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Date and Time: April 25, 2017 (Tuesday), 17:10-18:40

[Tu-P1] (Paper No. 10323-2)

Fluorescence Ratiometric Optical Broad Range pH Sensor based on CdSe/ZnS Quantum Dots and O170 Embedded in Ethyl Cellulose Matrix

Cheng-Shane Chu and Chih-Jen Su
Ming Chi University of Technology, Taiwan

[Tu-P2] (Paper No. 10323-3)

Optical Carbon Dioxide Sensor based on the Colorimetric Change of α -Naphtholphthalein and Internal Reference Fluorescent CIS/ZnS QDs

Cheng-Shane Chu and Meng-Wei Hsieh
Ming Chi University of Technology, Taiwan

[Tu-P3] (Paper No. 10323-4)

A New Measurement Scheme for Delay Parameters in TDM Fiber Optic Interferometric Sensor Network

Fei Liu¹, Xiaokang Qiu¹, Bin Xie³, Lijuan Gu², Xiaoping Zheng¹, and Min Zhang^{1,2}
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[Tu-P4] (Paper No. 10323-5)

Towards On-Line Radiation Monitoring with Perfluorinated Polymer Optical Fibers

P. Stajanca and K. Krebber
Bundesanstalt für Materialforschung und -prüfung, Germany

[Tu-P5] (Paper No. 10323-6)

Development of Ratiometric Optical Fiber Sensor for Ammonia Gas Detection

Cheng-Shane Chu and Yen-Fu Chen
Ming Chi University of Technology, Taiwan

[Tu-P6] (Paper No. 10323-8)

Femtosecond Laser Inscription of Phase-Shifted Grating by Post-Processing

Xian Zhou, Yutang Dai, Fufei Liu, Joseph Muna Karanja, and Meng Zou
Wuhan University of Technology, China

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[Tu-P7] (Paper No. 10323-10)

Regeneration Characteristics of FBG Written for the Visible Spectral Range

Camila Carvalho de Moura, Patricia Loren Inacio, Ismael Chiamenti, Valmir de Oliveira, and Hypolito Jose Kalinowski
Federal University of Technology – Paraná, Brazil

[Tu-P8] (Paper No. 10323-14)

Optical Fibre Fabry-Pérot Sensor Stability at High Temperatures

Dimitrios Polyzos, Jinesh Mathew, William N. MacPherson, Duncan P. Hand, and Robert R. J. Maier
Heriot-Watt University, UK

[Tu-P9] (Paper No. 10323-23)

Multilevel Temperature Threshold Sensor based on Photonic Crystal Fiber Transducers

P. Marć, N. Przybysz, K. Stasiewicz, and L. R. Jaroszewicz
Military University of Technology, Poland

[Tu-P10] (Paper No. 10323-27)

Highly Sensitive Gas Refractometer based on Inverse Mode-Coupling of Cladding-to-Core Modes in a Tapered Four-Core Fiber

Zhihua Shao, Xueguang Qiao, and Qiangzhou Rong
Northwest University, China

[Tu-P11] (Paper No. 10323-32)

Gas Pressure Sensing based on Antiresonant Reflecting Guidance Hollow-Core Fiber

Maoxiang Hou, Yiping Wang, Feng Zhu, Ying Wang, and Changrui Liao
Shenzhen University, China

[Tu-P12] (Paper No. 10323-33)

A Novel and Small Curvature Sensor based on Butterfly-Shape Mach-Zehnder Interferometer

Mao-qing Chen, Yong Zhao, Ri-qing Lv, and Feng Xia
Northeastern University, China

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[Tu-P13] (Paper No. 10323-35)

Palladium based Hydrogen Sensors Using Fiber Bragg Gratings

Maximilian Fisser, Rodney A Badcock, Paul D Teal, and Arvid Hunze
Victoria University of Wellington, New Zealand

[Tu-P14] (Paper No. 10323-40)

Functionalization of a Long Period Grating Coated with Gold Nanoparticles for Glyphosate Detection

Bárbara R. Heidemann¹, Júlia C. Pereira², Ismael Chiamenti¹, Marcela M. Oliveira¹, Marcia Muller¹, and José L. Fabris¹
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[Tu-P15] (Paper No. 10323-41)

QEPAS Nitric Oxide Sensor based on a Mid-Infrared Fiber-Coupled Quantum Cascade Laser

Wei Ren, Chao Shi, Zhen Wang, and Chenyu Yao
The Chinese University of Hong Kong, Hong Kong, China

[Tu-P16] (Paper No. 10323-43)

High-Speed Demodulation System of Identical Weak FBGs based on FDML Wavelength Swept Laser

Wang Yiming, Liu Quan, Wang Honghai, Hu Chenchen, Zhang Chun, and Li Zhengying
Wuhan University of Technology, China

[Tu-P17] (Paper No. 10323-44)

Graphene Oxide Modified Surface Plasmon Resonance Sensor based on Side-Polished Fiber

Jing Zhao, Ying Wang, Changrui Liao, Shaoqing Cao, Mingquan Li, and Yiping Wang
Shenzhen University, China

[Tu-P18] (Paper No. 10323-45)

Fabrication and Characterization of an Egg-Shaped Hollow Fiber Microbubble

Guanjun Wang^{1,3}, Yinlan Ruan², Pinggang Jia³, Zhiguo Gui³, Pengcheng Zhang³, Chao Wang¹, Shen Liu¹, Changrui Liao¹, Guolu Yin¹, and Yiping Wang¹
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[Tu-P19] (Paper No. 10323-46)

