

This year the conference will be held **in a hybrid format** (online/offline) taking into account russia's armed aggression in Ukraine

**We are confident that the russian barbaric aggression will not be able to hinder the communication of scientists in the free world**

Please note, that all time in the timetable is presented for EEST – Eastern European Summer Time (UTC/GMT+3)

**The Conference events will be held:**

*Lviv Polytechnic National University, main building, Zakhariievych hall, room 214  
(Ukraine, Lviv, S. Bandery str. 12)*

**All the sessions also will be available online on ZOOM:**

<https://us05web.zoom.us/j/85817116661?pwd=ZFNzSzYrdXdGME5GWjhuQ3BBSlBKZz09>

Meeting ID: 858 1711 6661

Passcode: 4et0Ef



**JUNE 26, MONDAY**

**THE OPENING CEREMONY**

Greetings of Chairman of the Program Committee,  
Rector of Lviv Polytechnic National University (Lviv, Ukraine),  
Professor **Yuriy Bobalo**

Greetings of Chairman of the Organizing Committee,  
Head of Department of Chemical Engineering,  
Lviv Polytechnic National University (Lviv, Ukraine),  
Professor **Volodymyr Atamanyuk**

**SPECIAL GUEST SPEECH**

**ECOCIDE CAUSED BY RUSSIAN AGGRESSION IN UKRAINE:  
DESTRUCTIVE IMPACT AND IMPLICATIONS FOR EUROPEAN  
COUNTRIES**

Associate Professor **Yuliya Ovchynnykova**

Member of the Parliament of Ukraine, Chairman of the Subcommittee on Forest Resources, Flora and Fauna, Natural Landscapes and Nature Reserve Fund of the Committee on Environmental Policy and Nature Management of the Parliament of Ukraine

14-00

Greetings of Head of Scholar Support Office (Kyiv, Ukraine),  
Professor **Olesia Vashchuk**

Greetings of General Director of Łukasiewicz – New Chemical Syntheses Institute (Pulawy, Poland),  
Professor **Janusz Igras**

Greetings of Vice-Dean for Scientific Affairs of Faculty of Chemical and Process Engineering, Warsaw University of Technology (Warsaw, Poland)  
Professor **Tomasz Sosnowski**

Greetings of Head of Department of Informatics and Environment Quality Research, Warsaw University of Technology (Warsaw, Poland),  
Professor **Artur Badyda**

Greetings of Head of Scientific Society of Students, Doctoral Candidates and Young Researchers of Lviv National Polytechnic University (Lviv, Ukraine),  
Associate Professor **Ivan Tymchuk**

Greetings of Head of Alumni Association of Lviv Polytechnic National University (Lviv, Ukraine),  
**Ihor Pavlishevskiy**

Greetings of Director of Western Scientific Center of National Academy of Sciences of Ukraine and Ministry of Education and Science of Ukraine (Lviv, Ukraine),  
Associate Professor **Oleh Zyniuk**

