

**INTERM 2024**  
**11<sup>th</sup> INTERNATIONAL CONGRESS ON MICROSCOPY &  
SPECTROSCOPY**

**BIOMATSEN 2024**  
**9<sup>th</sup> INTERNATIONAL CONGRESS ON BIOMATERIALS &  
BIOSENSORS**

**NANOMACH 2024**  
**5<sup>th</sup> INTERNATIONAL CONFERENCE ON NANOMATERIALS,  
NANOFABRICATION AND NANOCHARACTERIZATION**

**INTERPHOTONICS 2024**  
**6<sup>th</sup> INTERNATIONAL CONFERENCE ON PHOTONICS  
RESEARCH**

**SEMIMATER 2024**  
**SEMICONDUCTOR MATERIALS & DEVICE PHYSICS  
CONFERENCE**

**APRIL 18-24, 2024**

**Liberty Hotels Lykia, Oludeniz  
MUGLA / TURKEY**

**TENTATIVE PROGRAM**  
**TUESDAY, APRIL 16, 2024**

<b>14:00-16:30</b>	<b>REGISTRATION FOR EARLY ARRIVALS (14:00 Check-in)</b>
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**TENTATIVE PROGRAM**  
**WEDNESDAY, APRIL 17, 2024**

<b>9:00-16:30</b>	<b>REGISTRATION</b>
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	<b>(14:00 Check-in)</b>
Everyday Tours	<b>SOCIAL PROGRAM</b> <ul style="list-style-type: none"> <li>• <b>Saklıkent Jeep Safari</b></li> <li>• <b>Paragliding in Oludeniz</b></li> </ul>

<b>TENTATIVE PROGRAM</b> <b>THURSDAY, APRIL 18, 2024</b>	
<b>INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER</b>	
<b>HALL 1</b>	
<b>PLENARY SESSION</b> 09:45-10:30	Chairperson: <b>A.Yavuz Oral</b>  <b>Joon Myong Song</b>  Seoul National University, South Korea  <b>"ID483- Transparent Tumor Imaging-based Drug Penetration Monitoring"</b>
<b>PLENARY SESSION</b> 10:30-11:15	Chairperson: <b>A.Yavuz Oral</b>  <b>Hideaki Shiota</b>  Chiba University, Japan  <b>"ID716- Probing the Intermolecular Vibrations and Reorientation in Liquids and Solutions by Femtosecond Raman-Induced Kerr Effect Spectroscopy"</b>
11:15-11:45	<b>COFFEE BREAK</b>
<b>PLENARY SESSION</b> 11:45-12:30	Chairperson: <b>A.Yavuz Oral</b>  <b>Thomas Webster</b>  Hebei University of Technology, Tianjin, China and Interstellar Therapeutics, Mansfield, MA USA  <b>"ID497- A Real BandAid™: Incorporating Artificial Intelligence (AI) into Biomaterials, Nanotechnology, Sensors, and Medicine"</b>

12:30-14:00	<b>LUNCH</b>		
<b>PARALLEL SESSIONS</b> 14:00-16:30	<b>INTERM</b>  <b>HALL 1</b>  Chairperson: <b>Sergey Katsyuba</b>  14:00-14:30 <b>Sergey Katsyuba</b> Arbuzov Institute of Organic and Physical Chemistry, Russian Federation <i>(invited speaker)</i> <b>ID723- Clarifying structure of aqueous solutions by computationally supported spectral analysis</b>	<b>BIOMATSEN &amp; NANOMACH</b>  <b>HALL 2</b>  Chairperson: <b>Ewa Mijowska</b>  14:00-14:30 <b>Ewa Mijowska</b> West Pomeranian University of Technology, Poland <i>(invited speaker)</i> <b>ID842- Borophene as bifunctional electrocatalyst for electrochemical water decomposition (HER/OER)</b>	<b>INTERPHOTONICS &amp; SEMIMATER</b>  <b>HALL 4</b>  Chairperson: <b>Ersin Kayahan</b>  14:00-14:30 <b>Hendrik C Swart</b> University of the Free State, South Africa <i>(invited speaker)</i> <b>ID683- Laser-induced heating decimated luminescence nanothermometry using robust</b>

