUBMICRON TA₂O₅ CHANNEL WAVEGUIDE WITH INVERSE TAPER STRUCTURE	328
<i>Chung-Lun Wu ; Bo-Tsang Chen ; Wei-Chen Tien ; Yuan-Yao Lin ; Ann-Kuo Chu ; Yi-Jen Chiu ; Chao-Kuei Lee</i>	
TRANSMISSION IN SPACE-DIVISION MULTIPLEXED SYSTEMS	330
<i>Ryf, R.</i>	
SCANNING FIBER-OPTIC NONLINEAR ENDOMICROSCOPY FOR IN VIVO HISTOLOGY	332
<i>Wenxuan Liang ; Hall, G. ; Ming-Jun Li ; Xingde Li</i>	
SHEDDING LIGHT ON THE OPTICAL PROPERTIES OF SPIDER SILK FIBER	333
<i>Chow, D.M. ; Tow, K.H. ; Vollrath, F. ; Dicaire, I. ; Gheysens, T. ; Thevenaz, L.</i>	
IDEAL CUSP-LIKE MOTHEYE ANTIREFLECTIVE STRUCTURES FOR CHALCOGENIDE OPTICAL FIBERS	335
<i>Weiblen, R.J. ; Florea, C. ; Menyuk, C.R. ; Aggarwal, I.D. ; Busse, L.E. ; Shaw, L.B. ; Sanghera, J.S.</i>	
BRILLOUIN DISTRIBUTED FIBER SENSING AT ULTRA-HIGH SPATIAL RESOLUTION	337
<i>Thevenaz, L. ; Denisov, A. ; Soto, M.A.</i>	
FEMTOSECOND LASER INDUCED OPTICAL FIBER BRAGG GRATINGS (FBGS) FOR HARSH ENVIRONMENT SENSING APPLICATIONS	339
<i>Mihailov, S.J. ; Grobnc, D. ; Walker, R.B. ; Lu, P. ; Ding, H.</i>	
INFLUENCE OF DESIGN PARAMETERS ON THE PERFORMANCE OF A REFRACTIVE INDEX SENSOR BASED ON SPR IN PLASTIC OPTICAL FIBERS	341
<i>Al-Qazwini, Y. ; Noor, A.S.M. ; Yaacob, M.H. ; Mahdi, M.A. ; Harun, S.W.</i>	
CONTINUOUS REFRACTIVE INDEX SENSING BASED ON CARBON-NANOTUBE-DEPOSITED JOINT SINGLE-MODE MULTI-MODE FIBER SEGMENT	343
<i>Tan, Y.C. ; Huang, J.Y. ; Chow, K.K.</i>	
TOWARDS MZI MODULATOR IN GEOI AND SOI WAVEGUIDE PLATFORMS FOR MID-INFRARED WAVELENGTHS	345
<i>Rouifed, M.S. ; Ting Hu ; Littlejohns, C.G. ; Chongyong Liu ; Hong Wang</i>	

A HIGH-SPEED CMOS INTEGRATED OPTICAL RECEIVER WITH AN UNDER-DAMPED TIA	347
<i>Hyun-Yong Jung ; Jeong-Min Lee ; Woo-Young Choi</i>	
HETEROGENEOUSLY INTEGRATED SILICON LASERS FOR OPTICAL INTERCONNECTS.....	351
<i>Norberg, E.J. ; Koch, B.R. ; Roth, J.E. ; Ramaswamy, A. ; Guzzon, R.S. ; Sparacin, D.K. ; Fish, G.A.</i>	
OPTIMIZED SILICON PHOTONIC COMPONENTS FOR HIGH-PERFORMANCE INTERCONNECT SYSTEMS.....	353
<i>Yangjin Ma ; Yang Liu ; Ran Ding ; Baehr-Jones, T. ; Magill, P. ; Hang Guan ; Gazman, A. ; Qi Li ; Bergman, K. ; Hochberg, M.</i>	
IMPLEMENTATION OF INTEGRATED BANDWIDTH TUNABLE OPTICAL ADD-DROP FILTER USING CONTRA DIRECTIONAL GRATING ASSISTED COUPLERS	355
<i>Borojerdj, M.T. ; Menard, M. ; Kirk, A.G.</i>	
A POLARIZATION ROTATOR BASED ON AUGMENTED LOW INDEX GUIDING STRUCTURE	357
<i>Sun, X. ; Aitchison, J.S. ; Mojahedi, M.</i>	
DISPERSION PROPERTIES OF BENT SILICON NITRIDE WAVEGUIDES.....	359
<i>Furusawa, K. ; Sekine, N. ; Kasamatsu, A. ; Uzawa, Y.</i>	
OCTAVE-SPANNING FLAT NEGATIVE DISPERSION IN SILICON NITRIDE HORIZONTAL SLOT WAVEGUIDES	361
<i>Yang Yue ; Lin Zhang ; Changjing Bao ; Willner, A.E. ; Anderson, J.</i>	
TRAPPING AND UNLIMITED DELAY OF LIGHT PULSES AT MICROSCALE WITHOUT DISTORTION	363
<i>Sumetsky, M.</i>	
POLARISATION EFFECTS IN OPTICAL MICRORESONATORS.....	365
<i>Nasir, M.N.M. ; Gorajoobi, S.B. ; Murugan, G.S. ; Zervas, M.N.</i>	
SOL-GEL IMPRINT LITHOGRAPHY FOR GUIDED MODE RESONANCE STRUCTURES.....	367
<i>Yin Huang ; Longju Liu ; Ch'ng, B. ; Meng Lu</i>	
BLOCH OSCILLATIONS IN A PARITY-TIME SYNTHETIC DISSIPATIVE SILICON PHOTONIC LATTICE	371
<i>Xiao-Ping Liu ; Ye-Long Xu ; Fegadolli, W.S. ; Lin Gan ; Ming-Hui Lu ; Scherer, A. ; Zhi-Yuan Li ; Yan-Feng Chen</i>	
HIGH Q-FACTOR PHOTONIC CRYSTAL CAVITIES ON TRANSPARENT POLYMERS.....	373
