



SERBIAN SOCIETY OF CORROSION AND MATERIALS PROTECTION
UDRUŽENJE INŽENJERA SRBIJE ZA KORZIJU I ZAŠTITU MATERIJALA



INTERNATIONAL CONFERENCE

MEĐUNARODNA KONFERENCIJA

**MEETING POINT OF THE SCIENCE AND PRACTICE IN THE FIELDS OF CORROSION,
MATERIALS AND ENVIRONMENTAL PROTECTION**

**STECIŠTE NAUKE I PRAKSE U OBLASTIMA KOROZIJE, ZAŠTITE MATERIJALA
I ŽIVOTNE SREDINE**

PROGRAM

May 28-31, 2023, Divčibare, Serbia

HELIOS SRBIJA a.d., Gornji Milanovac



FIRESTOP INTERNACIONAL d.o.o., Nova Pazova



MIKROLUX d.o.o., Zaprešić, Hrvatska



TESCAN



PROGRAM

SUNDAY | Nedelja 28.05.2023.

10.00-20.00 Registration of the participants | *Registracija učesnika*

17.00-17.25 Opening ceremony | *Otvaranje Konferencije*

Plenary lectures | *Plenarna predavanja*

17.25-18.00 **Plenary lecture: Milutin Smiljanić^{1*}, Marjan Bele¹, Luka Pavko¹, Armin Hrnjić¹, Lea Gašparič², Anton Kokalj², Miran Gaberšček¹, Nejc Hodnik¹, Strong Metal-Support Interaction - a Tool Towards Enhanced Electrocatalytic Materials**, ¹Department of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia, ²Department of Physical and Organic Chemistry, „Jožef Stefan“ Institute, Ljubljana, Slovenia

18.00-18.35 **Plenary lecture: Milica Gvozdrenović, Enzymatic Electrochemical Bisoensors**, Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia

Invited lecture | *Predavanje po pozivu*

18.35-19.00 **Srđan Bulatović^{1*}, Vujadin Aleksić¹, Bojana Zečević², Ognjen Ristić¹, Ana Maksimović², Procedures for preventing corrosion of welded joints**, ¹Institute for testing of materials, Belgrade, Serbia, ²Innovation Centre, Faculty of Technology and Metallurgy, Belgrade, Serbia

19.00 **Welcome Reception – COCKTAIL | KOKTEL**

Detailed information about the Conference can be found at
Detaljnije informacije o Konferenciji mogu se naći na
<http://sitzam.org.rs/YUCORR/>

MONDAY | Ponedeljak 29.05.2023.

Plenary lectures | *Plenarna predavanja*

- 09.00-09.35 **Plenary lecture: Branimir N. Grgur, Renewable Energy Potentials of the Republic of Serbia for Green Hydrogen Production and Applications**, Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia
- 09.35-10.10 **Plenary lecture: Nemanja Banić, Development and optimization of photoreactor prototype for the treatment of wastewater loaded with organic effluents**, University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia

Invited lectures | *Predavanja po pozivu*

- 10.10-10.35 **Jovan P. Šetrajić, Review of the Anticorrosive Contribution of Nanotechnologies and Nanostructured Materials Based on LHO**, Academy of Sciences and Arts of the Republic of Srpska, Banja Luka, Republic of Srpska – Bosnia and Herzegovina

Oral presentations | *Usmena saopštenja*

- 10.35-10.50 **Prezentacija kompanije FIRESTOP INTERNACIONAL d.o.o., Nova Pazova**
- 13.00 **PICNIC | RUČAK U PRIRODI**

Plenary lecture | *Plenarno predavanje*

- 17.00-17.35 **Plenary lecture: Radomir Kovačević, Uranium – Magnum Crimen**, Serbian Institute of Occupational Health „Dr Dragomir Karajović“, Belgrade, Serbia

Oral presentations | *Usmena saopštenja*

- 17.35-17.50 **Marija Matić, Dragana Pavlović, Veljko Perović, Olga Kostić, Milica Marković, Miroslava Mitrović, Pavle Pavlović, Determination of micronutrient accumulation in livestock fodder and soil in three Belgrade municipalities**, Department of Ecology, Institute for Biological Research “Siniša Stanković”,

National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia

- 17.50-18.05** **Katarina Batalović, Mirjana Medić Ilić, Bojana Kuzmanović, Bojana Paskaš Mamula, Jana Radaković, Machine learning assisted screening of materials for Li-ion batteries**, CONVINCE-Center of excellence for hydrogen and renewable energy, VINCA Institute of nuclear sciences-national institute of the Republic of Serbia, Belgrade, Serbia
- 18.05-18.20** **Željko Krivačević, Dejan Grgić, Saša Stojanović, Aleksandar Pešić, Active cathodic protection against electrochemical corrosion of the steel structure of the pontoon for transshipment of petroleum products**, „Transnafta „ corp., Pančevo, Serbia
- 18.20-18.35** **Prezentacija kompanije MIKROLUX d.o.o., Zaprešić, Hrvatska**

TUESDAY | Utorak 30.05.2023.