First Step towards an Interferometric and Localized Surface Plasmon Fiber Optic Sensor

Harald Ian D.I. Muri, Andon Bano, and Dag Roar Hjelme
Norwegian University of Science and Technology, Norway

[Tu-P20] (Paper No. 10323-54)

Strain Measurement of Spiral Bevel Gear Using Optical Fiber Gratings

Liu Nianyun, Wang Yiming, Zhou Zude, and Lou Ping
Wuhan University of Technology, China

[Tu-P21] (Paper No. 10323-55)

Partially Reduced Graphene Oxide based FRET on Fiber-Optic Interferometer for Biochemical Detection

B. C. Yao¹, Y. Wu¹, C. B. Yu¹, J. R. He¹, Y. J. Rao¹, Y. Gong¹, Y. F. Chen¹, and Y. R. Li²
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[Tu-P22] (Paper No. 10323-60)

Simultaneous Measurement of Vibration and Temperature Using a Fabry-Perot Interferometer in Polarization Maintaining Fiber and Laser Diodes

Atsushi Wada, Satoshi Tanaka, and Nobuaki Takahashi
National Defense Academy, Japan

[Tu-P23] (Paper No. 10323-62)

Fiber-Optic Current Sensor Using an Internal Trigger Sampling Technique

Hyoung-Jun Park¹, Chan Il Yeo¹, Dong Hoon Son¹, Keo-Sik Kim¹, Hyun Seo Kang¹, Sung Chang Kim¹, and Minho Song²
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[Tu-P24] (Paper No. 10323-65)

Refractive Index Sensor based on Asymmetrical Mach-Zehnder Interferometer with Step-Like Tapers

Feng Xia, Yong Zhao, Hai-feng Hu, Mao-qing Chen, and Ya-nan Zhang
Northeastern University, China

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[Tu-P25] (Paper No. 10323-67)

Swelling Clad-Type Plastic Optical Fiber Alkane Sensor with Multi-Layer Cladding Using Electro spray Deposition Method

Akira Nakamura, Yutaka Suzuki, and Masayuki Morisawa
University of Yamanashi, Japan

[Tu-P26] (Paper No. 10323-68)

Three Dimensional FEM Model of FBGs in Panda Fibers with Experimentally Determined Model Parameters

Markus Lindner¹, Barbara Hopf¹, Alexander W. Koch², and Johannes Roths¹
¹*Munich University of Applied Sciences, Germany*, ²*Technical University of Munich, Germany*

[Tu-P27] (Paper No. 10323-69)

Verification of a Three Dimensional FEM Model for FBGs in PANDA Fibers by Transversal Load Experiments

Bennet Fischer¹, Barbara Hopf¹, Markus Lindner¹, Alexander W. Koch², and Johannes Roths¹
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[Tu-P28] (Paper No. 10323-73)

Optimised Process for Fabricating Tapered Long Period Gratings

K. Mullaney, S. E. Staines, S. W. James, and R. P. Tatam
Cranfield University, UK

[Tu-P29] (Paper No. 10323-79)

Monitoring the Fabrication of Tapered Optical Fibres

K. Mullaney, R. Correia, S. E. Staines, S. W. James, and R. P. Tatam
Cranfield University, UK

[Tu-P30] (Paper No. 10323-81)

Radiation Effects on Type I Fiber Bragg Gratings: Influence of Recoating

T. Blanchet^{1,2}, G. Laffont¹, R. Cotillard¹, E. Marin², A. Morana², A. Boukenter², Y. Ouerdane², and S. Girard²
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[Tu-P31] (Paper No. 10323-84)

Fabry-Perot Sensor based on Two Coupled Microspheres for Strain Measurement

Catarina S. Monteiro^{1,2}, Jens Kobelke³, Kay Schuster³, Jorg Bierlich³, and Orlando Frazao^{1,2}

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[Tu-P32] (Paper No. 10323-97)

Influence of Saturable Absorbers on Fiber Ring Laser Sensors

L. Rodriguez-Cobo^{1,2}, M.A. Quintela^{1,2}, R. Ruiz-Lombera¹, R.A. Perez-Herrera³,
M. Lopez-Amo³, and J.M. Lopez-Higuera^{1,2}

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[Tu-P33] (Paper No. 10323-98)

High-Speed Vibration Measurement by Fiber Bragg Gratings with Fourier Domain Mode Locking Laser

Tatsuya Yamaguchi and Yukitaka Shinoda
Nihon University, Japan

[Tu-P34] (Paper No. 10323-108)

Soil Moisture Content Measurement Using Optical Fiber Long Period Gratings

J.S.Hallett, M.Partridge, S.W. James, D. Tiwari, T. Farewell, S.H. Hallett, and R.P.Tatam
Cranfield University, UK

[Tu-P35] (Paper No. 10323-111)

Fiber Optic Nickel Ion Sensor based on Direct Ligand Immobilization

R.Raghunandhan¹, L.H.Chen², and C.C.Chan¹

¹Nanyang Technological University, Singapore, ²GLOBALFOUNDRIES, Singapore

[Tu-P36] (Paper No. 10323-114)

Refractive Index Sensing Using a Multimode Interference-Based Fiber Sensor in a Cavity Ring-Down System

Susana Silva¹ and Orlando Frazão^{1,2}

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[Tu-P37] (Paper No. 10323-121)

