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Contents

xiii	Authors
xix	Conference Committee
xxiii	Introduction
XXV	Sponsors
TOPIC 1	PHYSICAL SENSING
9655 02	Multi-channel optical gap sensor based on spectrally resolved interferometry [9655-44]
9655 03	Imaging spectrophotometer for 2D spatially resolved measurements of spectral reflectance of materials [9655-53]
9655 04	Distributed feedback fiber laser for sub-nanostrain-resolution static strain measurement by use of swept beat-frequency demodulation [9655-56]
9655 05	Performance of closed-loop resonant micro-optic gyro with hybrid digital phase modulation [9655-69]
9655 06	Polarimetric fiber vibration sensor based on polarization-diversity loop structure [9655-74]
9655 07	Fiber optic Doppler velocimeter based on a dual-polarization fiber grating laser [9655-100]
9655 08	Optical fiber temperature sensor with mK resolution and absolute frequency reference [9655-106]
9655 09	Feature regulation and applications of M-FBG by laser ablation [9655-110]
9655 0A	High-sensitivity strain sensors based on in-fiber reshaped air bubbles [9655-122]
9655 OB	A dual channel method for simultaneous evaluation in two branches of a multi-functional integrated optic chip [9655-123]
9655 OC	Optimized Phase Generated Carrier (PGC) demodulation algorithm insensitive to C value [9655-126]
9655 OD	Sagnac interferometer based stable phase demodulation system for diaphragm based acoustic sensor [9655-129]
9655 OE	Single layered flexible photo-detector based on perylene/graphene composite through printed technology [9655-137]
9655 OF	Stretchable photo sensor based on graphene/perylene composite utilizing electrohydrodynamic fabrication technique [9655-140]

9655 0G	High-sensitivity gas pressure sensors based on in-fiber devices [9655-141]
9655 OH	An implementation of non-contact optical fiber displacement sensor using bidirectional modulation of a Mach-Zehnder electro-optical modulator [9655-166]
9655 OI	Hybrid air-core photonic bandgap fiber ring resonator and implications for resonant fiber optic gyro [9655-181]
9655 OJ	Research of the differential-type optical fiber F-P vibration sensor with large frequency range [9655-191]
9655 OK	Improvement in topology measurement accuracy of atomic force microscope using additional sensor [9655-196]
9655 OL	A fiber optic cure monitoring technique with accuracy improvement of distorted embedded sensors [9655-197]
9655 OM	Pressure sensing of Fabry-Perot interferometer with a microchannel demodulated by a FBG [9655-199]
9655 ON	A hybrid fiber optic sensor system for condition monitoring of large scale wind turbine blades [9655-213]
9655 00	Hetero-core fiber optic tactile sensor for accurate discrimination of texture and hardness [9655-215]
9655 OP	SpiderSpec: a low-cost compact colorimeter with IoT functionality [9655-230]
9655 OQ	Dispersion characterization of group birefringence in polarization-maintaining fiber using a Kerr phase-interrogator [9655-233]
9655 OR	Sensing properties of periodic stack of nano-films deposited with various vapor-based techniques on optical fiber end-face [9655-238]
9655 OS	Simple top down imaging measurement of contact angle for practical assessment of hydrophilic surfaces [9655-258]
9655 OT	Optical imaging of air and water bubbles flowing through oil [9655-259]
9655 OU	Multipoint vibration sensing using fiber Bragg gratings and optical frequency domain reflectometry [9655-274]
9655 OV	Slope-assisted complementary-correlation optical time-domain analysis of Brillouin dynamic gratings for high sensitivity, high spatial resolution, fast and distributed fiber strain sensing [9655-280]
9655 OW	Fiber optic flowmeter based on distributed feedback fiber laser [9655-289]
9655 OX	Fiber Bragg grating ultrasonic sensors based on intensity modulation technique (Invited Paper) [9655-308]

TOPIC 2	CHEMICAL AND GAS SENSING
9655 OY	Optical oxygen sensor based on time-resolved fluorescence [9655-4]
9655 OZ	Methanol selective fibre optic gas sensor with a nanoporous thin film of organic-inorganic hybrid multilayers [9655-46]
9655 10	A tapered optical fiber interferometer study on the microdynamics phase separation mechanism of the poly(N-isopropylacrylamide) aqueous solution [9655-83]
9655 11	Fluorescent measurements of Zn²+ on a smartphone [9655-112]
9655 12	In-line chemical sensor based on C-type fiber and novel photonic crystal fibers with high sensitivity and fast dynamic response [9655-116]
9655 13	Microfiber Bragg grating hydrogen sensor base on co-sputtered Pd/Ni composite film [9655-119]
9655 14	Perpendicular coupling glass capillary based interferometric real-time microfluidic sensor [9655-125]
9655 15	Multi-point hydrogen detection system using hetero-core structured optical fiber hydrogen tip sensor based on surface plasmon resonance and pseudorandom noise code correlation reflectometry [9655-152]
9655 16	Optical characteristics of pesticides measured by terahertz time domain spectroscopy [9655-157]
9655 17	A new fiber-tip Fabry-Perot interferometer and its application for pressure measurement [9655-171]
9655 18	U-shaped evanescent wave optical fibre sensor based on a porphyrin anchored nanoassembled thin film for high sensitivity ammonia detection [9655-203]
9655 19	Nanocrystalline diamond microelectrode on fused silica optical fibers for electrochemical and optical sensing [9655-239]
9655 1A	Selective vapor detection of an integrated chemical sensor array [9655-268]
9655 1B	Differentiation of vapor mixture with chemical sensor arrays (Invited Paper) [9655-305]
TOPIC 3	BIOLOGICAL/BIOMEDICAL SENSING AND IMAGING
9655 1C	A novel single fiber optical tweezers based on light-induced thermal effect [9655-23]
9655 1D	A mode-division-multiplexing single fiber optical tweezers [9655-25]
9655 1E	Polymer fiber Bragg grating force sensors for minimally invasive surgical devices [9655-67]

