



# 16th Students' Congress of Society of Chemists and Technologists of Macedonia

## *Program*

27-28 October 2025  
Skopje, N. Macedonia

*16th Students' Congress of the Society of Chemists and Technologists of  
Macedonia  
27-28 October 2025*

<b>Monday</b>	<b>27.10.2025</b>
<b>8.00-9.00</b>	<b>Registration</b>
<b>9.00-9.20</b>	<b>Congress opening (FTM Amphitheatre)</b>
<b>Session 1</b>	<b>FTM Amphitheatre</b>
<b>Chairperson</b>	<b>Marija Prosheva</b>
<b>9.20-10.00</b>	<b>Petre Makreski</b> Institute of Chemistry, Faculty of Natural Sciences and Mathematics, Ss. Cyril and Methodius University in Skopje <b>Minerals of Macedonia: Insights from Vibrational Spectroscopy, Structural and Thermal Studies</b>
<b>10.00-10.30</b>	<b>Dawid Zych</b> Institute of Chemistry, Faculty of Chemistry and Pharmacy, University of Opole, Opole, Poland <b>Smart Chemistry in Action: Modern Methods and Sustainable Practices in Chemical Synthesis</b>
<b>10.30-11.00</b>	<b>Coffee break and refreshments</b>
<b>Session 2</b>	<b>Parallel session</b>
	<b>FTM Amphitheatre</b>
<b>Chairperson</b>	<b>Ruzica Stevkovska Stojanovska</b>
<b>11.00-11.15</b>	<b>Viktoria Fernandes</b> Nutritional Characterization of Gluten-Free Sourdough Muffins Enriched with Tomato Industry By-Products
<b>11.15-11.30</b>	<b>Blagica Janeva</b> Authenthication of Raspberry ( <i>Rubus idaeus</i> ) in Fresh and Processed Food Products Using PCR-HRM Analysis
<b>11.30-11.45</b>	<b>Ida Kucinoska Raleva</b> Optimization of a Method for Analysis of Residual Solvents in Food Packaging Using Headspace Sampling and Gas Chromatography Coupled with Mass Spectrometry (HS-GC-MS)
<b>11.45-12.00</b>	<b>Milica Aleksić</b> Relationship Between Pigment Composition and Oxidative Stability in Camelina ( <i>Camelina sativa</i> L.) Oil
<b>12.00-12.15</b>	<b>Stefan Kirovski</b> Optimization of Analytical Procedures for the Determination of OCPs and PCBs in Breast Milk

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- 12.15-12.30 **Zorica Bojadjeva**  
Feasibility of Using Purple Phototrophic Bacteria for  
Valorization of Food Processing Waste
- 12.30-12.45 **Viktor Cicimov**  
Typical Contaminations Found During Isolation and Growing  
of Purple Phototrophic Bacteria

**FCSE Amphitheatre**

**Chairperson** **Marinela Cvetanoska**

- 11.00-11.15 **Ivona Sofronievska**  
Development, Optimization and Testing of Silicone-Based  
Chemometers for Sampling and Quantification of  
Hydrophobic Organic Compounds in Water
- 11.15-11.30 **Anastasija Hadzismileva**  
Green and Efficient Extraction of Phenolic Compounds from  
Hypericum perforatum using Natural Deep Eutectic Solvents
- 11.30-11.45 **Teona Spaseska**  
Comparative Study on the Efficiency of Natural Deep Eutectic  
Solvents for Phenolic Acid Extraction
- 11.45-12.00 **Karolina Pietrusewicz**  
Studies on optimalization electrocatalytic activity of nickel  
phosphides towards oxygen evolution reaction
- 12.00-12.15 **Marija Kraleva**  
Development of Chirality Sensitive Descriptors for  
Quantitative Structure-Activity Relationships Modeling
- 12.15-12.30 **Anastasija Kalajdjieva**  
Identifying and Eliminating Misconceptions Among Eighth  
Grade Chemistry Students

**12.30-13.30 Lunch**

**Session 3** **FTM Amphitheatre**

**Chairperson** **Iva Dimitrievska**

- 13.30-14.00 **Vojo Jovanov**  
Ss. Cyril and Methodius University in Skopje, Faculty of  
Technology and Metallurgy, Skopje, N. Macedonia  
**Synthesis and photo-induced properties of TiO<sub>2</sub>/ZnAl LDH,  
TiO<sub>2</sub>/Kaolinite and TiO<sub>2</sub>/Illite based photocatalysts**
- 14.00-14.30 **Teodora Stojanovska**  
Company presentation – **Mikrosam**
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**14.30-14.45 Coffee break and refreshments**