Optical Fiber Tactile Sensor based on Fiber Specklegram Analysis

Eric Fujiwara, Francine D. Paula, Yu Tzu Wu, Murilo F. M. Santos, Egont A. Schenkel, and Carlos K. Suzuki
State University of Campinas, Brazil

[Tu-P38] (Paper No. 10323-122)

Fibre Bragg Grating Sensors for the Analysis of Pressure Distribution at a Disc Brake/Pad Interface

B. T. Major, D. Tiwari, R. Correia, S. W. James, M. Tirovic, and R. P. Tatam
Cranfield University, UK

[Tu-P39] (Paper No. 10323-123)

High Sensitive and Selective Escherichia Coli Detection Using Immobilized Optical Fiber Microprobe

Yanpeng Li¹, Qizhen Sun¹, Yiyang Luo¹, Yue Li¹, Andong Gong², Haibin Zhang², and Deming Liu¹
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[Tu-P40] (Paper No. 10323-124)

Fiber Sensor Identification based on Incoherent Rayleigh Backscatter Measurements in the Frequency Domain

Max Koeppel, Rainer Engelbrecht, Stefan Werzinger, and Bernhard Schmauss
Friedrich-Alexander University Erlangen-Nürnberg, Germany

[Tu-P41] (Paper No. 10323-127)

Localized Surface Plasmon Resonance Refractometer based on No-Core Fiber

Yan Ru Wang^{1,2}, Zhi Qiang Tou², Chun Liu Zhao¹, Ping Lam So², and Chi Chiu Chan²
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[Tu-P42] (Paper No. 10323-130)

Femtosecond Laser Processing of Optical Fibres for Novel Sensor Development

Kyriacos Kalli, Antreas Theodosiou, Andreas Ioannou, and Amedee Lacraz
Cyprus University of Technology, Cyprus

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[Tu-P43] (Paper No. 10323-131)

Health Monitoring of Carbon Cantilever Using Femtosecond Laser Inscribed FBG Array in Gradient-Index CYTOP Polymer Fibre

Antreas Theodosiou^{1,2}, Kyriacos Kalli¹, and Michael Komodromos²

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[Tu-P44] (Paper No. 10323-132)

Hysteresis Compensation Technique for POF Curvature Sensors

Arnaldo G. Leal Junior, Anselmo Frizera, and Maria José Pontes

Federal University of Espírito Santo, Brazil

[Tu-P45] (Paper No. 10323-137)

Photonic Sensing in Highly Concentrated Biotechnical Processes by Photon Density Wave Spectroscopy

Roland Hass¹, Michael Sandmann², and Oliver Reich¹

¹University of Potsdam, Germany, ²Institute for Food and Environmental Research, Germany

[Tu-P46] (Paper No. 10323-140)

Detection of Volatile Organic Compounds Using an Optical Fiber Sensor Coated with a Sol-Gel Silica Layer Containing Immobilized Nile Red

Dejun Liu¹, Xiaokang Lian¹, Arun Kumar Mallik¹, Wei Han¹, Fangfang Wei¹, Jinhui Yuan³, Chongxiu Yu³, Gerald Farrell¹, Yuliya Semenova¹, and Qiang Wu^{1,2,3}

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[Tu-P47] (Paper No. 10323-150)

A Miniaturized Ferrule-Top Optical Cantilever for Vibration Measurement

J. Li, S.M. Xu¹, J. N. Sun², Y. Q. Tang¹, and F.Z. Dong¹

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[Tu-P48] (Paper No. 10323-152)

Relative Humidity Sensor based on a Few-Mode Microfiber Knot Resonator by Mitigating Group Index Difference

Duy Duong Anh Le, Seungmin Lee, and Young-Geun Han

Hanyang University, Korea

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[Tu-P49] (Paper No. 10323-162)

Optical Detection of Glyphosate in Water

R. E. de Góes¹, G. R. C. Possetti^{2,3}, M. Muller¹, and J. L. Fabris¹

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[Tu-P50] (Paper No. 10323-164)

Optimization of Modal Sensitivity in Nanowire SPR Multimode Sensor

D. F. Santos^{1,3}, A. Guerreiro^{2,3}, and J. M. Baptista^{1,3}

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[Tu-P51] (Paper No. 10323-171)

Fiber Bragg Grating Sensor based on Cantilever Structure Embedded in Polymer 3D Printed Material

Rita Lima¹, R. Tavares³, S. O. Silva¹, P. Abreu³, Maria T. Restivo³, and O. Frazão^{1,2}

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[Tu-P52] (Paper No. 10323-172)

Blueberry Juices: A Rapid Multi-Analysis of Quality Indicators by Means of Dispersive Raman Spectroscopy Excited at 1064 nm

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[Tu-P53] (Paper No. 10323-178)

Refractive Index Sensor Using a Fabry-Perot Cavity in Polymer Fiber

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[Tu-P54] (Paper No. 10323-187)

Sapphire Fabry-Perot High-Temperature Sensor Study

YAO Yi-qiang, LIANG Wei-long, GUI Xinwang, and FAN Dian

Wuhan University of Technology, China

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[Tu-P55] (Paper No. 10323-189)

Microfluidic Chip based Microfiber/Nanofiber Sensors

Lei Zhang and Limin Tong
Zhejiang University, China

[Tu-P56] (Paper No. 10323-190)

Miniature FBG-based Fluidic Flowmeter to Measure Hot Oil and Water

Zhengyong Liu¹, Lin Htein¹, Lun-Kai Cheng², Quincy Martina², Rob Jansen², and Hwa-Yaw Tam¹
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[Tu-P57] (Paper No. 10323-191)

