



signature
Conferences & Expos

Crowne Plaza Nice - Grand Arenas Rue Costes et Bellonte, Nice, 06200 France

SCIENTIFIC PROGRAM

JOINT CONFERENCE

2nd International Congress and Expo on

Optics, Photonics and Lasers &

2nd International Congress and Expo on

Materials Science & Nanoscience

June 13-14, 2024 | Nice, France

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Conference Day-1

Wednesday, JUNE 13th, 2024

08:30-09:00	Registrations	
09:00-09:15	Opening Ceremony	Conference Chair: Dieter Bimberg, Founding Director “Center of NanoPhotonics”, TU Berlin, Germany
09:30-10:05	Plenary Speaker	Dieter Bimberg, Executive Director “Bimberg Chinese-German Center For Green Photonics”, CIOMP, CAS, China
	Title	Green Data Communication: Intelligent Physics And Engineering Will Contribute To A Sustainable Society
10:05-10:40	Plenary Speaker	Roel Baets, Ghent University, Belgium
	Title	Silicon Photonics, today and tomorrow
10:40-11:15	Plenary Speaker	Volker Sorger, University Of Florida, USA
	Title	Optoelectronic Devices for AI Chips
11:15-11:30		Coffee Break
11:30-12:05	Plenary Speaker	Xiaogang Liu , National University Of Singapore And Institute Of Materials Research Engineering, A*STAR, Singapore
	Title	Frequency Conversion Nanocrystals: Transforming Imaging And Assistive Technology
12:05-12:40	Plenary Speaker	Shigemasa Suga, SANKEN, Osaka University, Japan
	Title	Frontiers of 3D photoelectron momentum microscopy (PMM) and Soft X-ray resonant inelastic scattering (SX-RIXS) down to sub mm scale
12:40-13:15	Plenary Speaker	Wei Li, Lab Director Of GPL Photonics Laboratory, CIOMP, China
	Title	Thermal Photonics and Applications
13:15-14:00		Lunch and Networking
14:00-14:35	Plenary Speaker	Arseniy Kuznetsov, Institute Of Materials Research And Engineering, A*STAR, Singapore
	Title	Metaoptics and nanoantenna spatial light modulators
14:35-15:10	Plenary Speaker	Iam Choon Khoo, The Pennsylvania State University, USA
	Title	Chiral soft-matter photonic crystals for advanced reconfigurable photonic applications
15:10-15:35	Keynote Speaker	Yashaiahu (Shaya) Fainman, University Of California Dan Diego, USA
	Title	Chip-Scale Nanophotonic Technologies And Applications
15:35-16:00	Keynote Speaker	John Ballato, Clemson University, USA
	Title	A Materials Approach to the Thermal Management of Fiber Amplifiers and Lasers
16:00-16:15		Coffee Break
16:15-16:40	Keynote Speaker	Mihaela C. Stefan, University Of Texas At Dallas, USA
	Title	Fused-ring pyrrole organic semiconductors for organic field effect transistors
16:40-17:05	Keynote Speaker	Heinz-S. Kitzerow, Center For Optoelectronics And Photonics Paderborn (CeOPP) And Faculty Of Science, Paderborn University, Germany
	Title	Liquid Crystals And Nanostructures – Recent Examples Of A Liaison With Mutual Benefits

17:05-17:30	Keynote Speaker	Benfeng Bai, Tsinghua University, China
	Title	TBC
17:30-17:55	Keynote Speaker	Katia Gallo, KTH Royal Institute Of Technology, Sweden
	Title	TBC
17:55-18:20	Keynote Speaker	Caiming Sun, IRIM, The Chinese University Of Hong Kong (CUHK), China
	Title	TBC

End of Day-1 Conference

**Conference Day-2
Friday, JUNE 14, 2024
Meeting Room -1**

09:00-09:25	Keynote Speaker	Andrew Wing On Poon, Hong Kong Univ of Science And Technology, Hong Kong
	Title	Integrated Quantum Light Sources in Silicon Photonic Platforms
09:25-09:50	Keynote Speaker	Kam Sing Wong, Hong Kong Univ of Science And Technology, Hong Kong
	Title	Bound States In The Continuum: From Photoluminescence To Second Harmonic Enhancement
09:50-10:15	Keynote Speaker	Muhammad Nadeem Akram, University Of South-Eastern Norway, Norway
	Title	Fourier-ptychographic microscopy: achievements and applications
10:15-10:40	Keynote Speaker	Salman Noach, Jerusalem College of Technology , Israel
	Title	High energy Tm based/ KGW SWIR Raman laser