<i>Siraji, Ashfaqul Anwar ; Zhao, Yang</i>	
AUTO-POWERED, MINIATURIZED, SMART BIO-OPTOELECTRONIC SYSTEM DEDICATED TO FUNCTIONAL CONTACT LENSES AND REAL-TIME WIRELESS BIOMEDICAL IMAGING WITH HIGH SPATIAL AND DEEP RESOLUTION	377
<i>Kamrani, E. ; Hahn, S.K. ; Andy Yun, S.H.</i>	
DEMONSTRATION OF INTEGRATED MID-IR KERR FREQUENCY COMBS.....	378
<i>Savchenkov, A.A. ; Ilchenko, V.S. ; Di Teodoro, F. ; Belden, P.M. ; Lotshaw, W.T. ; Matsko, A.B. ; Maleki, L.</i>	
IMPACT OF BREATHING SOLITON IN KERR COMBS ON THE PERFORMANCE OF COMMUNICATION SYSTEMS.....	380
<i>Changjing Bao ; Peicheng Liao ; Lin Zhang ; Yan Yan ; Yinwen Cao ; Guodong Xie ; Mohajerin-Ariaei, A. ; Long Li ; Ziyadi, M. ; Kimerling, L.C. ; Michel, J. ; Willner, A.E.</i>	
AN EXPERIMENTAL AND THEORETICAL COMPARISON OF DIFFERENT NARROW LINEWIDTH BRAGG GRATINGS	382
<i>Spencer, D.T. ; Davenport, M. ; Srinivasan, S. ; Khurgin, J. ; Morton, P.A. ; Bowers, J.E.</i>	
MICRO-RESONATOR LASER WITH VERSATILE PUMPING CONFIGURATIONS	384
<i>Gorajoobi, S.B. ; Murugan, G.S. ; Langner, A. ; Zervas, M.N.</i>	
TUNABLE, AGILE RF PHOTONIC SOURCE.....	386
<i>Matsko, A.B. ; Liang, W. ; Eliyahu, D. ; Ilchenko, V.S. ; Savchenkov, A.A. ; Maleki, L.</i>	
BROAD AREA SINGLE-MODE RADIAL BRAGG LASERS.....	388
<i>Ben-Bassat, E. ; Scheuer, J.</i>	
INTEGRATED DUAL-COLOR INGAN LIGHT-EMITTING DIODE ARRAY THROUGH TRANSFER PRINTING	390
<i>Rae, K. ; Xie, E.Y. ; Trindade, A.J. ; Guilhabert, B. ; Ferreira, R. ; McKendry, J.J.D. ; Zhu, D. ; Laurand, N. ; Gu, E. ; Watson, I.M. ; Humphreys, C.J. ; Wallis, D.J. ; Dawson, M.D.</i>	
PHOTONIC CRYSTAL PHOTODETECTOR-MODULATOR INTEGRATION FOR ULTRA-COMPACT WAVELENGTH CONVERTER.....	392
<i>Nozaki, K. ; Matsuo, S. ; Fujii, T. ; Takeda, K. ; Kuramochi, E. ; Notomi, M.</i>	
MONOLITHIC MACH-ZEHNDER INTERFEROMETER MODULATOR IN AN UNMODIFIED CMOS PROCESS.....	394
<i>Khachaturian, A. ; Abiri, B. ; Zhou, A. ; Hajimiri, A.</i>	
NONRECIPROCAL TRANSMISSION THROUGH A SILICON OPTICAL DIODE	396
<i>Minghao Qi ; Weiner, A.M. ; Li Fan ; Jian Wang ; Varghese, L.T. ; Yi Xuan</i>	
RECENT PROGRESS IN OPTICAL NONRECIPROCAL DEVICES FOR SILICON PHOTONICS.....	398
<i>Mizumoto, T. ; Shoji, Y.</i>	
PARITY-TIME SYMMETRY AND NONRECIPROCAL LIGHT TRANSMISSION IN HIGH-Q MICROCAVITY SYSTEMS	400
<i>Min Xiao ; Xiaoshun Jiang ; Chang, L. ; Wen, J. ; Jiang, L.</i>	
TRAFFIC-AWARE NON-UNIFORM PASSBAND ASSIGNMENT IN ELASTIC OPTICAL NETWORKS.....	402
<i>Yang, M. ; Rastegarfar, H. ; Johnson, S. ; Mo, W. ; Ajay Gautham, M.S. ; Zhu, J. ; Wissinger, J. ; Cvijetic, M. ; Glick, M. ; Peyghambarian, N.</i>	
A NOVEL CHANNEL ESTIMATION TECHNIQUE FOR TRANSMITTER SIDE NARROWBAND FILTERING COMPENSATION	404
<i>Jie Pan ; Isautier, P. ; Tibuleac, S. ; Ralph, S.E.</i>	

SIMPLE NONLINEAR POST-COMPENSATOR FOR COHERENT DETECTION	406
<i>Langston, J. ; Isautier, P. ; Ralph, S.E.</i>	
LOWER BOUND ON SIGNAL-TO-INTERFERENCE RATIO FOR A NOVEL POLLING-BASED PON MONITORING SYSTEM	408
<i>Min Zhu ; Jiao Zhang ; Dongpeng Wang ; Xiaohan Sun</i>	
DATA-CENTER, METRO AND LONG-HAUL APPLICATIONS BASED ON ADVANCED PHOTONIC INTEGRATED CIRCUITS	410
<i>Evans, P. ; Ziari, M. ; Lal, V. ; Corzine, S. ; Butrie, T. ; Missey, M. ; Pavinski, D. ; Tang, J. ; Summers, J. ; Studenkov, P. ; Hosseini, A. ; Vallaitas, T. ; Kuntz, M. ; Ko, W. ; Sedgwick, F. ; Fisher, M. ; Sai, H.-S. ; Zhang, J. ; Samra, P. ; Pleumeekers, J. ; Rahn, J. ; Dominic, V. ; Schindler, P. ; Schmogrow, R. ; Kumar, S. ; Mertz, P. ; Croussore, K. ; Sun, H. ; Wu, K.-T. ; Mitchell, M. ; Reffle, M. ; Kish, F. ; Welch, D.</i>	