Interferometric vs Wavelength Selective Optical Fiber Sensors for Cryogenic Temperature Measurements

V. DeMiguel-Soto¹, D. Leandro¹, A. Lopez-Aldaba¹, J.J. Beato-López¹, J.I. Pérez-Landazábal¹, J.-L. Auguste², R. Jamier², P. Roy², and M. Lopez-Amo¹
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[Tu-P58] (Paper No. 10323-194)

Investigation on Sensitivity Improvement of Fiber Bragg Grating Sensors Using Weak Value Amplification based on Optical Attenuation

Kwang Wook Yoo, Jong-Cheol Shin, Ju Il Hwang, and Young-Geun Han
Hanyang University, Korea

[Tu-P59] (Paper No. 10323-195)

Thermal Sensing based on Whispering Gallery Modes in Tapered-Fiber-coupled Liquid Crystal Microdroplets

Yan Wang, Hanyang Li, Liyuan Zhao, Yongjun Liu, Shuangqiang Liu, and Jun Yang
Harbin Engineering University, China

[Tu-P60] (Paper No. 10323-197)

Directional Curvature Sensor based on Long Period Gratings in Multicore Optical Fiber

Javier Madrigal, David Barrera, Javier Hervás, Hailan Chen, and S.Sales
Universitat Politècnica de València, Spain

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[Tu-P61] (Paper No. 10323-207)

All-Fiber Hydrogen Sensor based on Stimulated Raman Gain Spectroscopy with a 1550 nm Hollow-Core Fiber

Fan Yang and Wei Jin

The Hong Kong Polytechnic University, Hong Kong, China

[Tu-P62] (Paper No. 10323-210)

Fiber Bragg Grating Sensors Written by Femtosecond Laser Pulses in Micro-Structured Fiber for Downhole Pressure Monitoring

J.-Y. Huang^{1,2}, J. Van Roosbroeck², A. Bueno Martinez¹, T. Geernaert³, F. Berghmans³, C. Caucheteur¹, B. Van Hoe², E. Lindner², and J. Vlekken²

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[Tu-P63] (Paper No. 10323-211)

A Comparison of Brazed Metal and Epoxied Fibre Bragg Grating Strain Sensors Under High Strain Regimes

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[Tu-P64] (Paper No. 10323-212)

Optical Fiber Meta-Tips: Perspectives in Sensing Applications

Maria Principe¹, Marco Consales¹, Alberto Micco¹, Alessio Crescitelli³, Giuseppe Castaldi¹, Emanuela Esposito³, Vera La Ferrara², Antonello Cutolo¹, Vincenzo Galdi¹, and Andrea Cusano¹

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[Tu-P65] (Paper No. 10323-215)

Reproducible SERS Substrates on Optical Fiber Tips by Nanosphere Lithography

M. Pisco¹, F. Galeotti², G. Quero¹, G. Grisci², A. Micco¹, L. V. Mercaldo³, P. Delli Veneri³, A. Cutolo¹, and A. Cusano¹

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[Tu-P66] (Paper No. 10323-217)

High Sensitivity Temperature Sensor based on a Polymer Filled Hollow Core Optical Fibre Interferometer

Rahul Kumar¹, Wai Pang Ng¹, Yong-Qing Fu¹, Jinhui Yuan², Chongxiu Yu², Gerald Farrell³, Yuliya, Semenova³, and Qiang Wu¹

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[Tu-P67] (Paper No. 10323-218)

Simultaneous and Quasi-Independent Strain and Temperature Sensor based on Microstructured Optical Fiber

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[Tu-P68] (Paper No. 10323-220)

Multi-Parameter Measurements Using Optical Fibre Long Period Gratings for Indoor Air Quality Monitoring

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[Tu-P69] (Paper No. 10323-221)

Fabry-Pérot based Refractive Index Optical Fiber Sensor for Measurement of Oxygen Concentration Levels in Hypoxic Tumors During Radiotherapy Treatment

Charusluk Viphavakit, DineshBabu Duraibabu, Sinead O'Keeffe, and Elfed Lewis

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[Tu-P70] (Paper No. 10323-227)

Relative Humidity Multi-Point Optical Sensors System based on Fast Fourier Multiplexing Technique

A. Lopez-Aldaba¹, D. Lopez-Torres¹, C. Elosua¹, J.-L. Auguste², R. Jamier², P. Roy², F.J. Arregui¹, and M. Lopez-Amo¹

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[Tu-P71] (Paper No. 10323-240)

High Temperature Sensing with Single Material Silica Optical Fibers

Stephen C. Warren-Smith¹, Linh V. Nguyen¹, Heike Ebendorff-Heidepriem¹, and Tanya M. Monro^{1,2}
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[Tu-P72] (Paper No. 10323-253)

Refractive Index Sensor based on θ -Shaped Microfiber Resonator and Vernier Effect

Zhilin Xu^{1,3}, Yiyang Luo², Qizhen Sun², Perry Ping Shum^{1,3}, Zhifang Wu^{1,3}, Xuguang Shao^{1,3}, and Deming Liu²
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[Tu-P73] (Paper No. 10323-263)

Highly Sensitive Fiber-Optic Fabry-Perot Geophone with Graphene-Coated PMMA Membrane

C. B. Yu, Y. Wu, F. Wu, C. Li, J. H. Zhou, Y. J. Rao, and Y. F. Chen
University of Electronic Science and Technology of China, China