15-00	<p style="text-align: center;"><b>PLENARY PRESENTATION</b></p> <p style="text-align: center;"><b>SCALABLE SYNTHESIS OF NEW TWO-DIMENSIONAL MATERIALS – MXENES</b></p> <p style="text-align: center;">Professor <b>Yury Gogotsi</b></p> <p style="text-align: center;">DSc, Dr.h.c. Charles T. and Ruth M. Bach Distinguished University Professor, Director, A.J. Drexel Nanomaterials Institute, Drexel University, USA</p>
16-00	<b>COFFEE BREAK</b>
16-15	<p style="text-align: center;"><b>SECTIONAL PRESENTATIONS</b></p> <p style="text-align: center;"><b>OPTIMIZATION OF BIOCHEMICAL PROCESSES AND BIOENGINEERING</b></p> <p style="text-align: center;"><i>Chairmen:</i> Professor <b>Artur Badyda</b>, Professor <b>Vira Lubenets</b></p>
16-15	<p>Nanoparticles modification for magnetic electrospun composites for tissue engineering</p> <p style="text-align: center;"><b>Anna Hlukhaniuk</b></p>
16-30	<p>Study on the applicability and precision of a new adaptation of optical mixing time measurement method in a ReadyToProcess WAVE 25 bioreactor</p> <p style="text-align: center;"><b>Mateusz Bartczak</b></p>
16-45	<p>Biocompatible scaffolds based on glass-ceramic materials for bone tissue engineering</p> <p style="text-align: center;"><b>Fesenko Oleksii</b></p>
<b>JUNE 27, TUESDAY</b>	
10-00	<p style="text-align: center;"><b>PLENARY PRESENTATION</b></p> <p style="text-align: center;"><b>POLYMERS AND MEDICAL DEVICES FOR CLINICAL APPLICATION: ARE CURRENT TESTS MEANINGFUL?</b></p> <p style="text-align: center;">Professor <b>Jörg Vienken</b></p> <p style="text-align: center;">Former President of International Federation of Artificial Organs (IFAO), Technical University Mittelhessen, Germany</p>
10-30	<p style="text-align: center;"><b>YOUNG CHEMIST'S SCHOOL</b></p> <p style="text-align: center;"><b>FROM ATOMS TO SUCCESS: THE CHEMISTRY BEHIND CREATING AND DEVELOPING A THRIVING STARTUP</b></p> <p style="text-align: center;">Professor <b>Nazar Podolchak</b></p> <p style="text-align: center;">DSc, Professor, Head of Administrative and Financial department, Founder and Director Tech StartUp School, CEO Scientific Park of Lviv National Polytechnic University, Ukraine</p>
11-00	<b>COFFEE BREAK</b>

11-15	<p style="text-align: center;"><b>SECTIONAL PRESENTATIONS</b></p> <p style="text-align: center;"><b>COMPUTER SIMULATION IN THE CHEMICAL TECHNOLOGY AND ENGINEERING</b></p> <p><i>Chairmen:</i> Professor <b>Volodymyr Atamanyuk</b>, Assoc. Prof. <b>Oleksandr Ivashchuk</b></p>
11-15	<p style="text-align: center;">CFD-Modeling of Thermal Agent Flow Through a Layer of Barley Brewer's Spent Grain</p> <p style="text-align: center;"><b>Roman Chyzhovych</b></p>
11-30	<p style="text-align: center;">Molecular Modeling of Electrical Conductive Polymer-Polymer Composites</p> <p style="text-align: center;"><b>Oleh Khamar</b></p>
11-45	<p style="text-align: center;">Theoretical basis of continuous drying of dispersed materials</p> <p style="text-align: center;"><b>Natalia Sorokova</b></p>
12-00	<p style="text-align: center;">Theoretical analysis of steady-state biooxydation under limitation and inhibition by substrate</p> <p style="text-align: center;"><b>Vadym Poliakov</b></p>
12-15	<p style="text-align: center;">Theoretical Investigations of Metal Ion Complexes with Polymer Ligands Based on Glycidyl Ethers of 3,5,7,3',4'-Pentahydroxyflavone</p> <p style="text-align: center;"><b>Anastasiia Dunaieva</b></p>
12-30	<p style="text-align: center;">Mathematical modeling of nanofiltration: the latest trends and developmental perspectives</p> <p style="text-align: center;"><b>Serhii Huliienko</b></p>
12-45	<p style="text-align: center;">Condensation mechanisms of monomeric tin hydroxide molecules and formation of polymorphic stannic acids: a quantum chemical study</p> <p style="text-align: center;"><b>Oksana Filonenko</b></p>
13-00	<b>LUNCH BREAK</b>
14-00	<p style="text-align: center;"><b>PLENARY PRESENTATION</b></p> <p style="text-align: center;"><b>CHEMICAL ENGINEERING AS APPLIED TO MEDICINE: THE NEW CHALLENGES</b></p> <p style="text-align: center;">Professor <b>Tomasz Sosnowski</b></p> <p style="text-align: center;">Vice-Dean for Scientific Research of Faculty of Chemical and Process Engineering, Warsaw University of Technology, Poland</p>
14-30	<p style="text-align: center;"><b>SECTIONAL PRESENTATIONS</b></p> <p style="text-align: center;"><b>GREEN CHEMISTRY</b></p> <p style="text-align: center;"><i>Chairmen:</i></p> <p style="text-align: center;">Professor <b>Jörg Vienken</b>, Professor <b>Tomasz Sosnowski</b></p>