7633 17	interferometer [9655-88]
9655 1G	Terahertz spectral characteristics of biological tissues [9655-132]
9655 1H	Fabrication and characterization of V-groove liquid core waveguide [9655-153]
9655 11	Highly sensitive terahertz sensor for glucose detection [9655-156]
9655 1J	Accurate and <i>in situ</i> monitoring of bacterial concentration using a real time all-fibre spectroscopic device [9655-158]
9655 1K	Optical fiber sensing of human skin emanations [9655-179]
9655 1M	Holographic 3D fluorescence microscopy (Invited Paper) [9655-235]
9655 1N	Orthodontic mechanics using mini-implant measured by FBG [9655-237]
9655 10	A single-shot 2D/3D simultaneous imaging microscope based on light field microscopy [9655-262]
9655 1P	Biomedical sensing and imaging for the anterior segment of the eye (Invited Paper) [9655-296]
9655 1Q	Surface plasmon scattering: an alternative approach for optical fibers biosensors (Invited Paper) [9655-303]
	(invited raper) [7600-3003]
TOPIC 4	INTEGRATED TECHNOLOGIES FOR SENSING
TOPIC 4 9655 1R	
	INTEGRATED TECHNOLOGIES FOR SENSING
9655 1R	INTEGRATED TECHNOLOGIES FOR SENSING Polarization-sensitive plasmonic hot spot tuning with nanoslit arrays [9655-37] Quantum opto-mechanical coupling model for fiber micro-cantilever beam damping
9655 1R 9655 1S	INTEGRATED TECHNOLOGIES FOR SENSING Polarization-sensitive plasmonic hot spot tuning with nanoslit arrays [9655-37] Quantum opto-mechanical coupling model for fiber micro-cantilever beam damping noise reduction [9655-48]
9655 1R 9655 1S 9655 1T	INTEGRATED TECHNOLOGIES FOR SENSING Polarization-sensitive plasmonic hot spot tuning with nanoslit arrays [9655-37] Quantum opto-mechanical coupling model for fiber micro-cantilever beam damping noise reduction [9655-48] A novel twin-core fiber connector [9655-51]
9655 1R 9655 1S 9655 1T 9655 1U	INTEGRATED TECHNOLOGIES FOR SENSING Polarization-sensitive plasmonic hot spot tuning with nanoslit arrays [9655-37] Quantum opto-mechanical coupling model for fiber micro-cantilever beam damping noise reduction [9655-48] A novel twin-core fiber connector [9655-51] Side polished twin-core fiber coupler [9655-57]
9655 1R 9655 1S 9655 1T 9655 1U 9655 1V	INTEGRATED TECHNOLOGIES FOR SENSING Polarization-sensitive plasmonic hot spot tuning with nanoslit arrays [9655-37] Quantum opto-mechanical coupling model for fiber micro-cantilever beam damping noise reduction [9655-48] A novel twin-core fiber connector [9655-51] Side polished twin-core fiber coupler [9655-57] Twin-core fiber end polish technique for particle trapping [9655-61] Ultra-sensitive temperature sensor based on liquid crystal infiltrated photonic crystal fibers
9655 1R 9655 1S 9655 1T 9655 1U 9655 1V 9655 1W	INTEGRATED TECHNOLOGIES FOR SENSING Polarization-sensitive plasmonic hot spot tuning with nanoslit arrays [9655-37] Quantum opto-mechanical coupling model for fiber micro-cantilever beam damping noise reduction [9655-48] A novel twin-core fiber connector [9655-51] Side polished twin-core fiber coupler [9655-57] Twin-core fiber end polish technique for particle trapping [9655-61] Ultra-sensitive temperature sensor based on liquid crystal infiltrated photonic crystal fibers [9655-94] All-fiber Sagnac loop hybrid interferometer based on a highly birefringent photonic crystal