10:40-10:55 Coffee Break

Session 1: Photonics

11:00-11:20	Invited Speaker	Binhao Wang, Xi'an Institute of Optics and Precision Mechanics, CAS, China
	Title	High-Speed Silicon Photonic DWDM Transceivers
11:20-11:40	Invited Speaker	Ottavia Jedrkiewicz, Institute for Photonics and Nanotechnologies - CNR, Italy)
	Title	Generation and tailoring of graphitic microelectrodes fabricated in diamond by pulsed Bessel beams
11:40-12:00	Invited Speaker	Christos Tsokos, National Technical University of Athens, Greece
	Title	Fully-Integrated FMCW THz Spectrometers For Non-Destructive Thickness Measurements
12:00-12:20	Invited Speaker	Yu-Hsun Chou, National Cheng Kung University, Taiwan
	Title	Fabrication Control and Challenges in Surface Plasmon Polariton (SPP) Lasers
12:20-12:40	Invited Speaker	Congwu Du, State University of New York at Stony Brook, USA
	Title	Optical Imaging of drug-induced brain dysfunction
12:40-13:00	Invited Speaker	Sean Hooten, Hewlett Packard Labs, USA
	Title	Automatic Differentiation Accelerated Feature Mapping Methods for Photonic Inverse Design

13:00-13:40 Lunch and Networking

13:40-14:00	Invited Speaker	Xiaochuan Xu, Harbin Institute of Technology (Shenzhen), China
	Title	Evanescent field engineering enabled silicon photonic devices
14:00-14:20	Invited Speaker	Mikhail Portnoi, University of Exeter, UK
	Title	Terahertz photonics of carbon-based nanostructures
14:20-14:40	Invited Speaker	Koichi Takiguchi, Ritsumeikan University, Japan
	Title	Spectrally efficient THz-wave communication using optical-domain or direct THz-domain reception signal processing
14:40-15:00	Invited Speaker	Anhui Liang, Ningbo Micro-color Optical Communication Limited, China
	Title	Optimal Form of Uncertainty Principle and Their Applications
15:00-15:20	Invited Speaker	Virgilijus Vaičaitis, Vilnius University Laser Research Center, Lithuania
	Title	Generation of broadband terahertz radiation in laser-created air plasma and its applications
15:20-15:40	Invited Speaker	Vasileios E. Lembessis, King Saud University, Saudi Arabia
	Title	Spin-to-orbit conversion mechanism in optical vortices creating miniature atom traps
15:40-16:00	Invited Speaker	Ulrich Jentschura, Missouri S&T University, USA
	Title	Dirac-Volkov Propagator: When Matter Perturbs Light and Relativistic Perturbation Theory is Not Enough
16:00-16:15	Coffee Break	
16:15-16:35	Invited Speaker	Ambali Alade Odebowale, The University of New South Wales, Australia
	Title	Machine Learning Assisted Selective Emitter Design for Solar Thermophotovoltaic System
16:35-16:55	Invited Speaker	Sanjida Akter, The University of New South Wales, Australia
	Title	High Responsivity of Zirconium boride/Chromium Alloy heterostructure for deep and near UV photodetector

Friday, JUNE 14, 2024

Meeting Room -2

Session 2: Optics

11:00-11:20	Invited Speaker	Theodore Goodson III, University of Michigan, USA
	Title	Nonlinear Optical and Time-Resolved Properties of Novel Organic Materials
11:20-11:40	Invited Speaker	Yosuke Aragane, Head of IOWN Development Office, NTT
	Title	Innovative Optical and Wireless Network (IOWN) for the next generation communication and computing infrastructure
11:40-12:00	Invited Speaker	Belén Ferrer , University of Alicante, Spain
	Title	Concrete as image texture target for movement measurement with subpixel precision
12:00-12:20	Invited Speaker	Dingchen Wang, Hong Kong University
	Title	Stretchable Optical Memristor Design, Fabrication, and Characterization
12:20-12:40	Invited Speaker	Yingwen Zhang, University of Ottawa, Canada
	Title	Utilization of multi-dimensional quantum entanglement in sensing and imaging

12:40-13:00 **Invited Speaker** Cherrie Lee, KTH Royal Institute Of Technology, Sweden
Title Engineering Coercive Fields via Ion-Exchange for Periodic Poling of RKTP

13:00-13:40 **Lunch and Networking**

13:40-14:00 **Invited Speaker** Yoichi Ogata, Department of Research and Development, Choi-Ogas Platform
Title Double aerial images assisted-ejection device

14:00-14:20 **Invited Speaker** Angelo Angelini, Italian National Institute of Metrological Research (INRiM) , Italy
Title High-Q Fano resonances in all-dielectric metasurfaces

14:20-14:40 **Invited Speaker** Rohit K Ramakrishnan, Centre for High Energy Physics, Indian Institute of Science, India
Title The Quantum Internet: A Photonic Approach

14:40-15:00 **Invited Speaker** I-Jan Chen, Soutport co. Ltd., Taiwan
Title Potential and opportunities of software defined optics in optical inspection and metrology

15:00-15:20 **Invited Speaker** Ioannis Roudas, Montana State University, USA
Title From Stokes to Mode Vector Modulation: Multidimensional Constellations and Polarimetric Detection for Energy Efficiency

