



University of Chemical  
Technology and  
Metallurgy

# CONFERENCE AGENDA

Second International Conference on  
Bioactive, Organic and Inorganic Advanced  
Materials and Clean Technologies

**27 – 29 April 2026, Sofia, Bulgaria**



Contract №: BG-RRP-2.004-0002-C01, „BiOrgaMCT”  
(Bioactive organic and inorganic materials and clean  
technologies). Procedure: BG-RRP-2.004 – Creation of a  
network of research universities in Bulgaria under the National  
Recovery and Resilience Plan

<https://ctt.uctm.edu>

**Day 1 [27 April 2026] Park Hotel Vitosha**

09:00 - 09:30	<b>Conference Registration [Park Hotel Vitosha, Vitosha Hall Lobby]</b>		
09:30 - 10:00	<b>Opening [Park Hotel Vitosha, Vitosha Hall]</b>		
10:00 - 10:45	<b>Keynote speaker: Prof. D.Sc. Ashok Vaseashta, <i>Spinning the Threads of Innovation: Biopolymer-Based Electrospun Nanofibers for Healing, Regeneration, and Beyond</i></b>		
10:45 - 11:00	<b>Coffee break [Park Hotel Vitosha, Vitosha Hall Lobby]</b>		
11:00 - 12:30	<b>First Session (Oral presentations)</b>		
Topic	<b>New generation materials [Vitosha Hall 1]</b>	<b>Light-responsive materials [Vitosha Hall 2]</b>	<b>Biologically active molecules [Moreni Hall]</b>
Chairperson	<b>Prof. Plamen Petkov</b>	<b>Dr. Anton Georgiev</b>	<b>Prof. Dancho Danalev</b>
Speakers	<p><b>Prof. Delia Brauer</b> <i>Bioactive Glasses – the Effect of Their Structure on Properties and Applications</i></p> <p><b>Prof. Lalla Btissam Drissi</b> <i>Light-Responsive Carbon Nanostructures: Bridging Biomedical and Energy Applications</i></p> <p><b>Prof. Dumitru Tsiulyanu</b> <i>Investigation of electrical conduction and moisture sensing abilities of tellurium-sodium nitrate nanocomposites</i></p> <p><b>Prof. Petrica Vizureanu</b> <i>β-Alloys, A New Class of Materials for Biomedical Engineering</i></p> <p><b>Dr. Daniel Merker</b> <i>Diamond Thin Films as Biointerfaces</i></p> <p><b>Dr. Dimitar Dimitrov</b> <i>In-situ synthesis of AuNPs, encapsulated in nanosized silica using green reagents</i></p>	<p><b>Prof. Sylvain Achelle</b> <i>Photoluminescence of Platinum (II) Complexes with Diazine-based ligands</i></p> <p><b>Prof. Carlos Lodeiro</b> <i>From Molecular Emitters to Smart Hybrid Platforms: Translating Optical Sensing from the Lab to Real-World Applications</i></p> <p><b>Dr. Kosuke Nakashima</b> <i>Rearrangement of C2-Spirooxindoles: Conversion to the 2-Hydroxyhemi-indigo and Chromenoindole</i></p> <p><b>Prof. Ivo Piantanida</b> <i>One molecule to bind them all: organic dyes simultaneously targeting DNA, RNA or proteins, for each target giving a selective response</i></p>	<p><b>Prof. Manuel Graça</b> <i>Smart Doping: How Iron Oxide Transforms the Bioactivity and Antibacterial Profile of 45S5 Glass</i></p> <p><b>Prof. Anna Ermakova</b> <i>Nanodiamonds for nanoscale sensing</i></p> <p><b>Dr. Aneliya Kostadinova</b> <i>Chitosan-based nanocomposites enriched with plant extract in a model of diabetic wound healing in vitro</i></p> <p><b>Dr. Aura Tintaru</b> <i>NMR study of drug loaded nanocarriers</i></p> <p><b>Prof. Petar Todorov</b> <i>Synthesis, spectral analysis and molecular docking of new caffeic and cinnamic acid-conjugated hemorphin analogs with potential biological activity</i></p> <p><b>Prof. Jana Tchekalarova</b> <i>Pharmacological evaluation of novel N- and C-modified peptide analogues of VV-hemorphin-5 and VV-hemorphin-7 as potential agents with anti-seizure activity</i></p>