CONTINUOUS CONTROL OF MICRORING WEIGHT BANKS	411
<i>Tait, A.N. ; Nahmias, M.A. ; Ferreira de Lima, T. ; Shastri, B.J. ; Wu, A.X. ; Zhou, E. ; Blow, E.C. ; Prucnal, P.R.</i>	
DUAL-CARRIER 400G SOLUTIONS BASED ON 8/16/32-QAM MODULATION FORMATS	413
<i>Zhensheng Jia ; Hung-Chang Chien ; Junwen Zhang ; Yi Cai ; Jianjun Yu</i>	
EXPERIMENTAL DEMONSTRATION OF SPACE-TIME-CODED ROBUST HIGH-SPEED INDOOR OPTICAL WIRELESS COMMUNICATION SYSTEM	417
<i>Ke Wang ; Nirmalathas, A. ; Lim, C. ; Tingting Song ; Skafidas, E.</i>	
INVESTIGATION OF PAM-4 MODULATION FOR WDM SYSTEMS	419
<i>Teipen, B.T. ; Griesser, H. ; Eiselt, M.</i>	
OTDR SIMILARITY TRACES ANALYSED EFFECTIVE METHOD FOR FAULT LOCATION IN POINT-TO-MULTIPOINT PON	421
<i>Xuan Zhang ; Fengjun Lu ; Min Zhu ; Xiaohan Sun</i>	
OUTAGE PERFORMANCE OF DF RELAY-ASSISTED FSO COMMUNICATIONS USING TIME DIVERSITY	423
<i>Castillo-Vazquez, C. ; Boluda-Ruiz, R. ; Castillo-Vazquez, B. ; Garcia-Zambrana, A.</i>	
SURFACE PASSIVATION IN SELF-INDUCED JUNCTION SI PHOTODIODES	427
<i>Neuvonen, P.T. ; Monakhov, E. ; Chi Kwong Tang ; Gran, J. ; Kubarsepp, T.</i>	
ULTRA-SENSITIVE DETECTOR FOR SILICON PHOTONICS; A PHOTODIODE INCORPORATING INTEGRATED BIPOLAR GAIN	429
<i>Keraly, C.L. ; Going, R. ; Wu, M.C. ; Yablonovitch, E.</i>	
FREQUENCY MODULATED LASER OPTICAL GYROSCOPE	431
<i>Shen, Y. ; Tran, M. ; Srinivasan, S. ; Hulme, J. ; Peters, J. ; Belt, M. ; Gundavarapu, S. ; Li, Y. ; Blumenthal, D. ; Bowers, J.E.</i>	
OPTICAL EEG (OEEG): A NOVEL TECHNIQUE TOWARD PLUG-AND-PLAY NON-INVASIVE BRAIN IMAGING AND HUMAN-MACHINE INTERFACING	433
<i>Kamrani, E. ; Hahn, S.K. ; Andy Yun, S.H.</i>	
ULTRASENSITIVE THREE DIMENSIONAL NANOSCALE CHEMICAL IMAGING	434
<i>Kuznetsov, I. ; Filevich, J. ; Feng Dong ; Woolston, M. ; Weilun Chao ; Anderson, E.H. ; Bernstein, E.R. ; Crick, D.C. ; Rocca, J.J. ; Menoni, C.S.</i>	
LINEAR MODE CMOS COMPATIBLE P-N JUNCTION AVALANCHE PHOTODIODE WITH OPERATING VOLTAGE BELOW 9V	436
<i>Hossain, M.M. ; Zarkesh-Ha, P. ; Hayat, M.M.</i>	
A HIGH-SPEED, HIGH-SENSITIVITY SILICON AVALANCHE PHOTODIODE IN 130-NM CMOS	438
<i>Jing Gao ; Hui Wu</i>	
HIGH PERFORMANCE GE/SI AVALANCHE PHOTODIODE	440
<i>Mengyuan Huang ; Pengfei Cai ; Liangbo Wang ; Su Li ; Wang Chen ; Ching-yin Hong ; Nai Zhang ; Dong Pan</i>	
COMPARISON OF THE 2D AND 3D INTEGRATED CIRCUIT FABRICATION PROCESS FOR VISIBLE IMAGING SPAD ARRAYS	442
<i>Lalucaa, Valerian ; Martin-Gonthier, Philippe ; Magnan, Pierre</i>	
AN ULTRA EFFICIENT, INTERNALLY REGULATED SIGNAL AMPLIFICATION MECHANISM FOR LIGHT DETECTION IN SEMICONDUCTORS	444
<i>Yu-Hsin Liu ; Yuchun Zhou ; Yu-Hwa Lo</i>	
LATERAL SILICON PHOTODIODES WITH EXTREMELY LOW DARK CURRENT FOR VISIBLE AND INFRA-RED APPLICATIONS	446
<i>Mehta, J. ; Lunardi, L.</i>	
TRAP ENHANCED GE/SI PHOTODIODE FORMED BY DIRECT BONDING: TOWARDS NIR IMAGING SYSTEM	448
<i>Hattasan, N. ; Ye, N. ; Corbett, B.</i>	
HIGH-POWER FLIP-CHIP BONDED PHOTODIODE WITH 110 GHZ BANDWIDTH	450
<i>Li, Q. ; Li, K. ; Xie, X. ; Fu, Y. ; Yang, Z. ; Shen, Y. ; Wang, Y. ; Beling, A. ; Campbell, J.C.</i>	
DYNAMIC BIASING OF APDS FOR IMPROVED RECEIVER SENSITIVITY	452
<i>Hayat, M.M.</i>	
PLANAR INAS AVALANCHE PHOTODIODES	454