[Tu-P74] (Paper No. 10323-276)

Optimized Wavelength Switched Phase Interrogator for Extrinsic Fabry-Perot Interferometric Sensors with Polarization Self-Calibrated

Ji Xia, Hong Luo, Fuyin Wang, and Shuidong Xiong
National University of Defense Technology, China

[Tu-P75] (Paper No. 10323-267)

Spectral Characteristics of Rotated Fused Polarization Maintaining Fiber Bragg Gratings Subjected to Transverse Loading

Qiang Liu^{1,2}, Quan Chai¹, Ye Tian¹, YanShuang Zhao¹, Yanlei Liu¹, Song Wang¹, JianZhong Zhang¹, Jun Yang¹, and LiBo Yuan¹
¹Harbin Engineering University, China, ²Northeast Petroleum University, China

[Tu-P76] (Paper No. 10323-271)

The Sensing Characteristic of Ultra-Weak FBG Inscribed on Splice Joint

Ye Tian¹, Quan Chai¹, Qiang Liu^{1,2}, Yichen Meng¹, YanLei Liu¹, Jing Ren¹, Song Wang¹, Jianzhong Zhang¹, Wenping Zhang¹, Jun Yang^{*1}, Zhihai Liu¹, and Libo Yuan¹
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[Tu-P77] (Paper No. 10323-275)

High Spatial Resolution Multiplexing of Fiber Bragg Gratings Using Single-Arm Frequency-Shifted Interferometry

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[Tu-P78] (Paper No. 10323-265)

LPFG based Fiber Optic Sensor for Magnetic Field Measurement

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[Tu-P79] (Paper No. 10323-278)

Optical Sensing with Antiresonant Capillary Fibers

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[Tu-P80] (Paper No. 10323-280)

Fiber Laser Accelerometer-Magnetometer

Zhaogang Wang, Wentao Zhang, Wenzhu Huang, and Fang Li

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[Tu-P81] (Paper No. 10323-281)

Detection of Glycoprotein Using Fiber Optic Surface Plasmon Resonance Sensors with Boronic Acid

Fang Wang, Yang Zhang, Zigeng Liu, Siyu Qian, Yiyang Gu, Zhenguo Jing, Changsen Sun, and Wei Peng

Dalian University of Technology, China

[Tu-P82] (Paper No. 10323-286)

A Novel Inter-Fibre Light Coupling Sensor Probe Using Plastic Optical Fibre for Ethanol Concentration Monitoring at Initial Production Rate

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[Tu-P83] (Paper No. 10323-289)

Optimization of Output Signal Power Spectrum in Raman- Assisted WDM System

Shilin Sun, liangjin Huang, Jianfei Wang, and Zhou Meng
National University of Defense Technology, China

[Tu-P84] (Paper No. 10323-292)

Combined Microfiber Knot Resonator and Focused Ion Beam-Milled Mach-Zehnder Interferometer for Refractive Index Measurement

André D. Gomes^{1,2}, Ricardo M. André^{1,2}, Stephen C. Warren-Smith^{2,3}, Jan Dellith², Martin Becker², Manfred Rothhardt², and Orlando Frazão¹
¹University of Porto, Portugal, ²Leibniz Institute of Photonic Technology (IPHT Jena), Germany, ³The University of Adelaide, Australia

[Tu-P85] (Paper No. 10323-293)

Microwave Photonics Filtering Interrogation Technique Under Coherent Regime for Hot Spot Detection on Cascaded FBG Fiber

Javier Hervás, David Barrera, Javier Madrigal, and Salvador Sales
Universidad Politécnica de Valencia, Spain

[Tu-P86] (Paper No. 10323-296)

Phase Modulation to Intensity Modulation Conversion for Sensitive FBG Sensor Interrogation

Javier Hervás, David Barrera, Javier Madrigal, and Salvador Sales
Universidad Politécnica de Valencia, Spain

[Tu-P87] (Paper No. 10323-298)

Bromothymol Blue Coated Fiber Optic Fabry-Perot Interferometer for Ammonia Gas Sensor

Dnyandeo Pawar, S. A. Mane, and S. N. Kale
Defence Institute of Advanced Technology (DU), India

[Tu-P88] (Paper No. 10323-318)

Mach-Zehnder Interferometer in Embedded-Core Optical Fiber

Jianan Fu, Meng Wang, Peng Huang, Jing Yang, Zheng Zhu, Chunying Guan, and Libo Yuan
Harbin Engineering University, China

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[Tu-P89] (Paper No. 10323-320)

Measuring of the Pitch Variation of Cholesteric Liquid Crystals Under Electric Field Using Wavelength-Swept Laser

Myeong Ock Ko¹, Sung-Jo Kim², Jong-Hyun Kim¹, and Min Yong Jeon¹

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[Tu-P90] (Paper No. 10323-322)

Graphene Oxide Coated Long Period Grating Based Fibre Optic Humidity Sensor

Kasun P W Dissanayake, Weiping Wu, Hien Nguyen, Tong Sun, and Kenneth T V Grattan
University of London, UK

[Tu-P91] (Paper No. 10323-344)

Fiber-Optic Sensor for Simultaneous Strain and Temperature Monitoring in Composite Materials at Cryogenic Condition

Umesh Sampath, Dae-gil Kim, Hyunjin Kim, and Minho Song
Chonbuk National University, Korea

[Tu-P92] (Paper No. 10323-345)