12:30 - 14:00	<b>Lunch break [Park Hotel Vitosha Restaurant]</b>		
14:00 - 15:30	<b>Second Session (Oral presentations)</b>		
Topic	<b>New generation materials</b> [Vitosha Hall 1]	<b>Light-responsive materials</b> [Vitosha Hall 2]	<b>Biologically active molecules</b> [Moreni Hall]
Chairperson	<b>Prof. Dumitru Tsiulyanu</b>	<b>Prof. Carlos Lodeiro</b>	<b>Prof. Jana Tchekalarova</b>
Speakers	<p><b>Dr. Andrei Sandu</b> <i>Obtaining and Characterization of Low Carbon Footprint Materials</i></p> <p><b>Prof. Marina Ciobanu</b> <i>Thermal effects and glass transition temperature of AsS<sub>3</sub>-GeS<sub>4</sub> ternary</i></p> <p><b>Prof. Luis Costa</b> <i>Polymer composites for smart thermal management and protection in energy systems</i></p> <p><b>Trayana Dolchinkova</b> <i>Optical properties of InP/ZnS quantum dots sensitized thin azo polymer films</i></p> <p><b>Prof. Şaban Atapek</b> <i>Investigation of Electrochemical Corrosion Behavior of SiMo-SiNb Ductile Cast Irons</i></p> <p><b>Tsvetelina Liubenova</b> <i>SEM and EDX Study of Zinc-Magnesium and Zink-Cobalt Phosphate Coatings on Mild Steel Surfaces</i></p>	<p><b>Dr. Atanas Kurutos</b> <i>Emerging colorimetric and fluorimetric smart materials</i></p> <p><b>Dr. Peter Šebej</b> <i>Substituent Effects on Cyanines: Role of Chain Length and Position</i></p> <p><b>Dr. Rebecca Strada</b> <i>A Study of the Deexcitation Pathways in Semiconducting Dyes</i></p> <p><b>Desislava Marinova</b> <i>Determinants of Z-Isomer Stability in Phthalylhydrazones: Dual Light- and Acid-Controlled Switching</i></p> <p><b>Eckhart Kornejew</b> <i>Customized Polyaspartic-Polyurea Systems for Surface Coating</i></p> <p><b>Prof. Hua Li / Rui Yang</b> <i>Fabrication of Visible-Light Active Ce-Doped Bi<sub>2</sub>O<sub>3</sub> Coatings via Single-Step Solution Precursor Plasma Spraying</i></p>	<p><b>Prof. Dancho Danalev</b> <i>Biologically active peptides - potential for new medical drugs</i></p> <p><b>Dr. Rossitsa Hristova</b> <i>Design, Synthesis, and Biological Evaluation of Novel Methyl-Substituted Pyrrole Hydrazones as Selective Melanoma Agents</i></p> <p><b>Prof. Emilia Naydenova</b> <i>Anticancer Activity of novel Analogues of Aurein 1.2 Containing Non-Proteinogenic Amino Acids in in vitro models of Osteosarcoma and Glioblastoma</i></p> <p><b>Prof. Nelly Georgieva</b> <i>Study on the effects of incorporation of unnatural amino acids in more than one position in the Temporin A molecule</i></p> <p><b>Dr. Boryana Borisova</b> <i>Novel heterocyclic PDE4 Inhibitors: a promising strategy for anti-inflammatory drug discovery</i></p> <p><b>Dilyana Dimitrova</b> <i>Synthesis and evaluation of Temporin A analogues modified with unnatural amino acids as potential antimicrobial agents</i></p>
15:30 - 16:30	<b>Coffee break &amp; Poster Presentations [Vitosha Hall Lobby &amp; Moreni Hall Lobby]</b>		