<i>White, B.S. ; Sandall, I.C. ; Chee Hing Tan</i>	
ALINGAAS SURFACE NORMAL PHOTODIODE FOR 2 μM OPTICAL COMMUNICATION SYSTEMS	456
<i>Ye, N. ; Yang, H. ; Gleeson, M. ; Pavarelli, N. ; Zhang, H.Y. ; O'Callaghan, J. ; Han, W. ; Nudds, N. ; Collins, S. ; Gocalinska, A. ; Pelucchi, E. ; O'Brien, P. ; Garcia Gunning, F.C. ; Peters, F.H. ; Corbett, B.</i>	
CONTROLLED STEERING AND FOCUSING OF SURFACE PLASMONS WITH METASURFACES	460
<i>Ambrosio, A. ; Wintz, D. ; Genevet, P. ; Capasso, F.</i>	
REMOTE PHOTONIC NANO-VIBRATIONS SENSING AND NANOPARTICLES BASED NANOSCOPY	462
<i>Zalevsky, Z. ; Ilovitsh, T. ; Ilovitsh, A. ; Beiderman, Y.</i>	

HIGH-POWER HETEROGENEOUSLY INTEGRATED WAVEGUIDE-COUPLED BALANCED PHOTODIODES ON SILICON-ON-INSULATOR	468
<i>Xiaojun Xie ; Qiugui Zhou ; Norberg, E. ; Jacob-Mitos, M. ; Zhanyu Yang ; Yaojia Chen ; Ramaswamy, A. ; Fish, G. ; Campbell, J.C. ; Beling, A.</i>	
HETEROGENEOUSLY INTEGRATED INGAAS AND SI MEMBRANE FOUR COLOR FOCAL PLANE ARRAYS	470
<i>Menon, Laxmy ; Yang, Hongjun ; Cho, Sang June ; Mikael, Solomon ; Ma, Zhenqiang ; Zhou, Weidong</i>	
A PLASMONIC SUBWAVELENGTH APERTURE ARRAY FOR POLARIMETRIC AND MULTISPECTRAL IMAGING	472
<i>Pelzman, C. ; Sang-Yeon Cho</i>	
SILICON PHOTONICS PACKAGING ON BOARD-LEVEL	474
<i>Brusberg, Lars ; Weber, Daniel ; Pernthaler, Dominik ; Mukhopadhyay, Biswajit ; Bottger, Gunnar ; Schroder, Henning ; Tekin, Tolga</i>	
SINGLE-MODE PERFORMANCE OF STAMPED METALLIC FIBER-OPTIC TURNING MIRROR ARRAYS FOR WDM LAN AND RF-OVER-FIBER APPLICATIONS	476
<i>Dannenberg, R. ; Shuhe Li ; Vallance, R. ; Beranek, M. ; Peterson, N.</i>	
A DQPSK RECEIVER BASED ON SILICON-ON-INSULATOR MICRO-RINGS	478
<i>Velha, Philippe ; Faralli, Stefano ; Contestabile, Giampiero</i>	
SILICON-ORGANIC HYBRID (SOH) INTEGRATION AND PHOTONIC MULTI-CHIP SYSTEMS: EXTENDING THE CAPABILITIES OF THE SILICON PHOTONIC PLATFORM	480
<i>Koos, C. ; Freude, W. ; Leuthold, J. ; Kohl, M. ; Dalton, L.R. ; Bogaerts, W. ; Lauer mann, M. ; Wolf, S. ; Weimann, C. ; Melikyan, A. ; Lindenmann, N. ; Billah, M.R. ; Muehlbrandt, S. ; Koeber, S. ; Palmer, R. ; Koehnle, K. ; Alloatti, L. ; Elder, D.L. ; Giesecke, A.-L. ; Wahlbrink, T.</i>	
DEVICES AND PROCESSES FOR ELECTRONIC-PHOTONIC INTEGRATION	482
<i>Dallessasse, J.M. ; Kesler, B. ; Su, G.L. ; Carlson, J.A. ; Lam, P.L. ; Walter, G.</i>	
ALL-PHOTONIC NONVOLATILE MEMORY CELLS USING PHASE-CHANGE MATERIALS	484
<i>Stegmaier, M. ; Rios, C. ; Hosseini, P. ; David Wright, C. ; Bhaskaran, H. ; Pernice, W.H.P.</i>	
MONOLITHIC INTEGRATION OF THE SELF-ROLLED-UP VERTICAL SIN_x RING RESONATOR AND THE RIDGE WAVEGUIDE	486
<i>Xin Yu ; Arbabi, E. ; Goddard, L.L. ; Xiuling Li ; Xiaogang Chen</i>	
DEMONSTRATION OF A TUNABLE BROADBAND COUPLER	488
<i>Tran, M. ; Hulme, J. ; Srinivasan, S. ; Peters, J. ; Bowers, J.</i>	
INGAASP/INP QW IMPURITY FREE INTERMIXING FOR VARIABLE ZRO₂ CAP THICKNESS	490
<i>Das, S. ; Malik, D. ; Bhowmick, T. ; Das, U. ; Das, T.D.</i>	
DESIGN AND FABRICATION OF TUNABLE MSM PD FOR FTTP AND DATA CENTER NETWORKS	494
<i>Komirisetty, K. ; Nsilo, G.Z. ; Geddis, D.</i>	
ULTRA-SHORT PULSE GENERATION USING SEMICONDUCTOR LASERS	496
<i>Marsh, J.H.</i>	
VALUE CHAIN FOR PHOTONIC ASICS PROTOTYPING - JEPPIX TECHNOLOGY PLATFORM FOR INP AND TRIPLEX PHOTONIC ASICS	498
<i>Lawniczuk, K.</i>	
32 CHANNEL, 25 GHZ INP INTEGRATED PULSE SHAPER WITH SOA AMPLITUDE CONTROL	500