9655 20	Grating decoupler of channel plasmon polariton waveguide for optical intergrated circuit application [9655-164]
9655 21	High performance refractive index sensing in multimode plasmonic waveguide [9655-165]
9655 22	Study on the strain characteristic of fiber optic flexural disk accelerometer [9655-175]
9655 23	Single-shot, long-range, and zoomable optical tomography and profilometry using a diffraction grating and a CCD camera [9655-188]
9655 24	Modal analysis of rotating plate using tracking laser Doppler vibrometer: algorithm modification [9655-209]
9655 25	Multi-channel measurement for hetero-core optical fiber sensor by using CMOS camera [9655-216]
9655 26	Linear polarization sensor with modified Shack-Hartmann wave-front sensor [9655-266]
9655 27	Microbubble resonators as enhancement platforms for linear and nonlinear applications (Invited Paper) $[9655-298]$
TOPIC 5	SPECIALTY OPTICAL FIBERS FOR SENSING
9655 28	Design of a high-birefringence two-core photonic crystal fiber for simultaneous measurement of pressure and temperature [9655-8]
9655 29	Simplified correlation-domain Brillouin sensor using plastic optical fiber [9655-10]
9655 2A	Strain characteristics of selectively infiltrated photonic crystal fibers [9655-22]
9655 2B	Supercontinuum generation through DNA-filled hollow core fiber for broadband absorption spectroscopy [9655-45]
9655 2C	Building a lab-in/on-fiber (Invited Paper) [9655-47]
9655 2D	Heterodyning fiber laser based magnetic field sensor using magnetostrictive composite material [9655-78]
9655 2E	Preparation of ytterbium-doped silica optical fiber using MCVD process with chelate precursor [9655-91]
9655 2F	Excitation characteristics of seven-core fiber in splicing process [9655-104]
9655 2G	Temperature sensitivity of the inline interferometer based on a two-core photonic crystal fiber selectively filled with polymer [9655-117]
9655 2H	A high-sensitivity chemical sensor based on titania coated optical-fiber long period grating for ammonia sensing in water [9655-120]
9655 21	Modal-interference-based temperature sensing using plastic optical fibers: markedly enhanced sensitivity near glass-transition temperature [9655-159]

9655 2J	Sensing nanometric displacement of a micro-/nano-fiber induced by optical forces by use of white light interferometry [9655-162]
9655 2K	Performance evaluation of an ultra-thin fiber optic dosimeter using therapeutic photon beams [9655-163]
9655 2L	A fiber optic spectrometer produced by a femtosecond 400-nm second harmonic Ti:sapphire laser [9655-194]
9655 2M	Self Q-switching of a bismuth doped silica fiber operating at 1.46 µm [9655-248]
9655 2N	A microdroplet-etched fiber Fabry-Perot resonator for the refractive index sensing [9655-249]
9655 20	Improvement of radiation resistance of Er-doped photonic crystal fiber source by spectrum trimming [9655-250]
9655 2P	Sensing characteristics of all-solid photonic bandgap fiber modal interferometers [9655-252]
9655 2Q	Design for an ultra-broad band single-polarization single-mode photonic crystal fiber based on the zero-order Surface Plasmon Polariton mode [9655-256]
9655 2R	Sensing characteristics of Brillouin scattering spectra in a micro-scaled silica fiber [9655-285]
9655 2S	Optical Bragg grating sensor fibers for ultra-high temperature applications (Invited Paper) [9655-297]
TOPIC 6	GRATING AND COMPONENT TECHNOLOGIES FOR SENSING
9655 2T	Regenerated long period gratings (LPGs) in boron-codoped germanosilicate optical fibre [9655-11]
9655 2U	The characteristic of gap FBG and its application [9655-34]
9655 2V	Sensitive strain sensor based on regenerated microfiber Bragg grating for high temperature environment [9655-39]
9655 2W	Pattern matching based smart interrogation algorithm for fiber Bragg gratings inscribed by femtosecond laser [9655-65]
9655 2X	Beat frequency dependence of the sensitivity for Faraday-rotation based heterodyning fiber laser magnetic field sensor [9655-89]
9655 2Y	Noise performance improvement of dual-polarization fiber grating laser through external optical feedback [9655-101]
9655 2Z	Fabrication of fiber Bragg gratings in embedded-core hollow optical fiber [9655-109]