16:30 - 17:30		Flash Poster Presentations	
New generation materials [Vitosha Hall 1]  Prof. Andriana Surleva		Light-responsive materials [Vitosha Hall 2]  Desislava Marinova	
Biologically active molecules [Moreni Hall]  Dilyana Dimitrova			
<p><b>Dr. Ondrej Bošák</b> <i>Electrical and dielectric properties of barium vanadate glasses with ZnO</i></p> <p><b>Prof. Vilma Petkova</b> <i>Induced defects and disorders in crystal structure of dry milled activated fluor apatite</i></p> <p><b>Dr. Pavlina Koleva</b> <i>Doped and undoped thin films obtained by spray pyrolysis technique</i></p> <p><b>Sofia Slavova</b> <i>Theoretical and Experimental Study on the Luminescence Properties of Europium(III)-2-carbamido-/2-acetyl-1,3-indandione Complexes</i></p> <p><b>F.B. Yılmaz Güler</b> <i>Investigation of Corrosion Behavior in AlCoCrFeNiX Alloys Produced by Spark Plasma Sintering</i></p> <p><b>Irem Erçel</b> <i>Assessment of the properties of AA2024-T3 aircraft alloy after anodic polarization in biocompatible organic acid electrolytes</i></p> <p><b>Rui Yang</b> <i>Structural Optimization and Antifouling and Anti-corrosion Performance Enhancement of Epoxy Coatings Based on Zeolitic Imidazolate Frameworks Materials</i></p>	<p><b>Dr. Boris Martinov</b> <i>Antibacterial silicone coatings incorporating GO, RGO, ZnO, and Ag nanoparticles</i></p> <p><b>Dr. Anelya Petrina</b> <i>Structural study and bioactivity of solid state synthesized biogenic hydroxyapatite</i></p> <p><b>Dr. Daniela Angelova</b> <i>Sustainable Valorization of Polystyrene Waste into Activated Carbon for Water Treatment</i></p> <p><b>Kalina Krumova</b> <i>Preparation of Zirconium-Containing Barium Titanate Oxide Glass-Ceramics – Phase Composition, Microstructure and Electric Properties</i></p> <p><b>Dr. Hristo Georgiev</b> <i>Composition and morphology of the newly formed phases on the surface depending on the conditions of the in vitro bioactivity test</i></p> <p><b>Dr. Ekaterina Serafimova</b> <i>From Farm to Table and Back Again: Circular Valorization of Biomass Ash and Sewage Sludge into Sustainable Material Blends</i></p> <p><b>Dr. Tina Tasheva</b> <i>Structure and in vitro bioactivity of novel composites based on biogenic hydroxyapatite and borate glasses</i></p>	<p><b>Dr. Nikolay Yavorov</b> <i>Eco-friendly functional paper coating for conservation efficiency</i></p> <p><b>Jakub Štrojsa</b> <i>Tuning Aggregation-Induced Emission via Solvent Polarity in Triazine Derivatives</i></p> <p><b>Jakub Valuš</b> <i>The Impact of Donor–Acceptor Interactions on the Aggregation and Emission Behavior of Chromophores</i></p> <p><b>Hristo Lalkovski</b> <i>Effect of temperature on the luminescent properties of sol – gel prepared Eu 3+ doped SiO<sub>2</sub> –B<sub>2</sub>O<sub>3</sub> glasses</i></p> <p><b>Dr. Polyana Miladinova</b> <i>Synthesis of heterocyclic reactive dyes for cotton with possibility for application as inhibitors of corrosion</i></p>	<p><b>Dr. Temenuzhka Radoykova</b> <i>Antioxidant phenolic compounds from lignocellulosic waste materials and their application for polymer stabilization</i></p> <p><b>Dr. Veronica Nemska</b> <i>Antibacterial activity of new rimantadine derivatives against Bacillus subtilis NBIMCC 3562 and Escherichia coli NBIMCC 8785</i></p> <p><b>Elena Velichkova</b> <i>Titan based organic-inorganic gels, containing Temporin A and analogs</i></p> <p><b>Milica Vidić</b> <i>Preliminary chemical analysis and assessment of the antioxidant potential of Satureja horvatii Šilić (Lamiaceae) herb extracts prepared using natural deep eutectic solvents</i></p> <p><b>Dr. Darya Ilieva</b> <i>Evaluation of the parameters of a spectrophotometric method for the Quantitative determination of an antimicrobial ingredient in commercial products</i></p>