	<p>14:30-15:00 <b>Oleksandr Kryshtal</b> AGH University of Krakow, Poland <i>(invited speaker)</i> ID728- Examination of phase transformations in single metal and alloy nanoparticles by in situ valence electron energy loss spectroscopy</p> <p>15:00-15:30 <b>Monica Baia</b> Babes-Bolyai University, Romania <i>(invited speaker)</i> ID756- VIBRATIONAL SPECTROSCOPIC INVESTIGATIONS ON PHARMACEUTICALS</p> <p>15:30-16:00 <b>Lucian Baia</b> Babes-Bolyai University, Romania <i>(invited speaker)</i> ID755- Bioactive glasses/glass-ceramics/metal nanoparticles based composites for tissue engineering applications</p>	<p>14:30-14:50 <b>Olga D. Hendrickson</b> Research Center of Biotechnology of the Russian Academy of Sciences, Russian Federation ID506-Application of nanozymes in lateral flow test systems for food control</p> <p>14:50-15:20 <b>Livia Alexandra Dinu</b> National Institute of Research and Development for Microtechnology, Romania <i>(invited speaker)</i> ID502-Metallic nanoparticles-graphene nanohybrids as artificial enzymes for environmental and biomedical electrochemical applications</p> <p>15:20-15:50 <b>Mingjun Xie</b> Zhejiang Provincial People's Hospital, China <i>(invited speaker)</i> ID501-Electrospray Preparation Method and Biomedical Application of Multifunctional Gelatin-Based Microgel</p>	<p>LaOF:Yb3+, Er3+ upconversion nanophosphors</p> <p>14:30-15:00 <b>Yia-Chung Chang</b> National Cheng-Kung University, Taiwan <i>(invited speaker)</i> ID15-Modeling Carbon-Based Nanostructures and Devices: A Comprehensive Approach</p> <p>15:00-15:20 <b>Khafiz Salikhov</b> Tatarstan Academy of Sciences, Russian Federation ID705- OPTO-ELECTRONIC SENSOR OF HYDROGEN</p> <p>15:20-15:40 <b>Waldemar Swiderski</b> Military Institute of Armament Technology, Poland ID680- A new method for measuring the flux density of terahertz radiation</p>
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<b>TENTATIVE PROGRAM</b>	
<b>FRIDAY, APRIL 19, 2024</b>	
<b>INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER</b>	
<b>HALL 1</b>	
<b>PLENARY SESSION</b> 09:30-10:15	<p>Chairperson: <b>A.Yavuz Oral</b></p> <p style="text-align: center;"><b>Yi Wang</b> Cornell University, USA</p> <p style="text-align: center;">“Interconnection of microscopy and radiology in medical imaging”</p>
<b>PLENARY SESSION</b> 10:15-11:00	<p>Chairperson: <b>A.Yavuz Oral</b></p> <p style="text-align: center;"><b>Kazuo Umemura</b> Tokyo University of Science, Japan</p> <p style="text-align: center;">“ID493- Enzyme and carbon nanotube devices using floatable diatom frustules as a nanoporous silica”</p>
11:00-11:30	<b>COFFEE BREAK</b>
<b>PLENARY SESSION</b> 11:30-12:15	<p>Chairperson: <b>Ersin Kayahan</b></p> <p style="text-align: center;"><b>My Ali El Khakani</b> INRS, University of Quebec, Canada</p> <p style="text-align: center;">“ID14- Photosensitizing materials via their decoration with pulsed-laser-deposited nanoparticles”</p>
12:30-13:15	<b>LUNCH</b>

13:15-18:00	<p><b><i>SOCIAL PROGRAM</i></b></p> <p>13:15-18:00 <b><i>GHOST TOWN &amp; BLUE LAGOON</i></b></p> <p><b><i>(Gathering at Congress registration desk)</i></b></p>
19:30-21:30	<p><b><i>DINNER WITH INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER PLENARY SPEAKERS</i></b></p>