<i>Metcalf, A.J. ; Leaird, D.E. ; Jaramillo, J. ; Lal, V. ; Hosseini, A. ; Kish, F. ; Weiner, A.M.</i>	
INTEGRATED-OPTIC FILTER FOR VARIABLE SYMBOL RATE OPTICAL OFDM SIGNALS	502
<i>Takiguchi, K. ; Ikeyama, Y.</i>	
PHOTONIC INTEGRATION FOR PHASED ARRAY SYSTEMS	504
<i>Morton, P.A.</i>	
PARITY-TIME OPTICAL METAMATERIALS	505
<i>Zi Jing Wong ; Liang Feng ; Ren-Min Ma ; Yuan Wang ; Xiang Zhang</i>	
SURFACE ENHANCED NONLINEAR OPTICS VIA LITHOGRAPHY-FREE METASURFACES	507
<i>Kai Liu ; Tianmu Zhang ; Dengxin Ji ; Murphy, J. ; Haomin Song ; Thomay, T. ; Shi, K. ; Qiaoqiang Gan ; Cartwright, A.</i>	
A HIGH INDEX DIELECTRIC BROADSIDE OPTICAL ANTENNA	509
<i>Dewanjee, A. ; Alam, M.Z. ; Aitchison, J.S. ; James, D.F.V. ; Mojahedi, M.</i>	
COUPLED AND DECOUPLED SUPER ABSORBING METASURFACES DEPENDING ON SPACER THICKNESS	511
<i>Kai Liu ; Nan Zhang ; Dengxin Ji ; Haomin Song ; Xie Zeng ; Qiaoqiang Gan</i>	
SPATIAL MULTIPLEXING VIA FRACTAL ARCHITECTURE	513
<i>Moocarme, M. ; Vuong, L.T.</i>	
FABRICATION OF SUBWAVELENGTH GRATING BASED OPTICAL NANO-HAIRS USING ALD NANO-PATTERNING	516
<i>Srimathi, I.R. ; Delaney, W.F. ; Johnson, E.G.</i>	
DIAMOND NANOPHOTONICS FOR SOLID STATE QUANTUM OPTICS	518
<i>de Leon, N.</i>	
ARTIFICIALLY-ENGINEERED INGAN-BASED DIGITAL ALLOY FOR OPTOELECTRONICS	519
<i>Wei Sun ; Chee-Keong Tan ; Tansu, N.</i>	
DILUTE-AS ALNAS SEMICONDUCTOR FOR ULTRAVIOLET EMITTERS	521
<i>Chee-Keong Tan ; Tansu, N.</i>	
MQW NANOMEMBRANE ASSEMBLIES FOR VISIBLE LIGHT COMMUNICATIONS	523
<i>Santos, J.M.M. ; Watson, S. ; Guilhaert, B. ; Krysa, A. ; Kelly, A.E. ; Laurand, N. ; Dawson, M.D.</i>	

IMPACT OF THE FRONT METAL LAYOUT ON THE FILL FACTOR OF GASB-BASED PHOTOVOLTAICS GROWN ON N-TYPE SUBSTRATE	525
<i>Herrera, D.J. ; Rahini, N. ; Conloa, B. ; Barbien, P. ; Barker, C. ; Erb, D. ; Park, C. ; Abdallah, S. ; Lester, L.F.</i>	
TAILORING PHOTONS	527
<i>Engheta, N.</i>	
ARBITRARY OPTICS - NOVEL NANOPHOTONIC AND SELF-ADAPTING OPTOELECTRONIC SYSTEMS	529
<i>Miller, D.</i>	
LIGHT'S TWIST	531
<i>Padgett, M.</i>	
A COMPARISON OF WIDELY TUNABLE, NARROW LINEWIDTH RING CAVITY LASERS ON SILICON SUBSTRATES	533
<i>Bowers, J.E. ; Komljenovic, T. ; Srinivasan, S. ; Hulme, J. ; Davenport, M.</i>	
MONOLITHICALLY INTEGRATED TUNABLE LASER SOURCE OPERATING AT 2μM FOR GAS SENSING APPLICATIONS	535
<i>Latkowski, S. ; D'Agostino, D. ; van Veldhoven, P.J. ; Rabbani-Haghighi, H. ; Docter, B. ; Ambrosius, H. ; Smit, M. ; Williams, K. ; Bente, E.A.J.M.</i>	
SINGLE-SHOT REAL-TIME ELECTRIC-FIELD RECONSTRUCTION OF A SWEEP SOURCE LASER	537
<i>Butler, T. ; Slepneva, S. ; O'Shaughnessy, B. ; Goulding, D. ; Kelleher, B. ; Hegarty, S. ; Lyu-Chu, H. ; Karnowski, K. ; Wojtkowski, M. ; Huyet, G.</i>	
SINGLE-SHOT MULTIHETERODYNE DETECTION OF A DYNAMICALLY VARYING PULSE TRAIN	539
<i>Butler, T. ; Tykalewicz, B. ; Goulding, D. ; Kelleher, B. ; Hegarty, S. ; Huyet, G.</i>	
MEASURING RADIATIVE CURRENT IN OPTICALLY PUMPED GAIN MEDIA	541
<i>Thomas, R. ; Snowton, P.M. ; Blood, P.</i>	
HIGHLY EFFICIENT WAVELENGTH CONVERSION IN INAS/GAAS QUANTUM DOT LASERS	543
<i>Huang, H. ; Schires, K. ; Raghunathan, R. ; Erasme, D. ; Arsenijevic, D. ; Sadeev, T. ; Bimberg, D. ; Grillot, F.</i>	
HIGH-TEMPERATURE OPERATION OF BIDIRECTIONAL TERAHERTZ QUANTUM CASCADE LASERS EMITTING FROM 3.1–3.7 THZ	545
<i>Khanal, S. ; Le Zhao ; Reno, J.L. ; Kumar, S.</i>	