Surface Plasmon Resonance Effect in Helical Photonic Crystal Fiber Using Transformation Optics Formalism

Chen Li, Li Xia, and Xin Chen
Huazhong University of Science & Technology, China

[Tu-P93] (Paper No. 10323-347)

Effect of F Doping in the Core of a Birefringent Photonic Crystal Fiber on Sensing Capability of Temperature and Strain Sensors

Youngmin Kim¹, Seongmin Ju², Seongmook Jeong³, Seung Ho Lee⁴, Youngwoong Kim⁵, and Won-Taek Han²

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[Tu-P94] (Paper No. 10323-364)

High Accuracy Demodulation for Twin-Grating based Sensor Network with Hybrid TDM/FDM

Fan Ai^{1,2}, Qizhen Sun^{1,2}, Jianwei Cheng^{1,2}, Yiyang Luo^{1,2}, Zhijun Yan^{1,2}, and Deming Liu^{1,2}

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[Tu-P95] (Paper No. 10323-365)

Distributed Dual-Parameter Optical Fiber Sensor based on Cascaded Microfiber Fabry-Parot Interferometers

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[Tu-P96] (Paper No. 10323-368)

Metal-Organic Framework Thin Films on a Surface of Optical Fibre Long Period Grating for Chemical Sensing

J. Hromadka^{1,2}, B. Tokay¹, S. James³, and S. Korposh^{1,3}

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[Tu-P97] (Paper No. 10323-369)

Fresnel-Reflection-based Fiber-Optic Cryogenic Temperature Sensor

Umesh Sampath, Dae-gil Kim, Hyunjin Kim, and Minho Song

Chonbuk National University, Korea

[Tu-P98] (Paper No. 10323-371)

Numerical Investigation on the Enhancement of Fiber Surface Plasmon Resonance by Chrome Layer

Mei Yang, Xinjie Feng, Yunhan Luo, Xin Xiong, Hao Wang, Yajun Wang, Jieyuan Tang, Heyuan Guan, Huihui Lu, Jianhui Yu, Jun Zhang, and Zhe Chen

Jinan University, China

[Tu-P99] (Paper No. 10323-374)

Comparison of Different Photoresist Buffer Layers in SPR Sensors based on D-shaped POF and Gold Film

Nunzio Cennamo¹, Maria Pesavento², Letizia De Maria³, Ramona Galatus⁴, Francesco Mattiello¹, and Luigi Zeni¹

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[Tu-P100] (Paper No. 10323-376)

In Vivo Brain Temperature Measurements based on Fiber Optic Bragg Grating

Mohammad I. Zibaii¹, Hamid Latifi¹, Fatemeh Karami¹, Abdolaziz Ronaghi², Sara Chavoshi Nejad², and Leila Dargahi²

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[Tu-P101] (Paper No. 10323-378)

Fiber Bragg Grating Interrogation Using a Wavelength Modulated 1651 nm Tunable Distributed Feedback Laser and A Fiber Ring Resonator for Wearable Biomedical Sensors

Anirban Roy, Arup Lal Chakraborty, and Chandan Kumar Jha
Indian Institute of Technology Gandhinagar, India

[Tu-P102] (Paper No. 10323-380)

Active Polymer Materials for Optical Fiber CO₂ Sensors

Karol Wysokiński¹, Marta Filipowicz¹, Tomasz Stańczyk¹, Stanisław Lipiński¹, Marek Napierała^{1,2}, Michał Murawski³, and Tomasz Nasitowski¹

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[Tu-P103] (Paper No. 10323-382)

Liquid Droplet Sensing Using Twisted Optical Fiber Couplers Fabricated by Hydrofluoric Acid Flow Etching

Gyeongho Son, Youngho Jung, and Kyoungsik Yu
Korea Advanced Institute of Science and Technology, Korea

[Tu-P104] (Paper No. 10323-398)

Dynamic Measurements of Physical Quantities in Extreme Environment Using Fiber Bragg Grating

Y. Barbarin, A. Lefrançois, S. Magne, V. Chuzeville, M. Balbarie, L. Jacquet, F. Sinatti, A. Osmont, and J. Luc

Commissariat à L'énergie Atomique Et Aux Énergies Alternatives, France

[Tu-P105] (Paper No. 10323-418)

A Novel Photonic Crystal Fiber with a Germanium Nanoparticles-Doped Germano-Silicate Core and its Nonlinear Optical Characteristics

Seongmook Jeong¹, Seongmin Ju², Yuseung Lee², Youngwoong Kim³, In-Sik Kim², Do-Kyeong Ko², and Won-Taek Han²

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[Tu-P106] (Paper No. 10323-421)

Plane-by-Plane Inscription of Grating Structures in Optical Fibers

P. Lu, S. J. Mihailov, H. Ding, D. Grobnic, R. Walker, D. Coulas, C. Hnatovsky, and A. Y. Naumov
National Research Council Canada, Canada

[Tu-P107] (Paper No. 10323-424)

Adiabatic Tapered Optical Fiber - Fabry Perot Structure as A Refractive Index Sensor

O.R.Ranjbar-Naeini, Z.Chenari, P.Zarafshani, F.Jafari., and H. Latifi
Shahid Beheshti University, Iran

[Tu-P108] (Paper No. 10323-426)

Precise Measurement Technique of Long Period Fiber Grating Sensors Using Fourier Transform Method

Mayumi Nagatsuka, Masayoshi Koizumi, Satoshi Tanaka, Atsushi Wada, and Nobuaki Takahashi
National Defense Academy, Japan