<p><b><i>TENTATIVE PROGRAM</i></b></p> <p><b><i>SATURDAY, APRIL 20, 2024</i></b></p>	
<p><b>INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER</b></p>	
<p><b>HALL 1</b></p>	
<p><b>PLENARY SESSION</b> 10:30-11:15</p>	<p>Chairperson: <b>A.Yavuz Oral</b></p> <p style="text-align: center;"><b>Günther Rupprechter</b> TU Wien, Austria</p> <p style="text-align: center;">“<b>ID843</b>- Observing nanostructures and reactants during catalysis by correlative surface microscopy”</p>
<p>11:15-11:45</p>	<p><b>COFFEE BREAK</b></p>
<p><b>PLENARY SESSION</b> 11:45-12:30</p>	<p>Chairperson: <b>A.Yavuz Oral</b></p> <p style="text-align: center;"><b>Alexander Khmaladze</b> SUNY at Albany, USA</p> <p style="text-align: center;">“<b>ID713</b>- 3D Imaging and Spectroscopy of Complex Biological Systems at the Sub-Cellular, Cellular and Multicellular Levels”</p>
<p>12:30-14:00</p>	<p><b>LUNCH</b></p>

<b>PARALLEL SESSIONS</b> 14:00-16:30	<b>INTERM</b>  <b>HALL 1</b>	<b>BIOMATSEN &amp; NANOMACH</b>  <b>HALL 2</b>
	Chairperson: <b>Daniela Djikanovic</b>  14:00-14:30 <b>Daniela Djikanovic</b> University of Belgrade, Serbia <i>(invited speaker)</i> <b>ID726-</b> Microscopic and spectroscopic monitoring of silicon influence on lignin synthesis. Implications for plant cell wall properties	Chairperson: <b>Marek Godlewski</b>  14:00-14:30 <b>Marek Godlewski</b> Polish Academy of Sciences, Poland <i>(invited speaker)</i> <b>ID485-</b> ZnO-BASED MARKERS ACTIVATED WITH RARE EARTH IONS FOR THERANOSTIC APPLICATIONS
	14:30-15:00 <b>Xiping Guo</b> Northwestern Polytechnical University, China <i>(invited speaker)</i> <b>ID731-</b> Preparation and Oxidation Resistance of Silicide Coating on Tungsten Substrate	14:30-15:00 <b>MERUYERT NAZHIPKYZY</b> Satbayev University, Kazakhstan <i>(invited speaker)</i> <b>ID881-</b> BIOMASS-DERIVED ACTIVATED CARBONS FOR ELECTROCHEMICAL ELECTRODES
	15:00-15:30 <b>Hikomitsu Nakajima</b> Saitama University, Japan <i>(invited speaker)</i> <b>ID735-</b> Analyses of iron species, metals, and pigments in the iron-hyperaccumulator moss <i>Scopelophila ligulata</i>	15:00-15:30 <b>Sanjairaj Vijayavenkataraman</b> New York University Abu Dhabi, UAE <i>(invited speaker)</i> <b>ID513-</b> 3D bioprinting: Challenges in Commercialization and Clinical Translation
	15:30-15:50 <b>Ping Guan</b> Northwestern Polytechnical University, China <b>ID724-</b> Preparation of Ionic Liquid Electrolyte Suitable for Low Temperature Environment and Its Lithium Ion Battery	15:30-16:00 <b>Rustem Zairov</b> Kazan Federal University, Russian Federation <i>(invited speaker)</i> <b>519-</b> Lanthanide Chelate Nanoparticles as luminescent thermometers