SINGLE-LOBE SURFACE-EMITTING QUANTUM CASCADE LASER WITH 2ND-ORDER METAL-SEMICONDUCTOR GRATINGS	547
<i>Boyle, C. ; Sigler, C. ; Kirch, J.D. ; Lindberg, D. ; Earles, T. ; Botez, D. ; Mawst, L.J.</i>	
POLARIZATION SWITCHING IN 1550NM VCSELS SUBJECT TO PARALLEL OPTICAL INJECTION	549
<i>Quirce, A. ; Perez, P. ; Valle, A. ; Pesquera, L. ; Hong, Y. ; Thienpont, H. ; Panajotov, K.</i>	
HIGH CW WALLPLUG EFFICIENCY 1.5 MICRON-EMITTING DIODE LASERS	551
<i>Botez, D. ; Garrod, T. ; Mawst, L.J.</i>	
LIMITATIONS TO BRIGHTNESS IN HIGH POWER LASER DIODES	553
<i>Crump, P. ; Winterfeldt, M. ; Decker, J. ; Ektevai, M. ; Fricke, J. ; Maassdorf, A. ; Erbert, G. ; Trankle, G.</i>	
JOULE-CLASS 940 NM DIODE LASER BARS FOR MILLISECOND PULSE APPLICATIONS	555
<i>Crump, P. ; Frevert, C. ; Ginolas, A. ; Knigge, S. ; Maassdorf, A. ; Lotz, J. ; Fassbender, W. ; Neukum, J. ; Korner, J. ; Topfer, T. ; Pranovich, A. ; Divoky, M. ; Lucianetti, A. ; Mocek, T. ; Ertel, K. ; De Vido, M. ; Erbert, G. ; Trankle, G.</i>	
MODE ENGINEERING IN LASERS BASED ON COUPLED LARGE OPTICAL CAVITIES	557
<i>Gordeev, N.Yu. ; Payusov, A.S. ; Shernyakov, Yu.M. ; Nadochiy, A.M. ; Mintairov, S.A. ; Kalyuzhnyy, N.A. ; Kulagina, M.M. ; Zhukov, A.E. ; Maximov, M.V.</i>	
FLAT NONLINEAR OPTICS: EFFICIENT FREQUENCY CONVERSION IN ULTRATHIN NONLINEAR METASURFACES	559
<i>Lee, J. ; Nookala, N. ; Tymchenko, M. ; Gomez-Diaz, J.S. ; Alu, A. ; Belkin, M.A. ; Demmerle, F. ; Boehm, G. ; Amann, M.-C.</i>	
EXPERIMENTAL INVESTIGATION OF THE ABOVE-THRESHOLD LINEWIDTH BROADENING FACTOR OF A MID-INFRARED QUANTUM CASCADE LASER	561
<i>Jumpertz, L. ; Michel, F. ; Pawlus, R. ; Elsasser, W. ; Shires, K. ; Carras, M. ; Grillot, F.</i>	
0.5–1.3 μM III-NITRIDE LASERS AND LIGHT EMITTING DIODES EPITAXIALLY GROWN ON (001) SILICON	563
<i>Hazari, A. ; Bhattacharya, A. ; Frost, T. ; Bhattacharya, P.</i>	
IMPROVEMENT OF POWER CHARACTERISTICS IN 850 NM QUANTUM WELL LASER WITH ASYMMETRIC BARRIERS	565
<i>Zubov, F.I. ; Maximov, M.V. ; Shernyakov, Yu.M. ; Gordeev, N.Yu. ; Nadochiy, A.M. ; Kryzhanovskaya, N.V. ; Semenova, E.S. ; Yvind, K. ; Asryan, L.V. ; Zhukov, A.E.</i>	
THE INFLUENCE OF DIFFERENTIAL MODAL GAIN ON THE FILAMENTARY BEHAVIOR OF BROAD AREA DIODE LASERS	567
<i>Winterfeldt, M. ; Crump, P. ; Knigge, S. ; Maassdorf, A. ; Erbert, G. ; Trankle, G.</i>	
GAIN-CURRENT RELATIONSHIPS IN QUANTUM-DOT AND QUANTUM-WELL LASERS: THEORY AND EXPERIMENT	569
<i>Chow, W.W. ; Liu, A.Y. ; Gossard, A.C. ; Bowers, J.E. ; Jahnke, F.</i>	
MONOLITHIC INTEGRATION OF A HIGH POWER SEMICONDUCTOR MASTER OSCILLATOR POWER AMPLIFIER	571
<i>Faugeron, M. ; Vilera, M. ; Perez-Serrano, A. ; Tijero, J.M.G. ; Esquivias, I. ; Krakowski, M. ; van Dijk, F.</i>	
INASP QUANTUM DOT LASERS	573
<i>Karomi, I. ; Shutts, S. ; Snowton, P.M. ; Krysa, A.B. ; Beanland, R.</i>	
FIRST DEMONSTRATION OF INGAP/INALGAP BASED 608NM ORANGE LASER AND 583NM YELLOW SUPERLUMINESCENT DIODE	575
<i>Majid, M.A. ; Al-Jabr, A.A. ; Oubei, H.M. ; Alias, M.S. ; Ng, T.K. ; Anjum, D.H. ; Ooi, B.S.</i>	

GAIN AND SPONTANEOUS EMISSION CHARACTERISTICS OF ALINN QUANTUM WELL FOR DEEP ULTRAVIOLET EMITTERS	577
<i>Chee-Keong Tan ; Tansu, N.</i>	
PHYSICAL MODEL FOR INDIUM-RICH INGAN/GAN SELF-ASSEMBLED QUANTUM DOT RIDGE-WAVEGUIDE LASERS EMITTING AT RED WAVELENGTHS ($\lambda\sim 630$ NM)	579
<i>Guan-Lin Su ; Frost, T. ; Bhattacharya, P. ; Dallesasse, J.M.</i>	