9655 30	Theoretical and experimental study on crosstalk caused by multiple reflections in identical weak fiber Bragg grating array [9655-113]
9655 31	Planar waveguide Michelson interferometer fabricated by using 157nm mask laser micromachining [9655-124]
9655 32	Tunable plasmonic characteristics at asymmetric double metal caps on a dielectric nanosphere [9655-154]
9655 33	Chirality measurements using optical fibre long period gratings fabricated in high birefringent fibre [9655-205]
9655 35	Long period grating sensors response to photosensitive bacteriorhodopsin coating [9655-218]
9655 36	Novel two-dimensional single-shot optical imaging system by VIPA-comb interferometry [9655-240]
9655 37	Temperature and strain measurement by using cascaded chirped long period fiber gratings [9655-251]
9655 38	High-resolution compact dual-frequency fiber laser accelerometer [9655-253]
9655 39	Combining regenerated gratings and optical fibre Fabry-Pérot cavities for dual sensing of ultra-high temperature and strain [9655-278]
TOPIC 7	NOVEL MATERIALS FOR SENSING
TOPIC 7 9655 3A	NOVEL MATERIALS FOR SENSING Metal ion sensing solution containing double crossover DNA [9655-160]
9655 3A	Metal ion sensing solution containing double crossover DNA [9655-160] Fiber temperature sensor with nanostructured cladding by TiO ₂ nanoparticles self-
9655 3A 9655 3B	Metal ion sensing solution containing double crossover DNA [9655-160] Fiber temperature sensor with nanostructured cladding by TiO ₂ nanoparticles self-assembled onto a side polished optical fiber [9655-169]
9655 3A 9655 3B 9655 3C	Metal ion sensing solution containing double crossover DNA [9655-160] Fiber temperature sensor with nanostructured cladding by TiO ₂ nanoparticles self-assembled onto a side polished optical fiber [9655-169] Study on the electrical control of graphene with single-stranded DNA [9655-272]
9655 3A 9655 3B 9655 3C 9655 3D	Metal ion sensing solution containing double crossover DNA [9655-160] Fiber temperature sensor with nanostructured cladding by TiO ₂ nanoparticles self-assembled onto a side polished optical fiber [9655-169] Study on the electrical control of graphene with single-stranded DNA [9655-272] Measurement of mechanoluminescence radiance of ZnS:Mn [9655-279]
9655 3A 9655 3B 9655 3C 9655 3D 9655 3E	Metal ion sensing solution containing double crossover DNA [9655-160] Fiber temperature sensor with nanostructured cladding by TiO ₂ nanoparticles self-assembled onto a side polished optical fiber [9655-169] Study on the electrical control of graphene with single-stranded DNA [9655-272] Measurement of mechanoluminescence radiance of ZnS:Mn [9655-279] Fabrication of printed ITO sensor for the ammonia hydroxide detection [9655-354] Recent advances on optical reflectometry for access network diagnostics and distributed
9655 3A 9655 3B 9655 3C 9655 3D 9655 3E 9655 3F	Metal ion sensing solution containing double crossover DNA [9655-160] Fiber temperature sensor with nanostructured cladding by TiO ₂ nanoparticles self-assembled onto a side polished optical fiber [9655-169] Study on the electrical control of graphene with single-stranded DNA [9655-272] Measurement of mechanoluminescence radiance of ZnS:Mn [9655-279] Fabrication of printed ITO sensor for the ammonia hydroxide detection [9655-354] Recent advances on optical reflectometry for access network diagnostics and distributed sensing [9655-398]

9655 3J	High resolution optical time-domain reflectometry based on correlation utilizing an all-fiber chaotic source [9655-105]
9655 3K	Spectrum zooming in network topology based on a white light fiber optic Mach-Zehnder interferometer [9655-145]
9655 3L	Brillouin optical correlation domain reflectometry with lock-in detection scheme (Invited Paper) [9655-161]
9655 3M	A comparative study for massive data compression in long-distance distributed optical fiber sensing systems [9655-204]
9655 3N	Characterization of temperature-dependent birefringence in polarization maintaining fibers based on Brillouin dynamic gratings [9655-231]
9655 3P	A novel optical coherent domain reflectometer with dual frequency modulation [9655-275]
TOPIC 9	ENVIRONMENTAL AND STRUCTURAL MONITORING
9655 3R	High performance fiber optic sensor based on self referenced FBGs and high-speed dual-wavelength pulse coding [9655-81]
9655 3S	Fe(C)-coated optical fiber sensors for corrosion alarm monitoring [9655-128]
9655 3T	Fiber optic ultrasonic sensing systems using PS-FBG for damage monitoring in composite materials (Invited Paper) [9655-174]
9655 3U	Multi-scale wavelet decomposition and its application in distributed optical fiber fences [9655-176]
9655 3V	A fiber optic epoxy cure monitoring technique by using a wavelength-swept laser [9655-208]
9655 3W	Ultrahigh-sensitivity temperature sensor based on in-fiber Fabry-Perot interferometer [9655-217]
9655 3X	Temperature and strain dependence of the Brillouin frequencies in tapered optical fiber [9655-270]
9655 3Y	Safety monitoring of the FBG sensor in respect of radioactivity and deformation measurement of a silo structure for radioactive waste disposal [9655-283]
9655 3Z	Design and performance analysis of front end optical instrument for coastal water remote sensing [9655-287]
TOPIC 10	INDUSTRIAL APPLICATIONS, FIELD TRIALS AND STANDARDIZATION
9655 40	Whole optic fiber weighing technique and device of belt conveyor [9655-7]
/ UUU - TU	Trible opine liber treigining recrimique and defice of ben confeçor [7000=7]