**Day 2 [28 April 2026] Park Hotel Vitosha**

09:30 - 10:00	<b>Conference Registration [Park Hotel Vitosha, Vitosha Hall Lobby]</b>		
10:00 - 10:45	<b>Keynote speaker: Dr. Olivier Siri, Azacalixarene: An Ever-Growing Macrocycle</b>		
10:45 - 11:00	<b>Coffee break [Park Hotel Vitosha, Vitosha Hall Lobby]</b>		
10:45 - 11:00	<b>Demonstration of Zeiss AxioScope 5 Smart Laboratory Microscope by AQUACHIM representative</b>		
11:00 - 12:30	<b>Third Session (Oral presentations)</b>		
Topic	<b>New generation materials</b> [Vitosha Hall 1]	<b>Light-responsive materials</b> [Vitosha Hall 2]	<b>Biologically active molecules</b> [Moreni Hall]
Chairperson	<b>Dr. Christian Girginov</b>	<b>Dr. Kosuke Nakashima</b>	<b>Prof. Stela Georgieva</b>
Speakers	<p><b>Prof. Perica Paunovic</b> <i>Graphene-Modified Conductive Polymer Based Composite Films for EMI Shielding Purpose</i></p> <p><b>Dr. Alberto López-Grande</b> <i>Thermodynamic model for the structure of Nd doped phosphate laser glasses</i></p> <p><b>Prof. Ruzha Harizanova</b> <i>Zirconium Modified Barium Titanate Crystallized from Oxide Glasses: Phase Composition and Microstructure</i></p> <p><b>Dr. Neda Neykova</b> <i>Effect of the passivation layer in perovskite solar cells</i></p> <p><b>Prof. Tomasz Czujko</b> <i>Innovative materials for hydrogen storage - expectations and reality</i></p> <p><b>Prof. Carmen Ristoscu</b> <i>Composite Coatings Synthesized by Laser Methods for Improved Bone Repair and Enhanced Antimicrobial Protection</i></p>	<p><b>Dr. Stefano Luigi Oscurato</b> <i>All-optical metrology using azopolymer surface-relief gratings</i></p> <p><b>Dr. Sheelbhadra Chatterjee</b> <i>Cooperative switching in a dihydropyrene-dithienylethene (DHP-DTE) hybrid photo switchable system</i></p> <p><b>Dr. Marcella Salvatore</b> <i>Light-Based System for Multifunctional Azopolymer Surface Design</i></p> <p><b>Prof. Filip Bures</b> <i>Boosting Photosynthesis by Light-Emitting Materials</i></p> <p><b>Dr. Jiří Tydlitát</b> <i>Triphenylamine Derivatives: From Emissive Solutions to Emissive Aggregates</i></p>	<p><b>Dr. Fatos Rexhepi</b> <i>Integrated FTIR and Chemometric Approach for Detecting Non-Local Adulteration in Styrian Pumpkin Seed Oil</i></p> <p><b>Dr. Xiaomei Liu</b> <i>Decoy EPS Layers for Trapping and Killing Bacteria</i></p> <p><b>Dr. Yoana Stoyanova</b> <i>Application of membrane filtration and spray drying for valorisation of spent lavender</i></p> <p><b>Dr. Nevena Lazarova-Zdravkova</b> <i>Membrane-Assisted Recovery and Spray Drying of Bioactive Compounds from Spent Lavender Biomass</i></p> <p><b>Dr. Diyan Tochev</b> <i>Phenolic compounds in secondary products from wine production of mavrud</i></p>