[Tu-P109] (Paper No. 10323-427)

Highly Sensitive Temperature Sensor Using Intrinsic Mach-Zehnder Interferometer Formed by Bent Micro-Fiber Embedded in Polymer

Pathi Munendhar, Lei Zhang, Limin Tong, and Shaoliang Yu
Zhejiang University, China

[Tu-P110] (Paper No. 10323-428)

Temperature and Refractive Index Measurements by Using a Microcavity Engraved with Femtosecond Laser in Multimode Fiber

Rodrigo Fiorin, Jociel L. da S. Adachi, Valmir de Oliveira, Hypolito J. Kalinowski, Ricardo C. Kamikawachi, and Ilda Abe
Federal University of Technology, Brazil

[Tu-P111] (Paper No. 10323-433)

Ultra-Sensitive, Wide Dynamic Range Temperature Sensor based on In-Fiber Lyot Interferometer

Hamed Nikbakht¹, Mohamad Hosein Poorghdiri Isfahani¹, and Hamid Latifi^{1,2}
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[Tu-P112] (Paper No. 10323-436)

Analysis of Signal Saturation in a Fiber Ring Resonator

Regina Magalhães, Susana O. Silva, and Orlando Frazão

Faculty of Sciences of University of Porto, Portugal

[Tu-P113] (Paper No. 10323-437)

Simultaneous Measurement of Temperature and Humidity with Microstructured Polymer Optical Fiber Bragg Gratings

Getinet Woyessa, Jens Kristian Mølgaard Pedersen, Andrea Fasano, Kristian Nielsen, Christos Markos, Henrik Koblitz Rasmussen, and Ole Bang

Technical University of Denmark, Denmark

[Tu-P114] (Paper No. 10323-438)

Effects of Pre-Strain on the Intrinsic Pressure Sensitivity of Polymer Optical Fiber Bragg-Gratings

Jens K. M. Pedersen, Getinet Woyessa, Kristian Nielsen, and Ole Bang

Technical University of Denmark, Denmark

[Tu-P115] (Paper No. 10323-439)

Optical Power-based Interrogation of Plasmonic Tilted Fiber Bragg Grating Biosensors

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[Tu-P116] (Paper No. 10323-440)

Optical Monitoring of Thin Film Electro-Polymerization on Surface of ITO-Coated Lossy-Mode Resonance Sensor

Michał Sobaszek¹, Magdalena Dominik², Dariusz Burnat², Robert Bogdanowicz¹, Vitezslav Stranak³, Petr Sezemsky³, and Mateusz Śmietana²

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[Tu-P117] (Paper No. 10323-448)

Double-Resonance Long Period Fiber Grating for Detection of E. Coli in Trace Concentration by Choosing a Proper Bacteriophage

Y. Chiniforooshan¹, A. Celebanska¹, M. Janik¹, P. Mikulic¹, F. Haddad², J. Perreault², and W. j. Bock¹

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[Tu-P118] (Paper No. 10323-452)

Development of a High Resolution Optical-Fiber Tilt Sensor by F-P Filter

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[Tu-P119] (Paper No. 10323-467)

Study of Corrosion Using Long Period Fiber Gratings Coated with Iron Exposed to Salty Water

L. Coelho¹, J. L. Santos¹, P.A.S. Jorge¹, and J. M. M. de Almeida^{1,2}

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[Tu-P120] (Paper No. 10323-469)

Two-Dimensional Array of Plasmonic V-Shaped Grooves for Sensing Applications

Hyeonsoo Park¹, Kyookeun Lee¹, Jeong-Geun Yun¹, Chulsoo Choi¹, Hwi Kim², and ByoungHo Lee¹

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[Tu-P121] (Paper No. 10323-471)

Refractive Index Sensor Using Layered Nanoslit Array based on Fabry-Pérot Resonances

Jangwoon Sung, Joonsoo Kim, Jongwoo Hong, Yohan Lee, and ByoungHo Lee

Seoul National University, Korea

[Tu-P122] (Paper No. 10323-473)

Coherent Anti-Stokes Raman Scattering Microscopy based on Polarization Maintaining Photonics Crystal Fiber

Jae Hwi Lee¹, Soongho park¹, Jun Geun Shin¹, Hyunmin Kim², DaeWon Moon², Seungmin Lee¹, Hojin Park¹, Byeong Ha Lee¹

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[Tu-P123] (Paper No. 10323-477)

Multiplexed Sub-Nano Resolution Quasi-Static Strain Sensor based on Transient Response of Fabry-Perot Interferometers

Jiageng Chen, Qingwen Liu, and Zuyuan He

Shanghai Jiao Tong University, China

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[Tu-P124] (Paper No. 10323-481)

Measurement of Modes Backreflection at Flat Termination of Hollow-Core Photonic Bandgap Fiber based on Mach-Zehnder and Michelson Hybrid Interferometer

Xiaobin Xu, Jinheng Li, Ming Yan, Ningfang Song, Jing Jin, Xiong Pan, and Jingming Song
Beihang University, China

[Tu-P125] (Paper No. 10323-483)

DNA based Thin Solid Films and its Application to Optical Fiber Temperature Sensor

Seongjin Hong, Woohyun Jung, Taeoh Kim, and Kyunhwan Oh
Yonsei University, Korea

[Tu-P126] (Paper No. 10323-484)