<b>TENTATIVE PROGRAM</b> <b>SUNDAY, APRIL 21, 2024</b>	
<b>INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER</b>	
	<b>HALL 1</b>
<b>PLENARY SESSION</b> 10:30-11:15	Chairperson: <b>A.Yavuz Oral</b>  <div style="text-align: center;"> <b>Alper Sahiner</b>  Seton Hall University, USA </div> <p style="text-align: center;">“<b>ID762-</b>Structure-Function Correlation in Advanced Materials Using Synchrotron Based Spectroscopy”</p>
11:15-11:45	<b>COFFEE BREAK</b>
<b>PLENARY SESSION</b> 11:45-12:30	Chairperson: <b>A.Yavuz Oral</b>  <div style="text-align: center;"> <b>XXX</b>  “xxx” </div>

12:30-14:00	<b>LUNCH</b>			
PARALLEL SESSIONS 14:00-16:10	<b>INTERM HALL 1</b>	<b>BIOMATSEN HALL 2</b>	<b>NANOMACH HALL 3</b>	<b>INTERPHOTONICS &amp; SEMIMATER HALL 4</b>
	<p>Chairperson: <b>Antony Ali ASSAF</b></p> <p>14:00-14:30 <b>Antony Ali ASSAF</b> Nantes Université, France <i>(invited speaker)</i> <b>ID720</b>- Raman spectroscopy applied on living samples: Monitoring of algal cells production in photobioreactors</p> <p>14:30-15:00 <b>Urška Gradišar Centa</b> University of Ljubljana, Slovenia <i>(invited speaker)</i> <b>ID750</b>-Characterization of composite materials</p> <p>15:00-15:30 <b>Holger Klein</b> CNRS, France <i>(invited speaker)</i> <b>ID758</b>- Going to extremely low doses: electron crystallography with the dose-symmetric electron diffraction tomography</p>	<p>Chairperson: <b>Arcady Zhukov</b></p> <p>14:00-14:30 <b>Arcady Zhukov</b> University of Basque Country, Spain <i>(invited speaker)</i> <b>ID494</b>- DEVELOPMENT OF SMART COMPOSITES WITH FERROMAGNETIC MICROWIRES</p> <p>14:30-15:00 <b>Anil Koklu</b> ASELSAN, Turkiye <i>(invited speaker)</i> <b>ID491</b>- Detection of disease biomarkers via electrical and fluorescence-based biosensors</p> <p>15:00-15:30 <b>Olga Pechanova</b> Slovak Academy of Sciences, Slovakia <i>(invited speaker)</i> <b>ID490</b>- Simvastatin- and coenzyme-Q10-loaded polymeric nanoparticles increased nitric oxide synthase activity via the Akt-eNOS pathway in obese Zucker rats</p> <p>15:30-16:00 <b>Taras Kavetskyy</b> Slovak Academy of Sciences, Slovakia <i>(invited speaker)</i> <b>ID516</b>-NETWORK PROPERTIES OF POLYMER MATRIXES FOR CONTROLLING A FUNCTIONALITY OF AMPEROMETRIC BIOSENSORS: RECENT ADVANCES AND PERSPECTIVES</p>	<p>Chairperson: <b>Josep Nogues</b></p> <p>14:00-14:30 <b>Josep Nogues</b> Catalan Institute of Nanoscience and Nanotechnology (ICN2), Spain <i>(invited speaker)</i> <b>ID876</b>-Anisometric Fe3O4 nanoparticles as versatile theranostic agents</p> <p>14:30-14:50 <b>Jacek Podwórny</b> Łukasiewicz Research Network-Institute of Ceramics and Building Materials, Poland <b>ID910</b>- Phase transformation in Ag-TiO2 nanocomposites</p> <p>14:50-15:10 <b>Anna Pajor-Świerzy</b> Jerzy Haber Institute of Catalysis and Surface Chemistry Polish Academy of Sciences, Poland <b>ID856</b>- Fabrication of conductive coatings based on nickel@silver core@shell nanoparticles by low-temperature sintering methods</p>	<p>Chairperson: <b>Ersin Kayahan</b></p> <p>14:00-14:30 <b>Constantin Meis</b> CEA – Saclay, France <i>(invited speaker)</i> <b>ID678</b>- Quantized field of single photons. The photon electric field and the photon wave function.</p> <p>14:30-15:00 <b>Tamara Basova</b> Siberian Branch of Russian Academy of Sciences, Russian Federation <i>(invited speaker)</i> <b>ID3</b>- Chemiresistive gas sensors based on metal phthalocyanines and their hybrid structures with metal nanoparticles</p> <p>15:00-15:20 <b>Alena Zavadilová</b> Czech Technical University in Prague, Czech Republic <b>ID687</b>- Laser-induced breakdown spectroscopy of uranium in eye-safe area</p> <p>15:20-15:50 <b>Jan-Joo Kim</b> Seoul National University, Korea, Republic Of <i>(invited speaker)</i> <b>ID23</b>- Spin Mixing: A Way for OLEDs to be the Ultimate Display?</p>
19:30-21:30	<b>DINNER WITH BIOMATSEN &amp; INTERPHOTONICS &amp; SEMIMATER INVITED SPEAKERS</b>			

