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578th Conference

4th International Conference on

PHOTONICS & LASER TECHNOLOGY

July 28-29, 2016 Berlin, Germany



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July 28,2016 Day 1

07:30-09:00 Registrations

Hall-Embassy I+II

conferenceseries.com **08:00-08:30** **Opening Ceremony**

Keynote Forum

08:30-08:35 **Introduction**

08:35-09:05 **Title: Multi-mode optical quantum memory for quantum processing and communication**
Artur V. Gleim, ITMO University, Russia

09:05-09:35 **Title: TBA**
Carl Christoph Jung, CCJ Software, Germany

Special Session

09:35-10:20 **Title: Dielectric waveguide lasers: The realm of efficiency**
Markus Pollnau, KTH – Royal Institute of Technology, Sweden

Group Photo

Networking & Refreshment Break 10:20-10:35 @ Main Lobby

Session: Photonics

Session Chair: Bruno Bêche, Université de Rennes, France
Session Co-Chair: Michael Giersig, Helmholtz-Zentrum Berlin für Materialien und Energie, Germany

Session Introduction

10:35-10:55 **Title: A generalized method for calculating phase matching conditions in biaxial crystals**
Guangwen Huo, Xijing University, China

10:55-11:15 **Title: Electromagnetic waves interaction with various metallic nanomaterials**
Michael Giersig, Helmholtz-Zentrum Berlin, Germany

11:15-11:35 **Title: Ultrahigh charging of small spherical grains by the beam-plasma method for creating a compact neutron source**
Vladimir B Karalnik, Troitsk Institute for Innovation and Fusion Research (SRC RF TRINITI), Russia

11:35-11:55 **Title: The ABCD matrix for parabolic reflectors and its application to astigmatism free four-mirror cavities**
Kevin Dupraz, Centre national de la recherche scientifique, France

11:55-12:15 **Title: Soft matter for integrated photonics and resonances: Various hybrid approaches and adaptive technologies**
Bruno Bêche, Université de Rennes, France

12:15-12:35 **Title: Quantization of electromagnetic field in an inhomogeneous medium based on scattering matrix formalism (S-quantization)**
Mikhail Kaliteevski, ITMO University, Russia

Session : Types of Lasers | Lasers in Industry

Session Chair: Stephan Bruening, Schepers GmbH & Co. KG, Germany
Session Co-Chair: Belkacem Meziane, Université d'Artois, France

Session Introduction

12:35-12:55 **Title: All-polymer planar optical sensing devices integrated in thin foils**
Bernhard Roth, Leibniz University Hannover, Germany

12:55-13:15 **Title: Embossing dies for surface functionalization by laser micro structuring**
Stephan Bruening, Schepers GmbH & Co. KG, Germany

Lunch Break 13:15-13:55 @ Element I+II Restaurant

13:55-14:15	**Title: Investigation on soliton related effects in mid-infrared quantum-cascade lasers** **Jing Bai**, University of Minnesota Duluth, USA
14:15-14:35	**Title: Advances in mid-infrared mode-locked fiber lasers** **Maria Chernysheva**, Aston University, UK
14:35-14:55	**Title: Single and dual wavelength Er:Yb double clad fiber lasers** **Baldemar Ibarra-Escamilla**, Instituto Nacional de Astrofísica, Mexico
14:55-15:15	**Title: Noise-like pulse dynamics in passively mode-locked fiber lasers** **O Pottiez**, Centro de Investigaciones en Óptica, Mexico
15:15-15:35	**Title: Predicting the unpredictable with an isomorphic single-control parameter structure of the Laser-Lorenz equations** **Belkacem Meziane**, Université d'Artois, France
15:35-15:55	**Title: Optimization of a DPAL system by adjusting cell structural parameters and cell temperatures** **Guofei An**, Southwest Institute of Technical Physics, China