Swept Source Optical Coherence Tomography for in Vivo Growth Monitoring of Capsicum Annuum Seeds Treated with Different NaCl Concentrations

Naresh Kumar Ravichandran, Ruchire Eranga Wijesinghe, Seung-Yeol Lee, Muhammad Faizan Shirazi, Kibeom Park, Hee-Young Jung, Mansik Jeon, and Jeehyun Kim
Kyungpook National University, Korea

[Tu-P127] (Paper No. 10323-485)

MOPA Fiber Laser for Photoacoustic Imaging Using Arrayed Ultrasound Transducer

Yong-Jae Lee^{1,2}, Joon-Tae Ahn¹, Eun-Ju Jeong¹, Hyun-Woo Song¹, Chang-Geun Ahn¹, Hyung Wook Noh¹, Joo Yong Sim¹, Min Yong Jeon², Susung Lee³, and Bong Kyu Kim*¹
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[Tu-P128] (Paper No. 10323-487)

Locally Pressed Plastic Optical Fibers for Refractive Index Sensing

Shumpei Shimada¹, Heeyoung Lee¹, Makoto Shizuka¹, Hiroki Tanaka¹, Neisei Hayashi², Yosuke Mizuno¹, and Kentaro Nakamura¹
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[Tu-P129] (Paper No. 10323-491)

High Sensitive FBG Load Cell for Icing of Overhead Transmission Lines

Naiqiang Mao¹, Guoming Ma^{1,2}, Chengrong Li^{1,2}, Yabo Li¹, Cheng Shi¹, and Yue Du¹
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[Tu-P130] (Paper No. 10323-497)

A Novel Single Fiber Optical Tweezers based on GIMMF: Simulation and Experiment

Tong Wang, Xiaoyun Tang, Yaxun Zhang, Yu Zhang, and Zhihai Liu
Harbin Engineering University, China

[Tu-P131] (Paper No. 10323-500)

A Light Intensity Monitoring Method based on Fiber Bragg Grating Sensing Technology and BP Neural Network

LI Lu-Ming¹, ZHU Qian², ZHANG Zhi-Guo², Cai Zhi-Min¹, Liao Zhi-Jun¹, and Hu Zhen-Yan³
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[Tu-P132] (Paper No. 10323-502)

On the Actual Bandwidth of Some Dynamic Fiber-Optic Strain/Temperature Interrogators

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[Tu-P133] (Paper No. 10323-505)

A Highly Sensitive Twist Sensor without Temperature Cross Sensitivity based on Tapered Single-Thin-Single Fiber Offset Structure

Wenjun Ni¹, Ping Lu¹, Demin Liu¹, Jiangshan Zhang², and Shibin Jiang³
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[Tu-P134] (Paper No. 10323-508)

Hollow-Glass-Microsphere-Structured Fabry-Perot Interferometric Sensor for Highly Sensitive Temperature Measurement

Junna Cheng¹, Ciming Zhou¹, Dian Fan¹, and Yiwen Ou^{1,2}
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[Tu-P135] (Paper No. 10323-512)

Polyaniline Deposition on Tilted Fiber Bragg Grating for pH Sensing

A. Lopez Aldaba^{1,2}, Á. González-Vila², M. Debliquy², M. Lopez-Amo¹, C. Caucheteur² and D. Lahem³
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[Tu-P136] (Paper No. 10323-514)

Ultrafast-Laser-Induced Negative-Index Fiber Bragg Gratings with Enhanced Thermal Stability

Jun He, Changrui Liao, Kaiming Yang, and Yiping Wang
Shenzhen University, China

[Tu-P137] (Paper No. 10323-520)

Accurate Reconstruction of Digital Holography Using Frequency Domain Zero Padding

Jun Geun Shin¹, Ju Wan Kim², Jae Hwi Lee¹, and Byeong Ha Lee¹
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[Tu-P138] (Paper No. 10323-522)

Noncontact Measurement of Elasticity Using Optical Fiber-based Heterodyne Interferometer and Laser Ultrasonics

Jonghyun Eom¹, Soongho Park², Jinwoo Lee², and Byeong Ha Lee²
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[Tu-P139] (Paper No. 10323-525)

Refractive Index Sensor based on Helical Long-Period Grating based on Dual-Hole Elliptical Core Fiber

Chao Liu, Yu Zhang, Zhihai Liu, and Yaxun Zhang
Harbin Engineering University, China

[Tu-P140] (Paper No. 10323-537)

Polarization Stable Plasmonic Sensor based on Tilted Fiber Bragg Grating

Kirill A. Tomyshev^{1,2,3}, Yuriy K. Chamorovskiy¹, Vasily E. Ustimchik^{1,2}, and Oleg V. Butov^{1,2}
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[Tu-P141] (Paper No. 10323-548)

High Speed Strain Measurement of Active Mode Locking FBG Laser Sensor Using Chirped FBG Cavity

Gyeong Hun Kim¹, Joon Young Kim¹, Chang Hyun Park¹, Chang-Seok Kim¹, Hwi Don Lee², and Youngjoo Chung²
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[Tu-P142] (Paper No. 10323-549)

Quasi-Distributed Fiber Sensor Using Active Mode Locking Laser Cavity with Multiple FBG Reflections

Chang Hyun Park¹, Gyeong Hun Kim¹, Chang-Seok Kim¹, Hwi Don Lee², and Youngjoo Chung²
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[Tu-P143] (Paper No. 10323-553)

Quantum Wires as Sensors of the Electric Field: A Model into Quantum Plasmonics

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