



**2<sup>nd</sup> International Summit on  
Lasers, Optics and Photonics  
&  
2<sup>nd</sup> International Summit on  
Graphene and 2D Materials**

**April 22–23, 2024 | Munich, Germany**

# Day-1 | April 22, 2024

08:30-09:00

## On Spot Registrations

**Chair**

*Houssain Kettani*, Professor & Chair of Computer Science,  
Al Akhawayn University, Morocco

**Co-Chair**

*Friedrich Grimm*, MD at RES Institute, Germany

**09:00-09:30**

**P**

*Title:* AI based Machine Vision for Mass Inspection:  
A Technical and Societal Challenge

*Julius Lawson Daku*, CEO & Founder of optoPartner, France

**09:30-10:00**

**P**

*Title:* Advancements of Shape Tolerance in Large ZERODUR®  
Optics Production

*Christian Reis*, Head of Development & Application Advanced  
Optics-SCHOTT, Germany

**10:00-10:30**

**P**

*Title:* Photonics in the Scope of Identity Access Management in  
Heterogenous IT Infrastructures

*Xenia Bogomolec*, CEO & Founder-Quant-X Security &  
Coding GmbH, Germany

10:30-10:45

## Refreshment Break

**10:45-11:15**

**P**

*Title:* Advancing Precise Control of Electromagnetic Radiation:  
An Innovative Multilayer Nanophotonic Structure for Mid-Infrared  
Atmospheric Windows

*Sarah S. Sharif*, Director-QNETS Laboratory, The University  
of Oklahoma, USA

**11:15-11:45**

**P**

*Title:* Design, Simulation and Applications of 3D-Printed  
Micro-Optics

*Alois Herkommer*, University of Stuttgart, Germany

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**11:45-12:15**     **P**     *Title:* Innovative Graphene-Ceramic Composites  
*Katalin Balazsi*, Centre for Energy Research, Hungary

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**12:15-12:45**     **P**     *Title:* Impacts of Mutual Phase Interactions on Crystal Polarity and Photocatalytic Hydrogen Production  
*Jrjeng Ruan*, National Cheng Kung University, Taiwan

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**12:45-13:45**     *Group Photo*  
*Lunch Break*

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**13:45-14:10**     **K**     *Title:* Topology and Symmetry Breaking in Polymer Emitters: A New Route to Electrically Driven Organic Lasing  
*David Carroll*, Wake Forest University, USA

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**14:10-14:35**     **K**     *Title:* Optimizing DWDM Communication Systems: SOA-Enhanced Fiber Loop Modulation for 50 GHz Optical Frequency Comb Generation  
*Mahrokh Avazpour*, Dublin City University, Ireland

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**14:35-15:00**     **K**     *Title:* Mathematical Modeling of Laser Beam Shaping and Basic Optical Systems  
*Martijn Anthonissen*, Eindhoven University of Technology, Netherlands

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**15:00-15:25**     **K**     *Title:* Towards TAMSELS: Tamm Assisted MetaSurface Emitting Lasers  
*Edmund Harbord*, University of Bristol, United Kingdom

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**15:25-15:40**     *Refreshment Break*

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**15:40-16:05**     **K**     *Title:* Will be updated soon...  
*Jinlong Wei*, Peng Cheng Laboratory, China