Session 3: Lasers

15:20-15:40 **Invited Speaker** Jun-Ho Choi, Gwangju Institute of Science and Technology, South Korea
Title Computational Spectroscopy and Molecular Aggregation in Aqueous Solutions

15:40-16:00 **Invited Speaker** Daiki Okazaki, Institute for Chemical Research, Kyoto University, Japan
Title Cr:ZnS mid-infrared mode-locked laser with carbon nanotube films

16:00-16:15 **Coffee Break**

16:15-16:35 **Invited Speaker** Mark Lee, University of Texas at Dallas, USA
Title Millimeter Wave Spectroscopy of Materials for the 6G Telecomm Spectrum

16:35-16:55 **Invited Speaker** SuHui Yang , Beijing Institute of Technology, China
Title Suppression of Scattering Clutters in an Underwater lidar system

16:55-17:15 **Invited Speaker** Zuoye LIU, Lanzhou University, China
Title The spectral reshaping of XUV pulse in macroscopic systems

17:15-17:35 **Invited Speaker** Boris Barmashenko, Ben-Gurion University of the Negev, Israel
Title Diode pumped alkali lasers (DPALs): High power gas lasers using hybrid technology

17:35-17:55 **Invited Speaker** Sergio Pellegrino, Laserpoint srl, Italy
Title Fast Broadband Optical Energy Laser Meters: State of the Art

Meeting Room -3

Coffee Break

Session 1: Materials

11:00-11:30 **Keynote Speaker** Julia W.P. Hsu, University of Texas at Dallas, USA
Title Room-temperature Fabrication of Flexible Transparent Conducting Electrodes for Perovskite Solar Cells Using Light

11:30-12:00	Keynote Speaker	Douglas H Werner, The Pennsylvania State University, USA
	Title	TBC
12:00-12:25	Invited Speaker	Cosimo Carfagna, CRdC Tecnologie Scarl, Italy
	Title	Mediterranean Diet and Polymer Technology
12:25-12:50	Invited Speaker	Ramon Alberto Paredes Camacho, National University of Singapore Chongqing Research Institute
	Title	Effective Doping Engineering Of Na ₃ V ₂ (PO ₄) ₂ F ₃ As A High-Performance Cathode Material For Sodium-Ion Batteries
12:50-13:30 Lunch and Networking		
13:30-13:55	Invited Speaker	Alexandros Sarantopoulos, Peter Grünberg Institute, Germany
	Title	Tailored ionic and thermal properties in memristive device
13:55-14:20	Invited Speaker	Zeno Gaburro, University of Trento, Italy
	Title	Teaching generalized refraction with Kadidak startup
14:20-14:45	Invited Speaker	Tkach Olena, Johannes Gutenberg University of Mainz, Germany
	Title	Investigation of the Electronic Structure of Materials using Photoelectron Momentum Microscopy
14:45-15:10	Invited Speaker	Hartmut Yersin, University of Regensburg, Germany
	Title	Thermally activated delayed fluorescence (TADF) of OLED emitters. Photophysics and design of breakthrough materials
15:10-15:35	Invited Speaker	Yuya Yamaguchi, National Institute of Information and Communications Technology, Japan
	Title	High-Speed Lithium Niobate Modulators for Optical Fiber and Radio-Over-Fiber Links
15:35-16:00	Invited Speaker	Mark S. Goorsky, University of California, Los Angeles, United States
	Title	Advances in Materials Integration for Photonic Structures
16:00-16:15 Coffee Break		
16:15-16:40	Invited Speaker	Wen Lee, A*STAR, Singapore
	Title	Development of Photonic Interposer for HPC Presentation
16:40-17:05	Invited Speaker	Lisa John, Homi Bhabha National Institute, India
	Title	Phase Pure PdCoO ₂ from Molten chlorides: Synthesis and characterization
17:05-17:25	Invited Speaker	Galestan Mackertich, The Pennsylvania State University, USA
	Title	Future Advancements in Additively Manufactured Compliant Mechanisms for Electromagnetic and Optical Applications
Poster Presentations		
PST-1	Poster Presenter	David Mas, University of Alicante, Spain
	Title	Experimental limits for subpixel movement detection
PST-2	Poster Presenter	Sang-Chul Jung, Sunchon National University, South Korea
	Title	Preparation of nano-sized PrFeO ₃ -based perovskite complex and their assessment of hydrogen generation by liquid phase plasma method
PST-3	Poster Presenter	Nikolay Solodovchenko, ITMO University, Russia
	Title	Quadruplets of photonic resonances in non-Hermitian dielectric objects
PST-4	Poster Presenter	Anna Ermina, Ioffe Institute, Russia
	Title	Flexible SERS Substrate based on Ag Nanopyramids and Organosilicon Compound

PST-5 **Poster Presenter** Jong-Hyun Lee, Seoul National University of Science and Technology, South Korea

Title Sinter-bondability improvement of Ag-coated Cu particles through self-heating of sheet formulation