**Session 4 Parallel session  
FTM Amphitheatre**

**Chairperson Marija Prosheva**

**14.45-15.00 Katarina Aleksić**

ZnO/GO-Modified Glassy Carbon Electrode for  
Electrochemical Sensing of Doxorubicin

**15.00-15.15 Amin Idrizovski**

Siloxane film investigation on modified silicate glass obtained  
from TEOS in water/toluene solution

**15.15-15.30 Trajce Trajkov**

Tribocatalytic degradation of Cephalexin by sol-gel ZnO  
powders: effect of the solvent

**15.30-15.45 Nikolay Gogov**

Perspectives on the Utilization of Waelz Clinker

**15.45-16.00 Vesna Miljić**

Ceramic materials from Industrial and Organic Waste:  
Technology for Environmental Sustainability

**FCSE Amphitheatre**

**Chairperson Iva Dimitrievska**

**14.45-15.00 Darko Stojchev**

Optimization of a lab-scale synthetic method for  
quinacridone derivatives and their characterization

**15.00-15.15 Veronika Gijovska**

Design and Implementation of a Python Tool for Multi-  
Method Calibration in the Quantitative Analysis of  
Organochlorine Contaminants using Gas Chromatography

**15.15-15.30 Aleksandra Gjerassimovska**

Introduction and Application of an Analytical Method for  
Monitoring Organochlorine Contaminants in the Vardar River  
Using Gas Chromatography

**15.30-15.45 Irem Tauk**

Antimicrobial properties of silver nanoparticles impregnated  
in socks using fruit waste grape pomace

**15.45-16.00 Mihajlo Zorić**

Uncomplex Outcomes: Spontaneous Oxidation of 2-  
(diphenylphosphino)benzaldehyde Schiff Base

**16.00-16.30 Coffee break and refreshments**

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<b>Session 5</b>	<b>FTM Amphitheatre</b>
<b>Chairperson</b>	<b>Ivona Sofronievska</b>
16.30-16.45	<b>Vladimir Grujovski</b> Investigation of siloxane film on modified silicate glass obtained from TEOS in dry toluene solution
16.45-17.00	<b>Kristina Avramović</b> Revisiting the Nucleation of High-Entropy (Oxy)(hydr)oxides
17.00-17.15	<b>Ruzica Stevkovska Stojanovska</b> Draping Different Styles of Women's Clothing
17.15-17.30	<b>Irena Dodevska</b> Optimization of Cop Diameter in Ring Spinning Process Using Taguchi Method
17.30-17.45	<b>Julia Murza</b> Nitrogen-Modified Pyrene Scaffolds as a Platform for New Luminescent Materials
17.45-18.00	<b>David Jovanov</b> Synthesis and characterization of aminoguanidinium lead, bismuth, and antimony iodide perovskites
<b>21.00-23.00</b>	<b>Social event</b>
<b>Tuesday</b>	<b>28.10.2025</b>
<b>8.00-9.00</b>	<b>Registration</b>
<b>Session 1</b>	<b>FTM Amphitheatre</b>
<b>Chairperson</b>	<b>Iva Dimitrievska</b>
9.00-9.40	<b>Jadranka Blazevska Gilev</b> Ss. Cyril and Methodius University in Skopje, Faculty of Technology and Metallurgy, Skopje, N. Macedonia <b>Polymer based composites</b>
9.40-10.10	<b>Violeta Ivanova-Petropulos</b> Faculty of Agriculture, Goce Delcev University, Stip, Republic of N. Macedonia <b>LC-ESI-MS/MS characterization of phenolic compounds, selenium species and vitamins in red winemaking</b>
<b>10.10-10.30</b>	<b>Coffee break and refreshments</b>
<b>Session 2</b>	<b>FTM Amphitheatre</b>