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<b>16:05-16:30</b>	<b>K</b>	<p><i>Title:</i> Bio-Remote Sensing and Integrated Artificial Intelligence Systems</p> <hr/> <p><i>Kianoush Rassels</i>, Delft University of Technology, Netherlands</p>
<b>16:30-16:55</b>	<b>K</b>	<p><i>Title:</i> The Physical Layer Secure Communications and Quantum Key Distribution (QKD) Systems Using Photonics</p> <hr/> <p><i>Atilla Hasekioglu</i>, BILGEM, TUBITAK, Turkey</p>
<b>16:55-17:20</b>	<b>K</b>	<p><i>Title:</i> Optical Techniques for Biomedical Analysis</p> <hr/> <p><i>Paddy French</i>, Delft University of Technology, Netherlands</p>
<b>17:20-17:45</b>	<b>K</b>	<p><i>Title:</i> Hybrid Prism - A New kind of Lens for Light in the Visible Spectrum as well as for X-rays</p> <hr/> <p><i>Friedrich Grimm</i>, MD at RES Institute, Germany</p>
<b>Sessions</b>		<b>3D Printing, Photonics and Applications, Optical Sensors, Quantum Optics &amp; Information, Novel Laser Technologies &amp; their Applications</b>
<b>Sessions Chair</b>		<b><i>Julius Lawson Daku</i>, CEO &amp; Founder of optoPartner, France</b>
<b>17:45-18:05</b>	<b>I</b>	<p><i>Title:</i> Optical Wavefront Shaping for Mode-Division Multiplexed Transmission</p> <hr/> <p><i>Tomohiro Maeda</i>, Aoyama Gakuin University, Japan</p>
<b>18:05-18:25</b>	<b>I</b>	<p><i>Title:</i> Study of 405 nm Laser-Induced Time-Resolved Photoluminescence Spectroscopy on Spinel and Alexandrite</p> <hr/> <p><i>Wenxing Xu</i>, Independent Researcher, Switzerland</p>
<b>18:25-18:45</b>	<b>I</b>	<p><i>Title:</i> Effects of Laser and LED Irradiation on the Growth and Control of Normal and Malignant Cells in Cell Cultures</p> <hr/> <p><i>Efrain Solarte</i>, Universidad del Valle, Colombia</p>

**18:45-19:05** |

*Title:* SLR Plan for Next Five Year at Shanghai Observatory

*Zhongping Zhang*, Shanghai Astronomical Observatory, Chinese Academy of Sciences, Shanghai, China

**POSTER** **P01**

*Title:* Hopf-Boundary-Limited External-Cavity Modes and their Transition to Chaotic Semiconductor Lasers with Time-Delayed Optoelectronic Feedback

*Qin Zou*, SAMOVAR, TelecomSudParis, France

**POSTER** **P02**

*Title:* Effects of Optical Irradiation with Laser and Led Light Sources on Cell Cultures of Leu-kemia

*Danielle Viviana Ochoa Arbeláez*, Universidad del Valle, Santiago de Cali, Colombia

**POSTER** **P03**

*Title:* Design of Membrane of a Biocatalytic Device with Graphene Materials

*Gulzat Demeuova*, L.N. Gumilyov Eurasian National University, Kazakhstan

**\*\*Closing the Conference for Day 1\*\***



# Day-2 | April 23, 2024

08:30-09:00

## On Spot Registrations

**Chair**

*Katalin Balazsi*, Head of Thin Film Physics Department, Centre for Energy Research, Hungary

**Co-Chair**

*Fengge Gao*, Director of Nanoscience Laboratory, Nottingham Trent University, United Kingdom

09:00-09:30

**P**

*Title:* Raman Spectroscopy in Biomedical Research and Diagnostics

*Mads S Bergholt*, King's College London, United Kingdom

09:30-10:00

**P**

*Title:* Cerabyte: Ultra Long-Term Sustainable Data Storage Solution for the Yotta Byte Era

*Steffen Klewitz*, COO-Cerabyte, Germany

10:00-10:30

**P**

*Title:* Structural Characterization of Carbon Materials and Semiconductor Devices using Tip Enhanced Raman and Scanning Near-field Raman Spectroscopy

*Masanobu Yoshikawa*, President-Toray Research Center, Inc., Japan

10:30-10:45

## Refreshment Break

10:45-11:15

**P**

*Title:* Photonic Layers for Solar Cells

*Hugo Aguas*, NOVA University of Lisbon, Portugal

11:15-11:45

**P**

*Title:* Mid-infrared Laser-based Absorption Spectroscopy for Trace Gas Detection

*Simona M. Cristescu*, Head of the Life Science Trace Detection Laboratory, Netherlands

