

Symposium Programme OPORPH 2025	
Wednesday (November 12, 2025)	
9.00 – 12.00	Registration of Participants
10.30 – 11.00	Symposium Opening
11.00 – 11.15	Welcome Coffee
Symposium Topic: Sustainable Industrial Technologies and Processes Session Chairs: Prof. Dr. Elvis Ahmetović, Assoc. Prof. Dr. Edisa Papračanin, Prof. Dr. Husejin Keran Faculty of Technology, University of Tuzla, Bosnia and Herzegovina	
11.15 – 12.30	Plenary Presentations
<u>11.15 – 11.45</u>	<i>Digital Twin and AI-Enabled Decarbonisation: CCUS 2.0 for Sustainable Process Industries</i> Farooq Sher School of Science and Technology, Nottingham Trent University, United Kingdom
<u>11.45 – 12.15</u>	<i>Sustainable Process System Engineering in a Holistic Approach to the Synthesis of Sustainable and Circular Production Systems</i> Zdravko Kravanja Faculty of Chemistry and Chemical Engineering, University of Maribor, Slovenia
<u>12.15 – 12.30</u>	Sponsor's Presentation: <i>Lukavac Cement d.o.o., Lukavac – Company Overview and Environmental Commitment</i> Mugdin Imamović Lukavac Cement d.o.o., Lukavac, Bosnia and Herzegovina
12.30 – 13.30	Oral Presentations
<u>12.30 – 12.45</u>	<i>Valorisation of Food Industry By-Products Through Green Extraction Techniques</i> Stela Jokić Faculty of Food Technology, Josip Juraj Strossmayer University of Osijek, Croatia
<u>12.45 – 13.00</u>	<i>Efficiency of Electrochemical Wastewater Treatment Powered by Different Energy Sources</i> Tijana Đuričić Faculty of Technology, University of Banja Luka, Bosnia and Herzegovina
<u>13.00 – 13.15</u>	<i>Integration of ESG Principles and Quality Standards in the Technological Process for the Production of Iodized Table Salt at Solana d.d. Tuzla</i> Ema Obralić Solana d.d. Tuzla, Bosnia and Herzegovina
<u>13.15 – 13.30</u>	<i>Sustainable Biotechnological Solutions for Industrial Effluents Valorization</i> Zorana Trivunović Faculty of Technology Novi Sad, University of Novi Sad, Serbia
<u>13.30 – 14.30</u>	Lunch and Poster Session

Symposium Topic: Alternative Raw Materials and Sustainable Materials Session Chairs: Prof. Dr. Milica Vilušić, Prof. Dr. Zoran Iličković, Doc. Dr. Mirnesa Čorbić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina	
14.30 – 15.15	Plenary Presentation
<u>14.30 – 15.15</u>	<i>Herzegovinian Čufter: From Traditional Product Protection to Innovation with Brewer's Spent Grain</i> Anita Lalić Faculty of Agriculture and Food Technology, University of Mostar, Bosnia and Herzegovina
15.15 – 16.45	Oral Presentations
<u>15.15 – 15.30</u>	<i>Synthesis and Characterization of Tetraamminecopper (II) Sulfate Monohydrate Intended for Hydrogen Storage</i> Mirzeta Saletović Faculty of Natural Science and Mathematics, University of Tuzla, Bosnia and Herzegovina
<u>15.30 – 15.45</u>	<i>Hydrothermal Synthesis and Antimicrobial Potential of CeO₂ Nanowires</i> Katarina Mužina Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>15.45 – 16.00</u>	<i>Development of Drug Delivery Systems for Parenteral Use and Obligatory Sidequests</i> Fabio Faraguna Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>16.00 – 16.15</u>	<i>Geopolymer Synthesis: Assessment of the Potential Use of Fly Ash from TPP Stanari and Waste Borosilicate Glass</i> Dajana Dragić Faculty of Technology, University of Banja Luka, Bosnia and Herzegovina
<u>16.15 – 16.30</u>	<i>The Importance of Material Recovery and the Risks of Landfilling End-of-Life Solar Photovoltaic Panels: A Review with Reference to Bosnia and Herzegovina</i> Zlata Ibrišimović Subašić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
Symposium Topic: Occupational Safety and Environmental Protection	
<u>16.30 – 16.45</u>	<i>Investigation of the Possibility of the Synthesis of Sucrose Esters from Biodiesel</i> Aleksandra Borković Faculty of Technology, University of Banja Luka, Bosnia and Herzegovina

Student Session	
Symposium Topic: Sustainable Industrial Technologies and Processes Session Chairs: Doc. Dr. Melisa Ahmetović, Edina Ibrić, Teaching Assistant, Naida Softić, Student Faculty of Technology, University of Tuzla, Bosnia and Herzegovina	
11.15 – 11.45	Plenary Presentation
<u>11.15 – 11.45</u>	<i>Bioremediation: Nature's Technology with Microbes as Catalysts of Change</i> Monika Šabić Runjavec

	Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
11.45 – 13.30	Oral Presentations
<u>11.45 – 12.00</u>	<i>Simulation of Processes in Redox Flow Batteries</i> Teo Smolej Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>12.00 – 12.15</u>	<i>Enhancing Preservation of Environmental Bacteria</i> Klara Štingl Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>12.15 – 12.30</u>	<i>Ecological Potential of Natural Bacterial Isolates for Use in Bioremediation</i> Jakov Gugić Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>12.30 – 12.45</u>	<i>Application of Sialic Acid Synthases in the Synthesis of Sialic Acid Analogues</i> Klara Ivanišić Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>12.45 – 13.00</u>	<i>Removal of a Chemical Warfare Agent Simulant from a Binary Solution Using Nanofiltration and Reverse Osmosis</i> Jan Kranjec Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>13.00 – 13.15</u>	<i>Water and Heat Integration Using Python-Based Optimization and Circular Economy Principles</i> Aida Skejić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
<u>13.15 – 13.30</u>	<i>Membrane Technologies for Sustainable Development: A Case Study of Raw Water Treatment from Lake Modrac</i> Maida Fajić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
13.30 – 14.30	Lunch and Poster Session
14.30 – 16.00	Oral Presentations
<u>14.30 – 14.45</u>	<i>Application of Membrane Filters in Processing of Wastewater</i> Maida Kuduzović, Marijana Marković Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
<u>14.45 – 15.00</u>	<i>Precipitation of Cd(II) Ions with NaHCO₃</i> Asija Cena Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
Symposium Topic: Alternative Raw Materials and Sustainable Materials Session Chairs: Senior Teaching Assistant Halid Junuzović, Teaching Assistant Maida Smajlović, Senior Teaching Assistant Edita Bjelić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina	
<u>15.00 – 15.15</u>	<i>Molecular Interactions in Polymer-based Drug Delivery Systems</i> Klara Maruševc Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia

<u>15.15 – 15.30</u>	<i>Hydrogen Production with a Transition Metal-Based Electrocatalyst</i> Nino Drpić Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
Symposium Topic: Occupational Safety and Environmental Protection	
<u>15.30 – 15.45</u>	<i>Determination of the Ecotoxicity of Pharmaceuticals by Vibrio fischeri</i> Barbara Tarandek Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
<u>15.45 – 16.00</u>	<i>Alternative Methods for Waste Gas Treatment</i> Šejla Mešanović Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
<u>16.00 – 16.15</u>	<i>Ecological Assessment of Air Quality in the Tuzla Canton (2020–2024): Dominant Pollutants and their Consequences</i> Amila Slijepčević Faculty of Health Studies, University of Bihać, Bosnia and Herzegovina
19.00	Gala Symposium Dinner at Hotel Salis

Thursday (November 13, 2025)	
8.00 – 10.00	Registration of Participants
Symposium Topic: Sustainable Agriculture with Environmental Preservation Session Chairs: Prof. Dr. Husejin Keran, Prof. Dr. Sabina Begić, Prof. Dr. Besim Salkić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina	
9.00 – 10.30	Plenary Presentations
<u>9.00 – 9.30</u>	<i>Green Sorbents – Modelling and Optimization of Processes for Wastewater Treatment</i> Kiril Lisichkov Faculty of Technology and Metallurgy, University Ss. Cyril and Methodius in Skopje, North Macedonia
<u>9.30 – 10.00</u>	<i>Development of Plant Probiotics from Mangrove-associated Microbes for Sustainable Regenerative Agriculture</i> Nazariyah Yahaya Faculty of Science and Technology, Universiti Sains Islam Malaysia (USIM), Negeri Sembilan, Malaysia
<u>10.00 – 10.30</u>	<i>Agroecological Approach in the Function of Sustainable Development and Agroecosystem</i> Hamdija Čivić Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina
10.30 – 11.00	Coffee