9655 41	Two-phase flow measurement based on oblique laser scattering [9655-80]
9655 42	Comparisons between co-axial and bi-axial optical systems for time-of-flight based laser scanners [9655-168]
9655 43	A hydrostatic leak test for water pipeline by using distributed optical fiber vibration sensing system [9655-246]
9655 44	Multilayered film monitoring using terahertz reflective time-domain spectroscopy [9655-290]
9655 45	New trends and applications of optical fiber sensing technologies at the NEL-FOST [9655-394]
	POST-DEADLINE PAPERS
9655 46	In-fiber whispering gallery mode resonator fabricated by femtosecond laser micromaching [9655-400]
9655 46 9655 47	
	micromaching [9655-400] High performance distributed acoustic sensor using cyclic pulse coding in a direct

Authors

Numbers in the index correspond to the last two digits of the six-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first four digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Aharoni, Abraham, 3D Ali, Shawkat, OE, OF Ast, Sandra, 11, 1Z Bae, Jinho, OE, OF Baker, Chams, 0Q Baldi, Massimo, OP Banh, Q. T., 23 Bao, Haihong, 31 Bao, Xiaoyi, OQ Bartelt, Hartmut, 2S Bergman, A., 0V Berneschi, Simone, 27 Bogdanowicz, Robert, 19 Botsev, Yakov, 31 Callaghan, Dean, 1E

Canning, John, 0S, 11, 1Z, 2T, 39

Cao, Beibei, 2E Cao, Qian, 38 Chang, Jiho, 3E Chen, Gongdai, 1T, 2F Chen, J., 08 Chen, Liang, 0J Chen, Su, 2E

Chen, Xue, 0M Chen, Zhe, 2J, 3B Cheng, Cheng, 13

Cheng, Linghao, 07, 2D, 2X, 2Y, 38

Cheng, M., 1J Cho, Seong-Kyu, 3Y Cho, Youngho, 2B, 3A Choi, Jaebin, 1A, 1B, 3C Choi, Jindoo, 44

Choi, Jong-Kuk, 3Z Choi, Sang-Jin, 0H Chu, Cheng-Shane, 0Y Chu, Ssu-Wei, 0Y Chung, Youngchul, 11 Chung, Youngioo, 1X, 2G Churkin, D. V., 3J, 48 Ciaccheri, Leonardo, OP Clark, David C., 1M

Cook, Kevin, 11, 1Z, 2T, 39 Dai, Jixiang, 13 Dai, Yutang, 09 da Silva, Marco J., 0T, 41 Deng, Ming, 14, 1Y, 46 de Oliveira, Walmir, 1N Ding, Liyun, 45

Ding, Mingfei, 1F

Di Pasquale, Fabrizio, 3R, 47

Dong, Huazhuo, 2J Du, Chenlin, 0M

Du, Jiangbing, 08, 3F, 3P

Dugasani, Sreekantha Reddy, 3A

Dutra, Guilherme, 0S, 0T Elsmann, Tino, 2S Eom, Tae Joong, 1P Eyal, Avishay, 31 Fan, M. Q., 3J, 48 Fan, Xinyu, 08, 3F, 3P Faralli, Stefano, 47 Farnesi, Daniele, 27

Farrell, Gerald, 1E Feng, Zi-Wei, 28 Ferhati, Mokhtar, 3K Ficek, Mateusz, 19 Firek, Piotr, OR Fischer, Robert, 41 François, A., 1Q Gabai, Haniel, 31 Gao, Min, 3S Gao, Shuai, 2V

Geng, Mengmei, 2N, 2P Gnyba, Marcin, 19 Gong, Yuan, 39 Goya, K., 2L

Guan, Bai-Ou, 07, 10, 1F, 28, 2D, 2N, 2P, 2R, 2V,

2X, 2Y, 38

Guan, Chunying, 2F, 2Z Guariza Filho, Odilon, 1N Guo, Donglai, 3S

Guo, Huivona, 30 Habisreuther, Tobias, 2S Hahami, Meir, 31 Han, Ya, 2Q Hayashi, Neisei, 29, 21

He, Jun, 1W, 2W, 3W He, Wei, 2D He, Zuyuan, 08, 3F, 3P Hoffmann, P., 1Q Hosoki, Ai, 15