**TENTATIVE PROGRAM**  
**MONDAY, APRIL 22, 2024**

INTERM & BIOMATSEN & NANOMACH & INTERPHOTONICS & SEMIMATER

HALL 1

<b>PLENARY SESSION</b> 10:30-11.15	Chairperson: <b>A.Yavuz Oral</b>  <p style="text-align: center;"><b>Yimei Zhu</b></p> <p style="text-align: center;">Brookhaven National Laboratory, USA</p> <p style="text-align: center;"><b>“ID734- Seeing Matter from Ultra-small to Ultra-fast and to Ultra-cold with Electrons”</b></p>
12:30- 13:15	<b>LUNCH</b>
13:15-18:00	<b>SOCIAL PROGRAM</b>  <b>13:15-18:00 THE BOAT CRUISE AROUND EXCELLENT BAYS OF BLUE LAGOON &amp; VISIT TO St. NICHOLAS ISLAND</b>  <i>(Gathering at Congress registration desk)</i>
19:30-21:30	<b>DINNER WITH INTERM &amp; NANOMACH INVITED SPEAKERS</b>

<b>TENTATIVE PROGRAM</b> <b>TUESDAY, APRIL 23, 2024</b>
<b>INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER</b>

<b>HALL 1</b>	
<b>PARALLEL SESSIONS</b> 11:00-11:50	<p><b>Chairperson:</b> Ersin Kayahan</p> <p>10:00-10:30  <b>Alexandra Mocanu</b>  National Institute for Research and Development in Microtechnologies, Romania  (invited speaker)  <b>ID699-</b> POLYMER PHOTONIC CRYSTALS: SYNTHESIS, CHARACTERIZATION AND APPLICATIONS</p>
	<p>10:30-10:50  <b>Fatmanur Kocaman Kabil</b>  Gebze Technical University, Turkiye  <b>ID27-</b> ZnO Semiconductor Powders Synthesized by Extracellular <i>R. Pusillus</i> Fungi</p>
	<p>10:50-11:10  <b>Vala Can Aşkan</b>  Gebze Technical University, Turkiye  <b>ID720-</b> Synthesis of Graphene from the Photothermal Reaction with a CO2 Laser and Its Effect on the Microstructural, Elemental, and Electrical Properties of Polyvinylidene Fluoride</p>
	<p>11.10-11:30  <b>Bahar Şölen Akdemir Yilmaz</b>  Gebze Technical University, Turkiye  <b>ID719-</b> An Investigation on the Electrical Conductivity Mechanism of PEDOT:PSS: Insights from UV-Vis-NIR Absorption Spectroscopy and Solvent Interaction Studies</p>
	<p>11:30-11:50  <b>Onur Alp Aksan</b>  Gebze Technical University, Turkiye  <b>IDxxx-xxx</b></p>
12:30-14:00	<b>LUNCH</b>