LOW MODULATION BIAS INGAN-BASED INTEGRATED EA-MODULATOR-LASER ON SEMIPOLAR GAN SUBSTRATE	581
<i>Chao Shen ; Leonard, J. ; Pourhashemi, A. ; Oubei, H. ; Alias, M.S. ; Tien Khee Ng ; Nakamura, S. ; DenBaars, S.P. ; Speck, J.S. ; Alyamani, A.Y. ; Eldesouki, M.M. ; Ooi, B.S.</i>	
HIGH PERFORMANCE INGAN/(IN)GAN QUANTUM DOT ($\lambda=630$ NM) LASERS	583
<i>Frost, T. ; Hazari, A. ; Bhattacharya, P.</i>	
HIGH PERFORMANCE 1060 NM VCSEL	585
<i>Kasukawa, A. ; Kawakita, Y.</i>	
COHERENT OPERATION OF 2\times2 VERTICAL CAVITY LASER ARRAY BY RESONANCE TUNING	589
<i>Thompson, B. ; Siriani, D.F. ; Choquette, K.D.</i>	
ANALYSIS OF MODULATION RESPONSE AND LOCKING RANGE DYNAMICS FOR COHERENTLY COUPLED PHASED, VERTICAL CAVITY LASER ARRAYS	591
<i>Fryslie, S.T.M. ; Choquette, K.D.</i>	
III-V-ON-SILICON PHOTONIC INTEGRATED CIRCUITS FOR COMMUNICATION AND SENSING APPLICATIONS	593
<i>Roelkens, G. ; Abassi, A. ; Keyvaninia, S. ; Uvin, S. ; Van Gasse, K. ; Wang, Z. ; Dave, U. ; Kuyken, B. ; Morthier, G. ; Van Thourhout, D.</i>	
CONTINUOUS-WAVE EMISSION OF III-V QUANTUM DOT LASERS GROWN DIRECTLY ON SI SUBSTRATES	595
<i>Shutts, S. ; Elliott, S.N. ; Snowton, P.M. ; Sobiesierski, A. ; Jiang Wu ; Mingchu Tang ; Huiyun Liu ; Beanland, R.</i>	
OPTICAL FEEDBACK SENSITIVITY OF HYBRID III-V SILICON LASERS	597
<i>Schires, K. ; Girard, N. ; Baili, G. ; Duan, G.H. ; Grillot, F.</i>	
DESIGN AND CHARACTERIZATION OF PHOTONIC CRYSTAL BANDEDGE SURFACE-EMITTING LASERS ON SILICON	599
<i>Deyin Zhao ; Shihchia Liu ; Hongjun Yang ; Zhenqiang Ma ; Reuterskiold-Hedlund, C. ; Hammar, M. ; Weidong Zhou</i>	
50-GB/S DIRECTLY MODULATED INGAALAS DFB LASERS FOR DATACOM APPLICATIONS	601
<i>Nakahara, K. ; Kitatani, T. ; Fukamachi, T. ; Sakuma, Y. ; Tanaka, S.</i>	
PERIODIC AND APERIODIC PULSATION REGIMES IN OPTICALLY INJECTED DISTRIBUTED FEEDBACK LASERS	603
<i>Aldaya, I. ; Campuzano, G. ; Gosset, C. ; Castañon, G.</i>	
PATTERNS OF MICROWAVE FREQUENCY SWITCHING AND BISTABILITY IN AN INJECTED QD DFB LASER	605
<i>Hurtado, A. ; Raghunathan, R. ; Henning, I.D. ; Adams, M.J. ; Lester, L.F.</i>	
NON-LINEAR AND DYNAMIC PROPERTIES OF MOVPE-GROWN INAS/INP QUANTUM-DOT AND QUANTUM-DASH FABRY-PEROT LASERS	607
<i>Sadeev, T. ; Huang, H. ; Shires, K. ; Arsenijevic, D. ; Grillot, F. ; Bimberg, D.</i>	
HIGH MODULATION EFFICIENCY OF SUB-MILLIAMPERE THRESHOLD GAIN/INP MEMBRANE DFB LASER	609
<i>Inoue, D. ; Hiratani, T. ; Fukuda, K. ; Tomiyasu, T. ; Amemiya, T. ; Nishiyama, N. ; Arai, S.</i>	
WIDELY TUNABLE SEMICONDUCTOR LASERS AND TRANSMITTERS	611
<i>Masanovic, M.L. ; Johansson, L.A.</i>	
AN ELECTRICALLY PUMPED POLARITON LASER	613
<i>Hoffing, S. ; Amthor, M. ; Rahimi-Iman, A. ; Na Young Kim ; Fischer, J. ; Savenko, I.G. ; Kulakovski, V.D. ; Shelykh, I.A. ; Reitzenstein, S. ; Forchel, A. ; Yamamoto, Y. ; Kamp, M. ; Schneider, C.</i>	
LIGHT-ACTUATED OPTOFLUIDICS	617
<i>Wu, M.C.</i>	
COMPACT SILICON PHOTONIC REFRACTOMETRIC SENSOR FOR ATMOSPHERIC CO₂ GAS MONITORING	619
<i>Guangcan Mi ; Horvath, C. ; Aktary, M. ; Van, V.</i>	
A UNIVERSAL SURFACE-ENHANCED RAMAN SPECTROSCOPY SUBSTRATE FOR "ALL" EXCITATION WAVELENGTHS	621
<i>Nan Zhang ; Kai Liu ; Haomin Song ; Xie Zeng ; Dengxin Ji ; Qiaoqi Gan</i>	
COHERENT ANTI-STOKES RAMAN SPECTROSCOPY ON CHIP	623
<i>Clemmen, S. ; Haoan Zhao ; Peyskens, F. ; Dhakal, A. ; Wuytens, P. ; Subramanian, A.Z. ; Le Thomas, N. ; Baets, R.</i>	