Hossain, Md. Arafat, 11, 1Z

Hosseinzadeh Kassani, Sahar, 12, 1H

Hotate, Kazuo, 3L Hou, Lu, OB, 22 Hu, Jun, 2U Hu, Nengpeng, 2X Hu, Pan, 0J

Hu, Peng, 2E Kim, Hwi, 26 Kim, Hyeon-Ho, 0H Hu, Qifan, 49 Hu, Wenbin, 3S Kim, Hvo-Suk, 11 Huang, Chujia, 45 Kim, Hyung Min, 2B Huang, Dongmei, 46 Kim, Hyunjin, OL, ON, 3V Huang, Hankai, 2J Kim, J. S., 2K Huang, Jun, 09 Kim, J. S., 2K Huang, Quandong, 0M Kim, Jae Hun, 1A, 1B, 2B, 3A, 3C Huang, Wei, 46 Kim, Jonghyun, 1M, 1O Huang, Wenzhu, 04, 0W Kim, Joonsoo, 21 Huang, Yijian, 1W Kim, Junsup, OK Huang, Yun-Yun, 10, 1F, 2N, 2P, 2V Kim, Ki-Soo, 3Y Hwang, J. H., 1H Kim, Kyuho, 1R Hwang, Sungui, 42 Kim, Kyung-Soo, 44 Hyun, Sangwon, 3Z Kim, Myung K., 1M Igawa, Hirotaka, 15 Kim, Sang Kyung, 1B Itoh, T., 2L Kim, Soohyun, 44 Jamalipour, Abbas, 11, 1Z Kim, Sug-Whan, 3Z James, S. W., 18, 1K, 2H, 33, 35 Kim, Sun-Je, 1R Jang, Changwon, 1M Kim, Yong Hyun, 3N Jang, J. S., 2K Kim, Young June, 1A, 3C Jang, Junhwan, 42 Kim, Young Suk, 06 Jang, K. W., 2K Kim, Youngmin, 10 Jeon, H., 2K Kishi, Masato, 3L Jeon, Keum-Soo, OH Klantsataya, E., 1Q Jeong, Jiseong, OK Klinger-Hoffmann, M., 1Q Jeong, Kyu Hwang, 3X Koba, Marcin, OR Jeong, Youngmo, 10 Kobelke, Jens, 12 Jhon, Young Miin, 3A Koo, Jieun, 3E Jiang, Desheng, 30 Korposh, S., 18, 1K, 2H, 33, 35 Jiang, Yuan, 31 Kosakai, T., 23 Jiang, Zhao-feng, 1G Koyama, Yuya, 00, 25 Jin, Long, 2D, 2N, 2V, 38 Kuang, Zeyuang, 07 Jin, Wei, 0D, 2U Kwon, G., 2K Kwon, Hyounghan, 20 Jin, Zhonghe, 05, 01 Jo, Songhyun, 06 Kwon, Won Sik, 44 Joo, B., 1H Langer, T., 0V Joo, Choun-Ki, 1P Lao, Yiqin, 2Y Joo, Ki-Nam, 02 Lee, B., 2K Jun, Seong Chan, 1A, 1B, 3A Lee, Byoungho, 1M, 1O, 1R, 20, 21, 26, 32 Jung, Jung-Yeul, 3E Lee, Chong Hyun, 0E, 0F Jung, Minwan, 2M Lee, Dong-Hoon, 03 Jung, Soohoon, 3E Lee, Dong-Kyu, 16, 11 Jung, Yongmin, 12 Lee, Hyuk Jae, 2B Jung, Youngmo, 1A, 1B, 3C Lee, Ji Eun, 1B Kalinowski, Hypolito J., 1N Lee, Ju Han, 2M Kang, Chong Yun, 1A, 1B Lee, Kwanil, 2B, 2M, 3X Kang, Hyukmo, 3Z Lee, Moonjin, 3E Karanja, Joseph Muna, 09 Lee, S.-W., 0Z, 18, 1K, 2H, 33 Khalil, Hossam, 24 Lee, Sang Bae, 2M, 3X Khazaeinezhad, Reza, 12, 1H Lee, Seok, 1A, 1B, 1I, 2B, 3A, 3C Kim, Beop-Min, 1P Lee, Seok-hwan, 3E Kim, Bok Hyeon, 1X, 2G Lee, Seung-Yeol, 1R, 21 Kim, Bongkyun, 1X, 2G Lee, Taikjin, 1A, 1B, 2B, 3A, 3C Kim, Byeong Kwon, 02 Lee, Yohan, 26 Kim, Chulki, 1A, 1B, 2B, 3A, 3C Lee, Yong Wook, 06 Kim, Dae-gil, OL, ON, 3V Lee, Yong-Eun, 1P Kim, Dongkyu, 24 Li, Chuang, 0B, 22 Kim, Geon-Hee, 3Z Li, Fang, 04, 0W