12:30 - 14:00	<b>Lunch break [Park Hotel Vitosha Restaurant]</b>		
14:00 - 15:30	<b>Fourth Session (Oral presentations)</b>		
Topic	<b>New generation materials</b> [Vitosha Hall 1]	<b>Light-responsive materials</b> [Vitosha Hall 2]	<b>Electrochemical methods for material studies</b> [Moreni Hall]
Chairperson	<b>Prof. Ruzha Harizanova</b>	<b>Prof. Sylvain Achelle</b>	<b>Prof. D.Sc. Martin Bojinov</b>
Speakers	<p><b>Petar Takov</b> <i>Manganese Ferrite Containing Glasses-Ceramics – Phase Composition, Microstructure and Electric Properties</i></p> <p><b>Dr. Johan Alauzun</b> <i>Synthesis of mesoporous hybrid materials as sorbent or catalyst support by non-hydrolytic sol-gel</i></p> <p><b>Dr. Ognen Pop-Georgievski</b> <i>Self-assembled monolayers: From versatile surface modification platforms for sensing to hole transporting layers for solar cell applications</i></p> <p><b>Dr. Stephan Kozhukharov</b> <i>Anodization of AA2024-T3 aircraft alloy in environmentally friendly electrolytes</i></p>	<p><b>Dr. Stevan Gavranović</b> <i>Advanced SCLC Model: A Guide for Analysis of the Fermi Level Shift in the Bandgap of Halide Perovskites</i></p> <p><b>Prof. Laurent Arurault</b> <i>Tuning thermo-optical properties of anodic films</i></p> <p><b>Prof. Christian Brosseau</b> <i>Electromagnetism of Functional Biomaterials</i></p> <p><b>Dr. Ivo Crnolatac</b> <i>More (polarized) light on biomolecular binding, probing molecular interactions with Fluorescence Anisotropy</i></p> <p><b>Dr. Ventsislav Bakov</b> <i>Exploring 1,8-naphthalimide AIEgens for Advanced Sensing Applications</i></p> <p><b>Prof. Desislava Staneva</b> <i>Self-disinfecting textiles modified with fluorescent hyperbranched polymers via antimicrobial photodynamic therapy</i></p>	<p><b>Prof. D.Sc. Martin Bojinov</b> <i>In-situ electrochemical studies of corrosion of low-alloyed steel in simulated steam generator coolants</i></p> <p><b>Dr. Nikoleta Ivanova</b> <i>Molecular Dynamics Investigation of Small Molecule Adsorption on Magnetite Surfaces</i></p> <p><b>Dr. Vasil Karastoyanov</b> <i>Corrosion and anodic oxidation of Alloy 690 in simulated primary coolant of a small modular reactor studied by in-situ electrochemical impedance spectroscopy</i></p> <p><b>Dr. Yoanna Penkova</b> <i>Electrochemically synthesized copper-tungsten oxides as photo-cathodes for photo-electrochemical water splitting</i></p> <p><b>Lyuben Borislavov</b> <i>Time Series Machine Learning Models for Organic Electrode Materials</i></p>
15:30 - 16:30	<b>Coffee break &amp; Poster Presentations [Vitosha Hall Lobby &amp; Moreni Hall Lobby]</b>		
16:30 - 19:00	<b>Sofia Free tour</b>		

**Day 3 [29 April 2026] Park Hotel Vitosha**

09:30 - 10:00	<b>Conference Registration [Park Hotel Vitosha, Vitosha Hall Lobby]</b>		
10:00 - 10:45	<b>Keynote speaker: Dr. Christine Baudequin, C-H functionalization: an efficient route for the synthesis of bioactive compounds and fluorescent heterocycles</b>		
10:45 - 11:00	<b>Coffee break [Park Hotel Vitosha, Vitosha Hall Lobby]</b> <b>Demonstration of Zeiss Axioscope 5 Smart Laboratory Microscope by AQUACHIM representative</b>		
11:00 - 12:00	<b>Fifth Session (Oral presentations)</b>		
Topic	<b>New generation materials</b> [Vitosha Hall 1]	<b>Light-responsive materials</b> [Vitosha Hall 2]	<b>Biologically active molecules</b> [Moreni Hall]
Chairperson	<b>Prof. Perica Paunovic</b>	<b>Dr. Atanas Kurutos</b>	<b>Prof. Petar Todorov</b>
Speakers	<p><b>Prof. Michael Herzog</b> <i>Recycling Innovations for Sustainable Material Management</i></p> <p><b>Prof. Christian Dreyer</b> <i>Functional Integration for Urban and Vertical Farming and Beyond</i></p> <p><b>Dr. Vivian Müller</b> <i>Composite Innovation for a Circular and Resilient Future</i></p> <p><b>Dr. Milan Klikar</b> <i>Affecting the optoelectronic properties of tripodal chromophores using various fluorine-based terminal substituents</i></p>	<p><b>Dr. Wojciech Stępniewski</b> <i>Electrochemical oxidation of copper and copper alloys: mechanism, challenges, and applications</i></p> <p><b>Dr. Andreas Bernaschek</b> <i>Investigation of New Approaches for UV-Curable Synthetic Resins and Non-Newtonian Fluids (STF)</i></p> <p><b>Dr. Kiril Dimitrov</b> <i>Sustainable Functional Integration of Chitosan-Based Components in Composites: Development and Applications</i></p>	<p><b>Dr. Kameliya Anichina</b> <i>Advances in the Design and Synthesis of Benzimidazole-based Anti-Trichinella Spiralis Agents</i></p> <p><b>Prof. Stela Georgieva</b> <i>Application of the Biologically Active Compound Cefixime for Selective Voltammetric Determination of Nitrite in Water via Diazotization–Coupling Reaction on a GC Electrode</i></p> <p><b>Dr. Janna Mateeva</b> <i>Study on solvent effects in the dissolution of rosa damascena concrete for rose absolute production</i></p>
12:00 - 12:15	<b>Closing remarks [Vitosha Hall 1]</b>		
12:15 - 13:30	<b>Lunch break [Park Hotel Vitosha Restaurant]</b>		