11.00 – 12.00	Oral Presentations
<u>11.00 – 11.15</u>	<i>Antibacterial and Antifungal Properties of Wild Oregano Oil, Almond Oil and Lavender Macerate Oil</i> Amra Bratovčić Faculty of Food Technology, University of Tuzla, Bosnia and Herzegovina
<u>11.15 – 11.30</u>	<i>Chemotyping of Essential Oils from Medicinal Herzegovinian Plants as a Contribution to Sustainable Agriculture</i> Stanislava Talić Faculty of Agriculture and Food Technology, University of Mostar, Bosnia and Herzegovina
<u>11.30 – 11.45</u>	<i>The Importance of Medicinal and Aromatic Herbs in Animal Nutrition on their Productive and Reproductive Properties</i> Husein Vilić Biotechnical Faculty, University of Bihać, Bosnia and Herzegovina
<u>11.45 – 12.00</u>	<i>Climatic Factors in the Cowshed as a Parameter of Milk Quality in Simmental Cows and their Impact on the Environment</i> Husein Vilić Biotechnical Faculty, University of Bihać, Bosnia and Herzegovina
Symposium Topic: Achievements in Production and Quality Control of Food	
12.00 – 12.45	Oral Presentations
<u>12.15 – 12.30</u>	<i>Advancing Food Fortification with Kinetics: Vitamin D₃ Encapsulation on Calcium Carbonate-Based Vehicles</i> Dijana Jelić Faculty of Sciences and Mathematics, University of Banja Luka, Bosnia and Herzegovina
<u>12.30 – 12.45</u>	<i>Advantages of Vegetarian and Lacto-ovo Diets in Environmental Protection and Sustainable Food Production</i> Midhat Jašić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
<u>12.45 – 13.00</u>	Closing Ceremony
<u>13.00</u>	Lunch
Student Session	
11.00 – 11.15	Plenary Presentation
<u>11.00 – 11.15</u>	<i>Exploring the Opportunities Offered by COST Projects</i> Amra Bratovčić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
Symposium Topic: Sustainable Agriculture with Environmental Preservation Session Chairs: Teaching Assistant Sedina Hodžić, Senior Teaching Assistant Amela Kusur Faculty of Technology, University of Tuzla, Bosnia and Herzegovina	

11.15 – 11.30	Oral Presentation
<u>11.15 – 11.30</u>	<i>Influence of Biostimulants and Substrate Types on Tomato (Solanum lycopersicum L.) Seed Germination and Early Growth</i> Selma Alemić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
Symposium Topic: Achievements in Production and Quality Control of Food	
11.30 – 12.00	Oral Presentations
<u>11.30 – 11.45</u>	<i>Production of Gluten-free Crackers with the Addition of Spirulina and Nutritional Yeast</i> Ajla Suljić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
<u>11.45 – 12.00</u>	<i>The Effect of Wheatgrass and Tomato Pomace Addition on the Nutritional, Functional and Sensory Properties of Pasta</i> Melisa Muminović Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
<u>12.00 – 12.15</u>	Closing Ceremony
<u>13.00</u>	Lunch

Poster Session	
Symposium Topic: Sustainable Industrial Technologies and Processes	
1.	<i>In Silico Molecular Descriptors in Steroid Derivates Lipophilicity Prediction</i> Teodora Jevrić Faculty of Technology Novi Sad, University of Novi Sad, Serbia
2.	<i>Synthesis and Characterization of Acrylic Acid–Maleic Anhydride Copolymers for Enhanced Water Purification</i> Vladan Mičić Faculty of Technology, University of East Sarajevo, Bosnia and Herzegovina
3.	<i>Testing of Anti-Corrosion Protection of Steel in Acidic and Salty Environments Using Burnishing and Natural Henna-Based Coating</i> Zahida Begović Faculty of Engineering and Natural Sciences, University of Zenica, Bosnia and Herzegovina
4.	<i>The Influence of Relative Humidity and Temperature on the Water Sorption Capacity of NaA-type Zeolite and its Modified Form 3A</i> Dragana Kešelj Faculty of Technology, University of East Sarajevo, Bosnia and Herzegovina
5.	<i>The Impact of Reusing Commercial Hydrated Lime as a Heterogeneous Catalyst on the Fatty Acid Methyl Esters Yield and its Characteristics in the Methanolysis Process of Rapeseed Oil</i> Azra Halilović Faculty of Engineering and Natural Sciences, University of Zenica, Bosnia and Herzegovina