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<b>Chairperson</b>	<b>Ivona Sofronievska</b>
10.30-10.45	<b>Klaudia Zielinkiewicz</b> Exohedrally functionalized single-walled carbon nanotubes in oxygen evolution reaction
10.45-11.00	<b>Maja Mulovska</b> 3D assemblies of NiO NPs: a precursor-modulated nanoscale-engineering approach based on turbostratic $\text{Ni}_3(\text{OH})_4(\text{NO}_3)_2$ and ordered $\beta\text{-Ni}(\text{OH})_2$ intermediates
11.00-11.15	<b>Mihail Trajkov</b> Synthesis and characterization of morpholinium lead, bismuth and antimony iodide perovskites
11.15-11.30	<b>Tuna Chakir</b> Structural and Electrical Characterization of Graphene/PVC and Graphene/PMMA Composites for EMI Shielding in Smart Buildings
11.30-11.45	<b>Katerina Kraljevska</b> Preparation and Analysis of Two Layered Coating on Silicate Glass
11.45-12.00	<b>Teodora Stojanovska</b> Synthesis of lignin/ $\text{TiO}_2$ waterborne polymer composites
12.00-12.15	<b>Adela Asani</b> Theoretical IRMPD spectroscopy of hydrogen- and helium-tagged protonated glycine
12.15-12.30	<b>Coffee break and refreshments</b>
<b>Session 3</b>	<b>FTM Amphitheatre</b>
<b>Chairperson</b>	<b>Iva Dimitrievska</b>
12.30-13.00	<b>Mishela Temkov</b> Ss. Cyril and Methodius University in Skopje, Faculty of Technology and Metallurgy, Department of Food Technology and Biotechnology, Skopje, N. Macedonia <b>Advances in Sensory Evaluation and Oral Perception of Gluten-Free Muffins Incorporating Tomato Pomace</b>
13.00-13.30	<b>Gjorgji Petrushevski</b> Quality Control Pharmaceuticals, ALKALOID AD, Blvd. Aleksandar Makedonski 12, 1000 Skopje, Macedonia <b>Chemical Engineer in the Pharmaceutical Industry – Becoming a Value-Based Leader</b>
13.30-14.30	<b>Lunch</b>

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<b>Session 4</b>	<b>FTM Amphitheatre</b>
<b>Chairperson</b>	<b>Marinela Cvetanoska</b>
14.30-14.45	<b>Kiril Hristovski</b> Following the phase transition and vibrational dynamics in ibuprofen by temperature-dependent infrared spectroscopy in conjunction with 2D correlation analysis
14.45-15.00	<b>Dimitar Apoleski</b> Theory of THz spectroscopy of liquid water
15.00-15.15	<b>Lina Bozhinovska</b> Validation of greenness UV spectrophotometric method for determination of ciprofloxacin in Cital® eye/ear drops
15.15-15.30	<b>Tamara Toshikj</b> Testing activated carbon and Amberlite XAD-2 as sorbents for passive sampling of organochlorine compounds in water
15.30-15.45	<b>Hristina Taseva</b> Monitoring Phase Transformation of Pharmaceutical Crystals Using Two-Dimensional Infrared Correlation Spectroscopy
15.45-16.00	<b>Elif Üstün</b> The Digital Signature of Metabolites: AI-Powered Biomarker Discovery
16.00-16.15	<b>Visar Ismaili</b> Atmospheric deposition of chemical elements and microplastics in mosses around industrial zone of Kastriot in the Republic of Kosovo
16.15-16.30	<b>Coffee break and refreshments</b>
<b>Session 5</b>	<b>FTM Amphitheatre</b>
<b>Chairperson</b>	<b>Marija Prosheva</b>
16.30-16.45	<b>Nazmiyyat Abbasli</b> Decoding the Metabolomic Architecture of Arctium minus Through LC-QTOF-MS Based Metabolomics
16.45-17.00	<b>Jovan Georgiev</b> Theoretical basis for neuroprotective potential of intranasal propolis by using sufficiently high concentrations of galangin
17.00-17.15	<b>Antonija Jurić</b> Understanding Hg(II) Removal onto Natural and Modified Zeolite Through Adsorption Isotherm Modeling
17.15-17.30	<b>Lala Qasimova</b>

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Iron-Mordenite-Catalyzed Benzene Hydroxylation: Stability  
via DLS and FMR

17.30-17.45

**Fatima Piralijeve**

Origami-structured triboelectric nanogenerator for efficient  
energy harvesting from human motion in metro stations

17.45-18.00

**Aytakin Asgarova**

Alumina-Based Ni-Fe Catalysts for CO<sub>2</sub> Reforming: Toward  
Efficient Carbon Utilization

18.00-18.15

**Darko Kazankov**

The process of charging of the furnaces in R.Ž Topilnica j.s.c-  
Skopje

18.15-18.30

**Dafinē Kastrati Bajcinca**

Cytotoxic Evaluation of 2-MNQ and 2-HNQ on HepG2 Cells  
Using the MTT Assay

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