14-30	<p>Research methods used to control the plasticization and retrogradation process of starch</p> <p><b>Magdalena Paluch</b></p>
14-45	<p>Efficient Synthesis of Conjugated 1,3,4-Thiadiazole Derivatives under Suzuki Cross-Coupling Reactions</p> <p><b>Barbara Wolek</b></p>
15-00	<p>Production of Epoxidized Waste Cooking Oil for Road Bitumen</p> <p><b>Yurii Hrynychuk</b></p>
15-15	<p>Glycopolymers based on water soluble polysaccharide and blocked isocyanate</p> <p><b>Viktoriia Tretinichenko</b></p>
15-30	<p>Synthesis and Application of Zinc Oxide Nanoparticles for Photodegradation of Organic Pollutants, Antibiotic Ofloxacin and Dye Methyl Orange, in Water</p> <p><b>Oksana Makota</b></p>
15-45	<p>N-hydroxyphthalimide and its derivatives for laccase-catalyzed oxidative degradation of Indigo Carmine</p> <p><b>Iryna Hordieieva</b></p>
16-00	<p><b>COFFEE BREAK</b></p>
16-15	<p><b>SECTIONAL PRESENTATIONS</b></p> <p><b>ALTERNATIVE AND NON-CONVENTIONAL ENERGY SOURCES</b></p> <p><i>Chairmen:</i> Professor <b>Volodymyr Atamanyuk</b>, Assoc. Prof. <b>Iryna Huzova</b></p>
16-15	<p>Study of drying of solid peat residue and composite based on it</p> <p><b>Zhanna Petrova</b></p>
16-30	<p>Advance in Technologies of Aviation Scrap Tires Disposal and Recycling</p> <p><b>Igor Kubersky</b></p>
16-45	<p>TGA and DTA of composite fuel and its components</p> <p><b>Viacheslav Mykhailyk</b></p>
17-00	<p>Increasing the energy efficiency of a rotor-pulsed cavitation heat generator using the electrohydraulic effect</p> <p><b>Andriy Palagnyuk</b></p>

**JUNE 28, WEDNESDAY**

10-00	<p><b>PLENARY PRESENTATION</b></p> <p><b>AZIDOPURINES AND BEYOND: FROM NOVEL SYNTHETIC METHODS TO APPLICATIONS IN MATERIALS SCIENCE</b></p> <p><b>Professor Maris Turks</b></p> <p>DSc, Professor, Dean of the Faculty of Materials Science and Applied Chemistry, Riga Technical University, Latvia</p>
10-30	<p><b>SECTIONAL PRESENTATIONS</b></p> <p><b>THE INNOVATIVE TECHNOLOGIES IN THE CHEMICAL AND FOOD INDUSTRIES</b></p> <p><i>Chairmen:</i> Professor <b>Maris Turks</b>, Assoc. Prof. <b>Volodymyr Reutsky</b></p>
10-30	<p>A Comparative Study in Metalloorganic Structural Chemistry: the X-ray Crystal Structures of [HB{C<sub>3</sub>N<sub>2</sub>H-3,5-(CH<sub>3</sub>)<sub>2</sub>}<sub>3</sub>Zr(OC<sub>6</sub>H<sub>5</sub>)<sub>3</sub>] and [HB{C<sub>3</sub>N<sub>2</sub>H-3,5-(CH<sub>3</sub>)<sub>2</sub>}<sub>3</sub>Zr(OC<sub>6</sub>H<sub>4</sub>-2-F)<sub>3</sub>]</p> <p><b>Roman Kresinski</b></p>
10-45	<p>Effect of the surface modification of HAp nanoparticles by oleic acid on the properties of HDPE nanocomposites containing thereof</p> <p><b>Viktor Tokarev</b></p>
11-00	<p>Synthesis and properties of lignin-highly branched polymeric systems</p> <p><b>Oleksandr Zaichenko</b></p>
11-15	<p>Functionalization of Montmorillonite and Possibilities of Synthesizing a Urethane Oligomer on the Surface of Nanoparticles</p> <p><b>Oleksii Gonchar</b></p>
11-30	<p><b>COFFEE BREAK</b></p>
11-45	<p>Particles size organization and effect of solution of humic acid with LaVO<sub>4</sub>:Eu<sup>3+</sup> nanoparticles on seed germination</p> <p><b>Nika Kriklya-Kamneva</b></p>
12-00	<p>Research of compositions polymerization of 2-hydroxyethyl methacrylate with polyvinylpyrrolidone in the presence of finely dispersed metal-containing fillers</p> <p><b>Galyna Dudok</b></p>
12-15	<p>Heat storage system based on copper-coated granules of polyethylene</p> <p><b>Anastasiia Kucherenko</b></p>