**11:45-12:15**

**P**

*Title:* Computing, Medicine, Mobility: How Optics Drive Mega Trends

*Patrick Heissler*, Chief Strategy Officer-SUSS MicroOptics, Germany

**12:15-12:45**

**P**

*Title:* A Vision outside the Quantum of Light

*Jay Robles Pecharroman*, CEO & Co-founder of JAYNSTEIN LLC, USA

**12:45-13:45**

*Group Photo*

*Lunch Break*

**13:45-14:15**

**P**

*Title:* Nanocarbon Added Ceramics: Current Status and Future Trends

*Csaba Balazsi*, Centre for Energy Research, Hungary

**14:15-14:45**

**P**

*Title:* A Theoretical Construction of Graphene and of a Single Photon by Applying Twin Physics

*Anna Backerra*, Director-Institute of Theoretical and Applied Micro Magnetism, Netherlands

**14:45-15:15**

**P**

*Title:* High Speed Roll to Roll CVD Graphene and Applications

*Yongki Kim*, CEO-Charmgraphene Co., Ltd., South Korea

**15:15-15:45**

**P**

*Title:* Graphene-like Materials in Tribological Applications

*Andreas Kailer*, Head of Wear Protection and Advanced Ceramics at Fraunhofer IWM, Germany

**15:45-16:00**

*Refreshment Break*

**16:00-16:25**

**K**

*Title:* Novel Fluorescent Optical Antennas for Visible Light Communication (VLC)

*Jacopo Catani*, Senior Researcher at CNR-INO, Italy

<b>16:25-16:50</b>	<b>K</b>	<p><i>Title:</i> Quantum Mechanical Device for the Permanent Enclosure of a Plasma Volume in a Stellarator Type Fusion Reactor</p> <hr/> <p><i>Friedrich Grimm</i>, MD at RES Institute, Germany</p>
<b>16:50-17:15</b>	<b>K</b>	<p><i>Title:</i> Advances in High Performance Computing</p> <hr/> <p><i>Houssain Kettani</i>, Professor &amp; Chair of Computer Science, Al Akhawayn University, Morocco</p>
<b>17:15-17:40</b>	<b>K</b>	<p><i>Title:</i> Graphene / Boron Carbide Ceramic Composites Prepared by SPS and Flash Sintering</p> <hr/> <p><i>Pavol Hvizdos</i>, Director-IMR SAS, Slovakia</p>
<b>17:40-18:05</b>	<b>K</b>	<p><i>Title:</i> Will be updated soon...</p> <hr/> <p><i>Fengge Gao</i>, Nottingham Trent University, UK</p>
<b>POSTER</b>	<b>P01</b>	<p><i>Title:</i> Progress of Laser Time Transfer at Chinese Space Station</p> <hr/> <p><i>Zhibo Wu</i>, Shanghai Astronomical Observatory, Chinese Academy of Sciences, Shanghai, China</p>
<b>POSTER</b>	<b>P02</b>	<p><i>Title:</i> Application of an Industrial-Grade 100-Watt, 300-Kilohertz Picosecond Green Laser for Space Target Laser Ranging</p> <hr/> <p><i>Long Mingliang</i>, Shanghai Astronomical Observatory, Chinese Academy of Sciences, Shanghai, China</p>
<b>POSTER</b>	<b>P03</b>	<p><i>Title:</i> Advances in the Thermoelectric Measurements of 2D Superconductor Utilizing Contact Printed Circuit Boards</p> <hr/> <p><i>Sanaz Shokri</i>, Institute for Metallic Materials, IFW Dresden, Germany</p>

**\*\*Closing the Conference for Day 2\*\***





# NEXT EVENTS

3<sup>rd</sup> International Summit on  
**Lasers, Optics and Photonics**

*May 05-07, 2025 | Rome, Italy*

&

3<sup>rd</sup> International Summit on  
**Graphene and 2D Materials**

*May 05-07, 2025 | Rome, Italy*



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