Kim, Giyoung, 16

Li, Feng, 0W

Li, Haibao, 1S Nam, Joonsik, 24 Nannipieri, Tiziano, 3R Li, Hanyu, 3M, 3U Li, Jie, 10, 2N, 2P, 2R, 2V Nazari, T., 1H Li, Song, 3K Ngo, Thanh Tung, 37 Li, Wei, 2Q Nishiyama, Michiko, 00, 15, 25 Li, Weilai, 40 Numata, Goki, 21 Li, Xiaofu, 30 Nunzi Conti, Gualtiero, 27 Li, Y., 3J, 48 Oh, Eunsong, 3Z Li, Zhengyong, 0A, 0G, 3W Oh, Juyeong, 2B, 3A Liang, Hao, 07, 2R, 2X, 2Y Oh, Kyunghwan, 12, 1H, 2B Liang, Peibo, 1C Okabe, Yoji, 3T Liang, S., OC Okuda, H., 0Z, 18 Liang, Yizhi, 07, 2D, 2X, 2Y, 38 Oton, Claudio J., 47 Liao, Changrui, 0A, 0G, 17, 1W, 3W Pan, Jae-Kyung, 0H Liao, Guozhen, 3B Pan, Jianjun, 40 Lim, Chaehyun, 1A, 1B, 3C Park, Byeongho, 2B, 3A Liu, Bin, 09 Park, Hyeonsoo, 20, 21, 32 Liu, Bo, 2N, 2P Park, J., 1H Liu, Chengxiang, 20 Park, Kyihwan, 0K, 24, 42 Liu, Deming, 2Q Park, Kyoungsoo, 06 Liu, Jie, 40 Park, Seongchong, 03 Liu, Jun, 3M Park, Seung-Nam, 03 Liu, L., 3P Park, Sung Ha, 2B, 3A Liu, Min, 46 Park, YoungJe, 3Z Liu, Qingwen, 08, 3F, 3P Partridge, M., 35 Liu, Shen, 0A, 0G, 17, 1W, 3W Patyk, Rodolfo L., OT Liu, Wei, 1G Paulson, B., 1H Liu, Wen, 2T Peng, Feng, OB, 22 Liu, Xinrui, OJ Peng, Gang-Ding, 1E Liu, Xuejing, 2U Persits, Nili, 3D Liu, Yang, 2F Qian, X. Y., 3J, 48 Liu, Zhihai, OB, 1C, 1D Qian, Ya, 3U, 43 Lopes, Stephani C. P. S., 1N Qiu, Weiqia, 2J Lu, Cheng-zhen, 1G Quercioli, Franco, 27 Lu, Huihui, 2J, 3B Rajan, Ginu, 1E Lu, Yana, 0Q Ran, Yang, 1F, 2P, 2V Luo, Cheng, 30 Ran, Zengling, 31, 39 Rao, Yunjiang, 31, 39, 3J, 3M, 3U, 43, 48 Luo, Hao, 3G Righini, Giancarlo C., 27 Luo, Yunhan, 3B Lydiard, S., 1J Rodrigues, Rômulo L. P., 41 Ma, Huilian, 05, 01 Rothhardt, Manfred, 2S Ma, Jun, 0D Różycki-Bakon, Radosław, OR Ma, L., 08, 3P Ruan, Shuangchen, 0M, 2O Mahmoud, Khaled, 03 Rutledge, Peter J., 11, 1Z Mao, Guopei, 2Z Ryl, Jacek, 19 Martelli, Cícero, OS, OT, 41 Sampath, Umesh, OL, ON, 3V Mathews, Sunish, 1E Schuster, Kay, 2S McGoverin, C., 1J Sciacca, B., 1Q Mencaglia, Andrea Azelio, OP Seki, Atsushi, 15, 2L Mignani, Anna Grazia, OP Selvanchyn, R., 1K Milczewski, Maura S., 1N Seo, Min Ah, 1A, 1B, 1I, 2B, 3A, 3C Miyaoka, Takumi, 36 Seo, Yong Bum, 02 Mizuno, Yosuke, 29, 21 Shi, Jinhui, 2Z Monro, T. M., 1Q Shi, Leilei, 14, 46 Moon, Hi Gyu, 1A, 1B Shin, Beom Ju, 1A Morales, Rigoberto E. M., 0T, 41 Shin, Bum Ju, 1B Muanenda, Yonas, 47 Shin, S. H., 2K Mun, Sang-Eun, 20 Shioda, Tatsutoshi, 23, 36