Networking & Refreshment Break 15:55-16:10@ Main Lobby

Workshop 16:10-18:25

Session Chair: Sergei A Kozlov, ITMO University, Russia
Session Co-Chair: Sergey A Moiseev, Kazan National Research Technical University, Russia

WS01	**Title: Strong quadrupole light-molecule interaction and surface-enhanced optical processes** **Aleksey Mickhailovich Polubotko**, Saint Petersburg State University, Russia
WS02	**Title: Polarization-independent subcarrier quantum communication system and its application in ITMO University quantum network** **Sergei A Kozlov**, ITMO University, Russia
WS03	**Title: Electrodynamical Forbiddance of the Strong Quadrupole Light-Molecule Interaction and Its Manifestation in Fullerene C_{60}** **Aleksey Mickhailovich Polubotko**, Saint Petersburg State University, Russia
WS04	**Title: Polarization-independent subcarrier quantum communication system and its application in ITMO University quantum network** **Artur V. Gleim**, ITMO University, Russia
WS05	**Title: Maintaining security against photon-number-splitting attacks in subcarrier wave quantum communication systems** **Vladimir Egorov**, Saint Petersburg State University, Russia
WS06	**Title: Method for determining of the optical constants for films and materials inside the absorption bands region** **E N Kotlikov**, Saint Petersburg State University of Aerospace Instrumentation, Russia
WS07	**Title: Proof of standard security analysis compatibility with a sub-carrier wave quantum communication method** **Andrei Gaidash**, ITMO University, Russia
WS08	**Title: Linear optical quantum circuits construction algorithm based on directed graphs or transform matrices** **Kozubov Anton**, ITMO University, Russia
WS09	**Title: Investigation of process of quartz glass crystallization by confocal Raman spectroscopy** **Dmitrii Pankin**, St. Petersburg State University, Russia

Closing Ceremony

July 29, 2016 Day 2

Hall-Embassy I+II

Sessions: Optoelectronic Materials and Devices| Optical system| Optical networking | Nanophotonics

Session Chair: Abdullah J Zakariya, Ministry of Interior Kuwait, Kuwait
Session Co-chair: E U Rafailov, Aston University, UK

Session Introduction

09:00-09:20	**Title: The quantum dot spectrometer-Exploiting the limitless number of colors of QDs** **Jie Bao**, Tsinghua University, China