**Poster Sessions – 27 April and 28 April, 15:30 - 16:30**

**New generation materials [Vitosha Hall Lobby]**

**N1: Dr. Eduard Stefanov**

*Mercury removal from technical sulfuric acid*

**N2: Dr. Vanya Lilova**

*Effect of the photocatalyst aggregation on the photocatalytic reaction rate concentration dependence*

**N3: Dr. Vesislava Toteva**

*Processing of cotton textile waste for sustainable synthetic fuel production: pretreatment, enzymatic hydrolysis and product characterization*

**N4: Prof. Vilma Petkova**

*Microstructural properties of self-compacting cement mortars with water reducer admixture and mineral additions*

**N5: Prof. Marian Kubliha**

*Electrical and dielectric properties of sulfide-based solid electrolytes with Na ionic conductivity*

**N6: Dr. Petr Kostka**

*Tellurite glasses co-doped with rare earths and chromium*

**N7: Kalina Ivanova**

*Study on the Antimicrobial Behavior of TiO<sub>2</sub>/ZnO/CuO Sol-Gel Powders*

**N8: Stefani Petrova**

*Photoactive cotton fabrics on the basis of Ho doped TiO<sub>2</sub> nanoparticles for self-cleaning*

**N9: Dr. Boyan Yordanov**

*Structure and mechanical properties of tool steel D3 alloyed with silicone nitride nanomodifier*

**N10: Dr. Biserka Lucheva**

*Lead Recovery from Lead Cake by Combined Chlorination Roasting and Leaching Process*

**N11: Alexander Tzintzarov**

*Synthesis and characterization of chitosan-*T. parthenium* and *L. nobilis* composites*

**N12: Dr. Jan Pospisil**

*Advanced SCLC Model: A Guide for Analysis of the Fermi Level Shift in the Bandgap of Halide Perovskites*

**N13: Dr. Georgi Chernev**

*Nano modified inorganic-organic surface agents for protection of concrete products*

**N14: Dr. Iskren Spiridonov**

*Recyclable paper packaging with increased barrier properties*

**N15: Maria Sabeva**

*Synthesis, characterization and antibacterial properties of sol-gel derived ZnO/ collagen materials*

**N16: Dr. Kostadinka Sezanova**

*Synthesis and characterization of Cu-modified  $\beta$ -Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> as a biomaterial for application in medicine*

**N17: Taras Kavetsky**

*Kinetics of photopolymerization of soybean oil-based polymers*

**N18: Dr. Tsvetomila Lazarova**

*High Entropy Spinel Oxides: Synthesis, characterization and catalytic properties*

**Poster Sessions – 27 April and 28 April, 15:30 - 16:30**

**Light-responsive and functional materials [Vitosha Hall Lobby]**

**L1: Blagovesta Katevska**

*Evaluation of deacidification product efficiency during accelerated thermal aging of document papers*

**L2: Dr. Marijana Radić Stojković**

*Structure-Selective Binding and Bioactivity of Chlorine-Substituted Cyanine Dyes with DNA, RNA, and Lipid Membranes*

**L3: Nina Vukadinović**

*Selective Targeting of DNA, RNA, and Lipid Membranes by Chlorine-Substituted Cyanine Dyes*

**L4: Dr. Lidija-Marija Tumor**

*Styryl Dyes with N-Phenylpiperazine Functionality: DNA, RNA and G-quadruplex Binding Ligands*

**Biologically active molecules**

**[Moreni Hall Lobby]**

**B1: Dr. Diana Kichukova**

*Synthesis and characterization of zeolite with Bugarian herbals composites*

**B2: Dr. Darina Georgieva**

*Developing active packaging based on natural products*

**B3: Dr. Ivan Savić**

*Chemical profile and antiradical activity of leaf and flower extracts of nasturtium (*Tropaeolum majus* L.)*

**B4: Rositsa Antonova**

*Cannabinoids, Hydroxycannabinoids, and Cannabidiol: Chemistry, Pharmacology, and Clinical Potential*

**B5: Lilia Yordanova**

*Comparative Antibacterial Activity of  $\text{SiCu}(\text{OH})_2$  and  $\text{SiCuSO}_4$  Nanomaterials*