Sima, Chaotan, 2Q

Singhal, N., 1J

Naeem, Khurram, 1X, 2G

Nakamura, Kentaro, 29, 21

Siuzdak, Katarzyna, 19 Wu, Xu, 2O Śmietana, Mateusz, OR, 19 Wu, Xuezhong, 31 Sobaszek, Michał, 19 Xia, Li, 2Q Son, Joo-Hiuk, 16 Xu, Hongbin, 0W Xu, Jiwei, 3M Song, Eui-Young, 20 Song, Kwang Yong, 3N, 3X Xu. Xizhen, 17 Song, Minho, OL, ON, 3V Xu, Yihang, 2F Song, Y., 1J Yamazaki, Hiroshi, 0O Soria, Silvia, 27 Yan, Dekai, OB Sun, Bing, OG, 1W, 3W Yan, Yuchao, Ol Sun, Bo, 2F, 2Z Yang, Bing, 3B Sun, Cheng, 2E Yang, Jing, 2F Sun, Li-Peng, 2N, 2P, 2R, 2V Yang, Jun, OB, OC, 1C, 1D, 1V, 22 Sun, Ping, 1G Yang, Kaiming, 0A, 3W Sun, Qi, 2R Yana, Ke, 31 Sun, Qizhen, 2Q Yang, Minghong, 13, 3S, 45 Sun, Zhenshi, 43 Yang, Yuanhong, 2U, 2W Suwal, O. K., 1H Yang, Yucheng, 2E Swift, S., 1J Yang, Zhiming, 14 Tabaru, Marie, 21 Yao, Yuguo, 3L Takahashi, Nobuaki, 0U, 37 Yeom, Dong-II, 2B Tam, Hwa-Yaw, 28 Yi, Jong Chang, 3C Tanaka, Satoshi, OU, OX, 37 Yin, Guolu, 0G, 1W, 3W Tang, Jieyuan, 3B Ying, Diqing, 01 Tao, W., 1J Yoo, W. J., 2K Tatam, R. P., 2H, 33, 35 Yoo, Young-Sik, 1P Tian, Jie, 2A Yoon, Yeomin, 0K Tian, Zhengwen, 3B Yu, Bo, 1F Tian, Zhuang, 10 Yu, Haihu, 2E, 30 Tiwari, D., 2H Yu, Jianhui, 2J, 3B Tong, Xinglin, 0J Yu, Kuanglu, 2Y Trannin, Pamela G., 1N Yu, Li, 2X Tsukida, Osamu, 37 Yu, WenBing, 2A Tur, Moshe, 0V, 3D Yu, Yongqin, 0D, 0M Yu, Zhangjun, OB Uchimura, Ryoutarou, 37 Vanholsbeeck, F., 1J Yuan, Li-Bo, OB, OC, 1C, 1D, 1S, 1T, 1U, 1V, 22, 2C, Vendruscolo, Tiago P., 0T, 41 2F, 2Z, 3G, 3K Yuan, Qiang, 2D Wada, Atsushi, OU, 37 Wang, Chao, 1W Yuan, Tingting, 1V, 2Z Wang, Gaopeng, 13 Yuan, Yinguan, 13, 45 Wang, Guanjun, 17 Yuan, Yonggui, 0B, 0C, 1V, 22, 3G Wang, Kun, 0J Yun, Hansik, 32 Wang, Linglan, 05, 01 Zaidi, Farhan, 3R Wang, Qiaoni, 2W Zeng, Jing, 1Y Wang, T., 0Z, 18, 1K Zhang, Jianjie, 05 Wang, Xianbin, 1U Zhang, Jun, 3B Wang, Ying, 2A, 3W Zhang, L., 3J Wang, Yiping, 0A, 0G, 17, 1W, 2W, 3W Zhang, Li, 20 Zhang, Linqiang, 3M, 3U, 48 Wang, Yiting, 3B Zhang, Min, 49 Wang, Z. N., 3J, 48 Watanabe, Kazuhiro, 00, 15, 25, 2L Zhang, Tao, 43 Wen, Xiaoyan, 09 Zhang, Weili, 3M, 3U Won, Bumsik, 42 Zhang, Wentao, 04, 0W Woo, Deok Ha, 2B, 3A Zhana, Xiaotona, 1V Wu, Bing, 0B, 0C, 22 Zhang, Yating, 2Q Wu, Chuang, 28 Zhang, Yaxun, 1C, 1D Wu, H., 3J Zhang, Yu, OB, 1C, 1D Wu, H., 48 Zhao, Enming, 1C, 1D

xvi

Wu, Huijuan, 3M, 3U, 43

Wu, Qi, 3T

Zhao, Jing, 17, 1W

Zhao, Minli, OJ

Zheng, Wanjun, 49
Zheng, Xing, 3S
Zheng, Yu, 30
Zhong, Xiaoyong, 0G, 3W
Zhong, Xing, 2Z
Zhou, Chaoran, 0J
Zhou, Ciming, 45
Zhou, Jiangtao, 1W
Zhou, Xian, 09
Zhu, Cheng, 3S
Zhu, Jianhui, 2O
Zhu, Tao, 14, 1Y, 46
Zuber, A., 1Q

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Introduction

The Fifth Asia-Pacific Optical Sensors Conference (APOS 2015) was held 20–22 May 2015, at the Lotte City Hotel Jeju in Jeju, Korea.

APOS 2015 continues a series of conferences that are intended to provide a central forum for an update and review of technical information covering a wide range of optical sensing fields—from fundamental research to systems and applications. The conference is open to researchers and professionals from the Asia-Pacific Rim as well as all regions of the world.

Since the first event held in Chengdu, China in 2008, APOS has become the key regional forum in this field and where an international collection of researchers and industry colleagues could get together to discuss and develop mutual collaborations. It is also the place where we can train the next generation of young researchers and leaders.

APOS 2015 was initiated to provide an open forum discussing state-of-the-art scientific and technological achievements in optical sensors, leading to future industrial applications. The conference included the following topics: Physical Sensing; Chemical and Gas Sensing; Biological/Biomedical Sensing and Imaging; Integrated Technologies for Sensing; Specialty Optical Fibers for Sensing; Grating and Component Technologies for Sensing; Novel Materials for Sensing, Distributed, Multiplexed and Networked Sensing; Environmental and Structural Monitoring; and Industrial Applications, Field Trials and Standardization. Many of the submitted papers described recently developed optical sensors. Sharing the research achievements from this conference will benefit the international scientific community.

This volume contains reviewed papers presented at APOS 2015; a total of 151 papers were selected among 181 submitted abstracts, including three plenary talks, 78 oral presentations, and 100 poster presentations covering 18 sessions. This work was supported by the Korean Federation of Science and Technology Societies Grant funded by the Korean government.

The committee chairs would like to express their sincere thanks to the organizing committee members, program committee members, international steering committee members and also all sponsoring and supporting organizations that offered essential support to the success of APOS 2015.

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