12-30	<p>Creation of cosmeceutical hydrogel mask with plant extract</p> <p><b>Yana Holubovska</b></p>
12-45	<p>Suspension oligomerization of the hydrocarbon fraction C9 initiated by 2-[4-(tert-butylperoxymethyl) piperazinomethylperoxy]-2-methylpropane</p> <p><b>Yevhenii Zhuravskiy</b></p>
13-00	<b>LUNCH BREAK</b>
14-00	<p><b>PLENARY PRESENTATION</b></p> <p><b>LIGHT CONVERSION WITH QUANTUM DOTS</b></p> <p>Associate Professor <b>Yuriy Khalavka</b></p> <p>DSc, Head of the Department of General Chemistry and Chemistry of Materials, Yuriy Fedkovych Chernivtsi National University, Ukraine</p>
14-30	<p><b>SECTIONAL PRESENTATIONS</b></p> <p><b>ECOLOGY AND SUSTAINABLE DEVELOPMENT. ENVIRONMENTAL PROTECTION</b></p> <p><i>Chairmen:</i> Associate Professor <b>Yuriy Khalavka</b>, Associate Professor <b>Ivan Tymchuk</b></p>
14-30	<p>Analysis of Parameter Sensitivity to Enhance the Detection of Leaks in Sealed Landfills</p> <p><b>Marco Vocciant</b></p>
14-45	<p>An assessment of synthesis and effectiveness of potassium ferrate(VI) as a green agent in the treatment of carwash wastewater</p> <p><b>Maciej Thomas</b></p>
15-00	<p>Adsorption Removal of Surfactants from Wastewater: A Review of Adsorbents and Mechanisms</p> <p><b>Vira Sabadash</b></p>
15-15	<p>Empirical cumulative function of distribution studies of the dynamics of state the gas medium in the fire heat sources occurrence</p> <p><b>Ruslan Kornienko</b></p>
15-30	<p>Technical alternatives for the reconstruction of the «Ternopil'skyi» water intake of the «Ternopilvodokanal» Utility Company</p> <p><b>Tetiana Pokshevnytska</b></p>
15-45	<p>Anti-corrosion protection of aluminum alloy by composition based on polysaccharide and sorbate</p> <p><b>Olia Khlopyk</b></p>
16-00	<b>COFFEE BREAK</b>