09:20-09:40	**Title: Monolithically integrated tunable QW laser** **Abdullah J Zakariya**, Ministry of Interior Kuwait, Kuwait
09:40-10:00	**Title: Spectrum-polarization encoding for broadband laser pulses basing on rotatory dispersion and its possible applications** **Shixiang Xu**, Shenzhen University, China
10:00-10:20	**Title: Exact analytical aberration theory of centered optical systems containing conic surfaces** **Boian Andonov Hristov**, Bulgarian Academy of Sciences, Bulgaria
10:20-10:40	**Title: Quantum algorithms for factorization problem** **Xinhua Peng**, University of Science and Technology of China, China
10:40-11:00	**Title: Fourier transforms of geometric forms and interference patterns, deflection of light by the sun** **DO Tan Si**, HoChiMinh-city Physical Association, Vietnam
	Networking & Refreshment Break 11:00-11:15@ Main Lobby
11:15-11:35	**Title: Brillouin microscopy for sub-cellular 3D mechanical imaging** **Giuseppe Antonacci**, Centre for Life Nano Science, Italy
11:35-11:55	**Title: Router and routing designs for 3D torus optical network on chip** **Weigang Hou**, Northeastern University, China
11:55-12:15	**Title: New generation of a single-chip LEDs with superior colour rendering emission** **E U Rafailov**, Aston University, UK
12:15-12:35	**Title: Photonic microwave arbitrary waveform generation with adjustable chirp parameter based on remote sensing applications** **Sanjeev Kumar Raghuvanshi**, Indian School of Mines, India
Sessions: Optical Sensor Technologies and Types | Medical Laser Technology | Optometry Practice	
Session Chair: German F de la Fuente, ICMA CSIC-University of Zaragoza, Spain **Session Co-Chair: Daniel Valverde**, University of Guayaquil, Ecuador	
	Session Introduction
12:35-12:55	**Title: Importance of early diagnosis Retina** **Daniel Valverde**, University of Guayaquil, Ecuador
12:55-13:15	**Title: The laser furnace: Enabling continuous processing of ceramics and glass under extreme conditions** **German F de la Fuente**, ICMA CSIC-University of Zaragoza, Spain
	Lunch Break 13:15-13:55 @ Element I+II Restaurant
13:55-14:15	**Title: Scleral contact lens for KC management** **Nezar R Damati**, Eyezone Institute of Opticianry and Private Training, Kuwait
14:15-14:35	**Title: Aerosol profiling by Raman Lidar in Nanjing, China** **Nianwen Cao**, Nanjing University of Information Science and Technology, China
14:35-14:55	**Title: New applications for high repetition rate high energy P-P lasers** **Victor V Apollonov**, Prokhorov General Physics Institute, Russia
14:55-15:15	**Title: Cascaded multi-dithering technique for high power beam combination setup** **Hee Kyung Ahn**, Korea Research Institute of Standard and Science, South Korea
15:15-15:35	**Title: Investigation of distribution mechanism of noise fluxes between three oscillating modes of a free-running class –A laser** **Jafar Jahanpanah**, Kharazmi University, Iran
	Video Presentation
15:35-15:50	**Title: The effects of laser characteristics on melting of workpiece subject to surface plasmon excited by a pulsed laser** **Wei Peng-Sheng**, National Sun Yat-Sen University, Taiwan
	Young Research Forum
15:50-16:00	**Title: Research progress on metal ions doped lithium tantalate crystals and their applications in green laser** **Kang Xueliang**, Shandong University, China

16:00-16:10	**Title: Laser processing of solar cells on laser crystalized silicon** **Tim Frijnts,** Helmholtz Zentrum für Materialien und Energie Berlin, Germany
16:10-16:20	**Title: Surface alloying of al coatings on P92 steels by laser line scanning** **Hector Santos,** University of Madrid, Spain

Networking & Refreshment Break 16:20-16:35@ Main Lobby

Poster Timings 16:35-16:55

16:55-17:15	**Title: Wireless data transmission method using pulsed THz sliced spectral continuum** **Sergei A Kozlov,** ITMO University, Russia
17:15-17:35	**Title: Utilization of continuous low power visible laser in the 3D printing of strong and ultra- light weight cross-linked silica aerogel** **Khaled M Saoud,** Virginia Commonwealth University in Qatar, Qatar
17:35-17:55	**Title: 4D-Photonic crystals** **Naimi E K,** National University of Science and Technology "MISIS", Russia
17:55-18:15	**Title: Analytical approaches to description of nonlinear processes in inhomogeneous optical waveguides** **Mikhail A Bisyarin,** St.Petersburg State University, Russia

Poster Presentations @ Main Lobby

PHO001	**Title: Plasmon-coupled CuInS2 and CuInS2/ZnS for hybrid white LEDs** **Bagher Tabibi,** Hampton University, USA
PHO002	**Title: PLs from bandedge and surface-trapped state transitions in CdSe quantum dots for white light applications** **Bagher Tabibi,** Hampton University, USA
PHO003	**Title: Fiber-Optic heterodyne frequency modulation sensor for volatile organic compounds (vocs) detection** **Rajibur Rahaman Khan,** Kyungpook National University, Korea
PHO004	**Title: A study of the relative cost in elastic optical OFDM networks** **Anwar Alyatama,** Kuwait University, Kuwait
PHO005	**Title: TBA** **Hamza Alsalla,** Exeter University, UK

Closing & Award Ceremony

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