PARALLEL SESSIONS 14:00-17:00	<b>INTERM &amp; NANOMACH</b> <b>HALL 1</b>	<b>BIOMATSEN</b> <b>HALL 2</b>
	Chairperson: <b>Ovidiu Crisan</b>	Chairperson: <b>Owen J Guy</b>
	14:00-14:30 <b>Ovidiu Crisan</b> National Institute for Materials Physics, Romania <i>(invited speaker)</i> <b>ID893-</b> Magnetic Nanolayered Systems with THz Emission Properties	14:00-14:30 <b>Owen J Guy</b> Swansea University, UK <i>(invited speaker)</i> <b>ID486-</b> Graphene and silicon chip technologies for biosensing applications
	14:30-14:50 <b>Karolina Dudek</b> Łukasiewicz - Institute of Ceramics and Building Materials, Poland <b>ID909-</b> Functionalization of the NiTi shape memory alloy surface by innovative hybrid coatings	14:30-15:00 <b>Vasa Radonic</b> BioSense Institute, Serbia <i>(invited speaker)</i> <b>ID488-</b> INNOVATIONS IN GOLD ELECTRODE MANUFACTURING FOR COST-EFFECTIVE BIOSENSORS
14:50-15:20 <b>Cristina PACHIU</b> National Institute for Research and Development in Microtechnologies (IMT-Bucharest), Romania <i>(invited speaker)</i> <b>ID737-</b> CARBON NANOMATERIALS WITH PERFORMANCE IN EMI SHIELDING: GROWTH, STRUCTURING AND CHARACTERIZATION OF MATERIALS	15:00-15:30 <b>Darya Alontseva</b> D. Serikbayev East Kazakhstan Technical University, Kazakhstan <i>(invited speaker)</i> <b>ID511-</b> Enhancing the biocompatibility and bacteria resistance of 3D printed Ti6Al4V alloy endoprosthetic implants by applying Ta and Ta-Cu coatings	
15:20-15:50 <b>Filipe Mergulhão</b> University of Porto – FEUP, Portugal <i>(invited speaker)</i> <b>ID727-</b> Development of Functionalized Carbon Nanotubes and Graphene Composites to Inhibit Single- and Multi-Species Biofilms in Medical Devices	15:30-15:50 <b>Daniel Gillard</b> Swansea University, UK <b>ID487-</b> Molecular Vapor Deposition (MVD) – for biosensing applications	
17:00-17:30	<b>COFFEE BREAK</b>	
17:30-18:30	<b>FOYER (Poster Session Area)</b> Chairperson: A. Yavuz Oral  <b>POSTER SESSION</b>  <b>INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER</b>	

<b>TENTATIVE PROGRAM</b>
<b>WEDNESDAY, APRIL 24, 2024</b>
<b>INTERM &amp; BIOMATSEN &amp; NANOMACH &amp; INTERPHOTONICS &amp; SEMIMATER</b>
<b>HALL 1</b>

PARALLEL SESSIONS 10:30-11:40	<p>Chairperson: <b>Klimonsky Sergey</b></p> <p>10:30-11:00  <b>Klimonsky Sergey</b>  Lomonosov Moscow State University, Russian Federation  <i>(invited speaker)</i>  <b>ID685</b>- Stripe patterned photonic crystals: preparation and properties</p> <p>11:00-11:20  <b>Krzysztof Szczepanowicz</b>  Jerzy Haber Institute of Catalysis and Surface Chemistry, Poland  <b>ID860</b>- Theranostic nanocarriers to the central nervous system therapies</p> <p>11:20-11:40  <b>Klaudia Zielinkiewicz</b>  West Pomeranian University of Technology, Poland  <b>ID845</b>- Bulk scale fabrication of few-layered borophene - a combined strategy</p>
12:00	<b>Hotel Check Out</b>

<i>PROGRAM LEGEND DESCRIPTIONS</i>	
<b>ID-</b>	<b>INTERM 2024 oral presentations</b>
<b>ID-</b>	<b>BIOMATSEN 2024 oral presentations</b>
<b>ID-</b>	<b>NANOMACH 2024 oral presentations</b>
<b>ID-</b>	<b>INTERPHOTONICS 2024 oral presentations</b>
<b>ID-</b>	<b>SEMIMATER 2024 oral presentations</b>