**B6: Dayana Benkova**

*Chitosan-Encapsulated *Tanacetum parthenium* and *Laurus nobilis* Extracts as a Phytotherapeutic Approach Against Melanoma*

**B7: Denitsa Georgieva**

*Strain-Dependent DPPH and ABTS Radical-Scavenging Potential of Microalgae Strain Culture Supernatants*

**B8: Dr. Stanislava Vladimirova**

*Synthesis of new pyrroloquinoline compounds as potential biological active agents*

**B9: Silviya Hristova**

*Lignin and Catechin Synergistically Improve Antioxidant Functionality of Silk Fibroin Biomaterials*

**B10: Dr. Ariana Langari**

*Influence of extract of bay leaf and its chitosan-based composite on erythrocyte morphology and fluidity*

**B11: Prof. Zvezdelina Yaneva**

*Synergistic Antioxidant Performance of Lignin–Chitosan Nanocomposites: Experimental Evaluation and AI-Guided Optimization*

**B12: Dr. Veronika Karadjova**

*Synthesis and characterization of new metal complexes of Be(II) - peptide ligand*

**B13: Dr. Iliana Nikolova**

*Increasing the functionality of paper with natural products*

**Poster Sessions – 27 April and 28 April, 15:30 - 16:30**

**Electrochemical methods for material studies**

**[Moreni Hall Lobby]**

**E1: D.Sc. Maria Atanassova**

*Solvent extraction and separation of 3d-series metals with 4-acylpyrazolones*

**E2: Lama Mzek**

*New chelating ligands comprised of pyrazolone and carboxymethyl-bridged saturated N-heterocyclic moieties for solvent extraction of iron*

**E3: Georgi Vassilev**

*Redox processes in symmetric electrochemical cells for sodium-ion batteries*

**E4: Tsvetelina Gerasimova**

*Electrochemical Sodium Storage in Biowaste-Derived Hard Carbons*

**E5: Trajche Tushev**

*Carbon Composites with Nasicon Phosphosulphate with Improved Sodium Energy Storage*

**E6: Dr. Mariya Kalapsazova**

*Electrochemical insertion of sodium ions into hard carbons through the view of ex-situ EPR spectroscopy*

**E7: Viktor Yanev**

*Study Of Rare - Earth Metal Oxides As Additives To  $Li_3RuO_4$  &  $Li_2RuO_3$  To Improve Cycling Stability*

**E8: Rositsa Kukeva**

*In-situ EPR analysis of electrochemically decomposed organic electrolytes, ingredients in Na- and Li-ion batteries, supported by theoretical DFT calculations and complementary NMR analysis*

**E9: Dr. Martin Nedyalkov**

*Electrochemical pulverization of lithium ruthenates driven by oxygen activity activation*

**E10: Dr. Silva Stanchovska**

*Sodium titanates as negative electrodes in full sodium-ion cells*

**E11: Dr. Delyana Marinova**

*Bipolar organic matrices and their redox interaction with  $Li^+$  and  $Na^+$  ions in non-aqueous electrolyte*

**E12: Dr. Sonya Harizanova**

*Reduced graphene oxide as perspective additive for phosphate-pyrophosphate electrode materials*

**E13: Dr. Dimka Fachikova**

*Electrochemical characterization of advanced titanium alloys with biomedical applications*





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### **Scientific Committee of the Conference**

Prof. Ruzha Harizanova, PhD – UCTM

Prof. Dancho Danalev, PhD – UCTM

Assoc. Prof. Anton Georgiev, PhD – UCTM

Prof. Martin Bojinov, PhD, D.Sc – UCTM

Prof. Jana Tchekalarova, PhD – BAS

### **Organization Committee of the Conference**

Dobromir Dobrev, Member of the Managing Body, BiOrgaMCT

Miglena Ivanova, Member of the Managing Body, BiOrgaMCT

Teodora Valcheva, Marketing Expert, Center for Technology Transfer

Desislava Marinova, student, UCTM

Dr. Pavlina Bancheva, Assist. Prof. Eng., UCTM

Dilyana Dimitrova, Assist. Prof. Eng., UCTM



BiOrgaMCT Conference  
website

Contract №: BG-RRP-2.004-0002-C01, „BiOrgaMCT”  
(Bioactive organic and inorganic materials and clean  
technologies). Procedure: BG-RRP-2.004 – Creation of a  
network of research universities in Bulgaria under the National  
Recovery and Resilience Plan

<https://ctt.uctm.edu>