6.	<i>The Influence of Adsorbent Mass and Initial Ion Concentration on the Capacity and Efficiency of Lead (II) Ions Adsorption from Aqueous Solutions Using Natural Bentonite as Adsorbent</i> Amna Karić Faculty of Engineering and Natural Sciences, University of Zenica, Bosnia and Herzegovina
7.	<i>Nutritionally Improved Chocolate with Added Cocoa Fibre</i> Đurđica Ačkar Faculty of Food Technology, Josip Juraj Strossmayer University of Osijek, Croatia
8.	<i>Optimization of Kinetic Parameters for Maleic Anhydride Synthesis in an Industrial Tubular Fixed-Bed Reactor</i> Emir Suljaković Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
9.	<i>Physico-Chemical Characterization of Sludge for Assessment of its Potential Use</i> Belmin Poljić Solana d.d., Tuzla, Bosnia and Herzegovina
Symposium Topic: Alternative Raw Materials and Sustainable Materials	
10.	<i>Linking Mechanical Properties of Poly(Lactide-Co-Glycolide) (PLGA) with the Potential for Extended Drug Release</i> Rafael Anelić Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
11.	<i>Dynamic Mechanical Analysis of PLGA Copolymers – Linking Viscoelastic Properties to Extended Drug Release Potential</i> Pongrac Petra Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
12.	<i>Rheological Properties of PDLLA and PLGA Solutions in DMSO</i> Leo Mandić Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
13.	<i>Chemical Pretreatment of Pea Waste and its Valorization for Polyhydroxyalkanoate Production</i> Karlo Grgurević Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia
14.	<i>Immobilized Horseradish Peroxidase on Biomagnetite Particles for Efficient Removal of Phenol from Water</i> Sanja Panić Faculty of Technology Novi Sad, University of Novi Sad, Serbia
15.	<i>Alternative Raw Materials: A Selection Methodology</i> Damir Mulamehmedović Alpacem Cement Anhovo, Slovenia
Symposium Topic: Occupational Safety and Environmental Protection	
16.	<i>Assessment of Ambient SO₂ Air Pollution in Selected Urban Areas of Northeastern Bosnia (2020-2024)</i> Maida Smajlović Faculty of Technology, University of Tuzla, Bosnia and Herzegovina

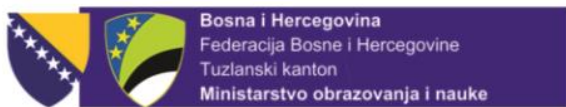
17.	<i>Long-term Trends of PM2.5 Concentrations in Tuzla, Lukavac and Živinice (2020–2024)</i> Hana Alihodžić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
18.	<i>Application of Directive (2012/18/EU) on the Control of Major-accident Hazards Involving Dangerous Substances in Domestic Legislation</i> Borislav N. Malinović Faculty of Technology, University of Banja Luka, Bosnia and Herzegovina
19.	<i>Assessment of the Phytoremediation Potential of Canna indica in Wastewater Treatment Under Laboratory Conditions</i> Hana Demirović Biotechnical Faculty, University of Bihać, Bosnia and Herzegovina
20.	<i>Phytoremediation Potential of Japanese Knotweed (Reynoutria japonica) in Reducing Organic Pollutants from Synthetic Wastewater</i> Šejla Dervišević Biotechnical Faculty, University of Bihać, Bosnia and Herzegovina
Symposium Topic: Achievements in Production and Quality Control of Food	
21.	<i>Chemical Composition, Antioxidant and Antimicrobial Activity of Commercial CBD Oil</i> Emir Horozić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
22.	<i>Preliminary Morphological Notes on the Native Apple Cultivar ‘Petrovača’</i> Imad Đozić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
23.	<i>Valorisation and Protection of the Traditional Specialty „NEŠESTA“ as a Guaranteed Traditional Specialty of the Una-Sana Canton</i> Sebila Rekanović Biotechnical Faculty, University of Bihać, Bosnia and Herzegovina
24.	<i>Preliminary Morphological Notes on the Native Apple Cultivar ‘Švabulja’</i> Imad Đozić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
25.	<i>Physicochemical Properties, Antioxidant Activity and Content of Bioelements in Commercial Pumpkin Seed Oil Samples</i> Majda Mešić Center for Adult Education in Technical Professions, Tuzla, Bosnia and Herzegovina
26.	<i>Bestilj as an Autochthonous Plum Product with Functional Food Potential</i> Semira Karijašević Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
27.	<i>Preliminary Morphological Notes on the Native Apple Cultivar ‘Gospojinača’</i> Imad Đozić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
28.	<i>Effect of Acacia and Chestnut Honey on the Physicochemical, Antioxidant and Sensory Properties of Gingerbread</i> Zerina Halilović

	Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
29.	<i>Development and Production of Pistachio Cream</i> Mirha Bojić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
30.	<i>Preliminary Morphological Notes on the Native Apple Cultivar 'Kada'</i> Imad Đozić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
Symposium Topic: Sustainable Agriculture with Environmental Preservation	
31.	<i>Sustainable Weed Management: Advances in Bioherbicides, Nanotechnology, and Non-Chemical Approaches</i> Amra Bratovčić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
32.	<i>Plasma-activated Water Improves the Root Plasticity</i> Tihana Marček Faculty of Food Technology, Josip Juraj Strossmayer University of Osijek, Croatia
33.	<i>Effect of Biostimulant Application on Seed Germination and Early Growth of Pepper</i> Sedina Hodžić Faculty of Technology, University of Tuzla, Bosnia and Herzegovina
34.	<i>Winery Wastewater as a Cultivation Medium for Bacillus-based Biocontrol Agents Production</i> Jovana Grahovac Faculty of Technology Novi Sad, University of Novi Sad, Serbia

Acknowledgment of Sponsorship

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