SPATIALLY RESOLVED DIFFUSE REFLECTANCE SI PROBES FOR TISSUE CHARACTERIZATION OVER A WIDE SCATTERING RANGE	625
<i>Senlik, O. ; Jokerst, N.M.</i>	
DISCRETE-FREQUENCY INFRARED MICROSPECTROSCOPY USING MONOLITHICALLY INTEGRATED PHOTONIC FILTERS	627
<i>Jui-Nung Liu ; Bhargava, R. ; Cunningham, B.T.</i>	
ULTRAFAST COHERENT OPTICAL SIGNAL PROCESSING USING STABILIZED OPTICAL FREQUENCY COMBS FROM MODE-LOCKED SEMICONDUCTOR DIODE LASERS	631
<i>Delfyett, P.J. ; Bhooplapur, S. ; Klee, A.C. ; Sarailou, E.</i>	

MODE LOCKED LASERS FOR MICROWAVE PHOTONICS APPLICATIONS	633
<i>van Dijk, F. ; Faugeron, M. ; Brenot, R. ; Maxin, J. ; Pillet, G. ; Morvan, L. ; Baili, G.</i>	
QUANTUM-DOT MODE-LOCKED LASERS FOR MICROWAVE-SIGNAL GENERATION AND 160 GB/S OPTICAL COMMUNICATION	635
<i>Arsenijevic, D. ; Schmeckeber, H. ; Kleinert, M. ; Rouvalis, E. ; Ziegler, R. ; Steffan, A.G. ; Bimberg, D.</i>	
TBIT/S TRANSMISSION BASED ON MODE LOCKED LASER FREQUENCY COMB SOURCES	637
<i>Vujicic, V. ; Calo, C. ; Watts, R. ; Lelarge, F. ; Browning, C. ; Merghem, K. ; Marlinez, A. ; Ramdane, A. ; Barry, L.P.</i>	
RESONANT MODE-LOCKING VIA DELAYED FEEDBACK IN QUANTUM DOT SEMICONDUCTOR LASERS	639
<i>Kelleher, B. ; Goulding, D. ; Tykalewicz, B. ; Hegarty, S.P. ; Huyet, G. ; Erneux, T. ; Viktorov, E.A.</i>	
114 SPACE-DIVISION-MULTIPLEXED WDM TRANSMISSION USING 6-MODE 19-CORE FIBERS	643
<i>Igarashi, K. ; Tsuritani, T. ; Morita, I. ; Suzuki, M.</i>	
LARGE-SCALE, HETEROGENEOUS, FEW-MODE MULTI-CORE FIBER TECHNOLOGIES WITH OVER 100 SPATIAL CHANNELS	645
<i>Sakaguchi, J. ; Klaus, W. ; Delgado Mendinueta, J.-M. ; Puttnam, B.J. ; Luis, R.S. ; Awaji, Y. ; Wada, N.</i>	
COMPACT MULTIPLEXERS FOR SPACE-DIVISION MULTIPLEXING	647
<i>Haoshuo Chen ; Fontaine, N.K. ; Ryf, R.</i>	
POLARIZATION DIVERSIFIED INTEGRATED CIRCUITS FOR ORBITAL ANGULAR MOMENTUM MULTIPLEXING	649
<i>Binbin Guan ; Chuan Qin ; Scott, R.P. ; Fontaine, N.K. ; Tiehui Su ; Proietti, R. ; Yoo, S.J.B.</i>	
SPACE DIVISION MULTIPLEXING OF BLUE LASERS FOR UNDERSEA COMMUNICATIONS	653
<i>Johnson, E. ; Baghdady, J. ; Byrd, M. ; Wenzhe Li ; Morgan, K. ; Pung, A. ; Miller, K.</i>	

ADDITIONAL PAPERS

EFFICIENT NANOSCALE PHOTONIC DEVICES AND MONOLITHIC ELECTRONIC-PHOTONIC SUBSYSTEMS IN SUB-100 NM SOI CMOS	657
<i>Pavanello, F. ; Wade, M.T. ; Notaros, J. ; Shainline, J.M. ; Poulton, C.V. ; Chen Sun ; Georgas, M. ; Alloatti, L. ; Atabaki, A. ; Kumar, R. ; Moss, B. ; Lin, S. ; Ram, R.J. ; Stojanovic, V. ; Popovic, M.A.</i>	
BROADBAND WAVELENGTH-MULTIPLEXED ENTANGLED SOURCES FROM MONOLITHIC SEMICONDUCTOR CHIPS	659
<i>Dongpeng Kang ; Anirban, A. ; Helmy, A.S.</i>	
TRANSIENT RECONFIGURABLE SUBANGSTROM-PRECISE PHOTONIC CIRCUITS AT THE OPTICAL FIBER SURFACE	661
<i>Dmitriev, A. ; Toropov, N. ; Sumetsky, M.</i>	
SINGLE-CARRIER ALL-ETDM 1.08-TERABIT/S LINE RATE PDM-64-QAM TRANSMITTER USING A HIGH-SPEED 3-BIT MULTIPLEXING DAC	663
<i>Raybon, G. ; Adamiecki, A. ; Cho, J. ; Winzer, P. ; Konczykowska, A. ; Jorge, F. ; Dupuy, J.-Y. ; Riet, M. ; Duval, B. ; Kim, K. ; Randel, S. ; Piloni, D. ; Guan, B. ; Fontaine, N. ; Burrows, E.C.</i>	
FIRST REAL-TIME COHERENT MIMO-DSP FOR SIX COUPLED MODE TRANSMISSION	665
<i>Randel, S. ; Corteselli, S. ; Badini, D. ; Piloni, D. ; Caelles, S. ; Chandrasekhar, S. ; Gripp, J. ; Chen, H. ; Fontaine, N.K. ; Ryf, R. ; Winzer, P.J.</i>	

Author Index