16-15	<p>Reclamation of technogenically damaged territories of a sulfur production enterprise using the method of stimulating microisogenesis in plants</p> <p><b>Oleh Nagurskyi</b></p>
16-30	<p>Polyethylene packages and polyethylene terephthalate bottles - a source of precursors for chemical syntheses</p> <p><b>Tatiana Tkachenko</b></p>
16-45	<p>Containerized Plug &amp; Play Sludge Dewatering Plants as a Energy and Cost-Effectiveness Solution for Small and Middle WWTP'S</p> <p><b>Andrii Shevchenko</b></p>
17-00	<p>The impact of rocket attacks in the Lviv region on sustainable development and statistical forecasts of environmental consequences</p> <p><b>Kateryna Petrushka</b></p>
17-15	<p>Protection of steel by environmentally friendly anti-corrosion pigment</p> <p><b>Mariia-Olena Danyliak</b></p>
17-30	<p>Study of Changes in Acid-Alkaline Balance of Cooling Water Circulating System of Power Plants during Water Treatment by Liming According to Stabilization Treatment Method</p> <p><b>Pavlo Kuznietsov</b></p>
17-45	<p>Investigation of the sorption properties of synthetic layered double hydroxides of variable composition for the protection of water bodies from organic and inorganic pollutants</p> <p><b>Eleonora Butenko</b></p>
<b>JUNE 29, THURSDAY</b>	
10-00	<p><b>PLENARY PRESENTATION</b></p> <p><b>SCIENCE FOR BUSINESS – 4 YEARS IN LUKASIEWICZ RESEARCH NETWORK</b></p> <p><b>Dr. hab. Marcin Konkol</b></p> <p>DSc, Deputy Director for Research, Łukasiewicz Research Network – New Chemical Syntheses Institute, Poland</p>
10-30	<p><b>PLENARY PRESENTATION</b></p> <p><b>TAPPING INTO WATER POLLUTION</b></p> <p>Associate Professor <b>Rosa Busquets</b></p> <p>PhD, Associate Professor in Analytical and Forensic Chemistry, Kingston University, United Kingdom</p>
11-00	<p><b>COFFEE BREAK</b></p>



11-15	<p style="text-align: center;"><b>SECTIONAL PRESENTATIONS</b></p> <p style="text-align: center;"><b>DEVELOPMENT, ENERGY AND RESOURCE SAVING IN THE CHEMICAL AND FOOD TECHNOLOGIES</b></p> <p style="text-align: center;"><i>Chairmen:</i> Associate Professor <b>Rosa Busquets</b>, Assoc. Prof. <b>Diana Kindzera</b></p>
11-15	<p style="text-align: center;">Radiation treatment of biological origin materials</p> <p style="text-align: center;"><b>Dmytro Tregubov</b></p>
11-30	<p style="text-align: center;">Preliminary purification of biogas from hydrogen sulfide in biomethane production</p> <p style="text-align: center;"><b>Andriy Slyuzar</b></p>
11-45	<p style="text-align: center;">Heat cost calculation of the process of zucchini fruits saturation with sucrose from an aqueous solution</p> <p style="text-align: center;"><b>Iryna Huzova</b></p>
12-00	<p style="text-align: center;">Producing and Applying Ingredients from Secondary Raw Materials of Sunflower Oil Production in Elastomeric Compounds</p> <p style="text-align: center;"><b>Oleksandra Panfilova</b></p>
12-15	<p style="text-align: center;">Acid-alkaline surface properties of powders: potentiometric research methods</p> <p style="text-align: center;"><b>Yuliya Danchenko</b></p>
12-30	<p style="text-align: center;">The influence of the coordination properties of metals on the activity of binary catalysts for the oxidation of cyclohexane</p> <p style="text-align: center;"><b>Anatoliy Ludyn</b></p>
12-45	<p style="text-align: center;">Kinetics of filtration drying of matches splint</p> <p style="text-align: center;"><b>Tetiana Kuzminchuk</b></p>
13-00	<p style="text-align: center;"><b>COFFEE BREAK</b></p>
13-15	<p style="text-align: center;">Functional-Cost Analysis of Waste Mineral Oil Regeneration Methods</p> <p style="text-align: center;"><b>Andriy Nagurskyy</b></p>
13-30	<p style="text-align: center;">Kinetics of boric acid dissolution</p> <p style="text-align: center;"><b>Oleksandr Kuzyk</b></p>
13-45	<p style="text-align: center;"><b>INTERNATIONAL ROUND TABLE OF THE CONFERENCE PARTICIPANTS</b></p> <p style="text-align: center;"><b>THE CLOSING CEREMONY</b></p>