Plenary lecture | Plenarno predavanje

- 10.00-10.35** **Plenary lecture: Vesna S. Cvetković, Towards sustainable rare earth elements recovery**, Institute of Chemistry, Technology and Metallurgy, National Institute, Department of Electrochemistry, University of Belgrade, Belgrade, Serbia

Invited lecture | Predavanje po pozivu

- 10.35-11.00** **Vujadin Aleksić^{1*}, Bojana Zečević², Srđan Bulatović¹, Ana Maksimović², Ljubica Milović³, The Finite Element Method in the function of corrosion damage assessment of pipelines**, ¹Institute for testing of materials-IMS Institute, Belgrade, Serbia, ²Innovation Centre of the Faculty of Technology and Metallurgy, Belgrade, Serbia, ³University of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia

Oral presentations | Usmena saopštenja

- 11.00-11.15** **Slobodan Cvetković¹, Jovana Perendija¹, Aleksandra Radomirović², Assessment of Emissions into the Atmosphere from Biogas Cogeneration Plant in Serbia** ¹Institute of Chemistry, Technology and Metallurgy, National Institute, Department of

Electrochemistry, University of Belgrade, Belgrade, Serbia,
²Society "Chemical and Energy Engineering", Belgrade, Serbia

11.15-11.30 **Zoran Karastojković¹, Ognjen Ristić², Mladen Mladenović², When the oxygen might be applied for corrosion protection at steel surface,** ¹Society for ethics and evaluation in culture and science, Belgrade, Serbia, ²Institute IMS, Belgrade, Serbia

11.30-11.45 **Prezentacija kompanije HELIOS SRBIJA A.D., Gornji Milanovac**

16.00-18.00 **POSTER SESSION | POSTER SEKCIJA**

- 1. Katarina Božić^{1,2,*}, Miroslav M. Pavlović^{1,2}, Đorđe Veljović³, Marijana R. Pantović Pavlović^{1,2}, Optimization of hidrothermally obtained hydroxyapatite deposition process on titanium by novel *in situ* process,** ¹Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Department of Electrochemistry, University of Belgrade, Belgrade, Serbia, ²Center of Excellence in Environmental Chemistry and Engineering - ICTM, University of Belgrade, Belgrade, Serbia, ³Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia
- 2. Aleksandra A. Jovanović¹, Muna Rajab Elferjane^{2,3}, Milena Milošević⁴, Petar Batinić⁵, Jovana Bošnjaković⁶, Milica Rančić⁷, Aleksandar Marinković², The Stability of Wild Thyme Extract-Loaded Phospholipid-Cholesterol Liposomal Particles,** ¹University of Belgrade, Institute for the Application of Nuclear Energy INEP, Belgrade, Serbia, ²University of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia, ³University of Misurata, Faculty of Nursing and Health Sciences, Misurata, Libiya, ⁴University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia, ⁵Institute for Medicinal Plants Research "Dr Josif Pančić", Belgrade, Serbia, ⁶Research and Development Institute Lola L.T.D., Belgrade, Serbia, ⁷Faculty of Forestry, University of Belgrade, Belgrade, Serbia
- 3. Aleksandra A. Jovanović¹, Muna Rajab Elferjane^{2,3}, Milena Milošević⁴, Aleksandar A. Jovanović⁵, Nataša Knežević⁶, Mladen Bugarčić⁵, Aleksandar Marinković², The Impact of Ultrasound Waves on Polyphenol Yield and Antioxidant Capacity of *Aloe vera* L. Extracts,** ¹University of Belgrade, Institute for the Application of Nuclear Energy INEP, Belgrade, Serbia, ²University of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia, ³University of Misurata, Faculty of Nursing and Health Sciences, Misurata, Libiya, ⁴University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia,

Belgrade, Serbia, ⁵Institute for Technology of Nuclear and Other Mineral Raw Materials, Belgrade, Serbia, ⁶University of Belgrade, "VINČA" Institute of Nuclear Sciences - National Institute of the Republic of Serbia, Belgrade, Serbia

4. **Sanja I. Stevanović¹, Dragana L. Milošević¹, Dušan V. Tripković¹, Vladan R. Čosović¹, Vesna M. Maksimović², Nebojša D. Nikolić¹, Promoting effect of Zn in platinum catalyst for effective ethanol electrooxidation reaction**, ¹University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia, ²University of Belgrade, "VINČA" Institute of Nuclear Sciences - National Institute of the Republic of Serbia, Belgrade, Serbia,
5. **Dragana Pavlović, Marija Matić, Veljko Perović, Natalija Radulović, Milica Marković, Miroslava Mitrović, Pavle Pavlović, Effect of essential micronutrients on catalase enzyme activity in *Tilia* sp. leaves growing in urban areas**, Department of Ecology, Institute for Biological Research "Siniša Stanković", National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia
6. **Bojan Jokić¹, Milica Gvozdenović², Branimir Jugović², Synthesis of iridescent crystal vanadium-oxide ceramic glazes**, ¹Faculty of Applied Arts in Belgrade, University of Arts in Belgrade, Belgrade, Serbia, ²Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ³Institute of Technical Sciences of SASA, Belgrade, Serbia
7. **Đendi Vaštag¹, Špiro Ivošević², Chemometric approach in detection the effect of environment and type of TiNi alloy on its corrosion degradation**, ¹University Novi Sad, Faculty of Sciences, Novi Sad, Serbia, ²University of Montenegro, Faculty of Maritime Studies Kotor, Kotor, Montenegro
8. **Ivana Jagodić¹, Dina Tenjić², Teodora Vidović¹, Jovana Cvetić¹, Nemanja Banić¹, Efficiency of methylene blue removal and hydrogen production using noble metals modified MoO₃ under UV and simulated solar radiation**, ¹University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia, ²University of Novi Sad, Faculty of Sciences, Department of Biology and Ecology, Laboratory for Ecophysiology and Ecotoxicology - LECOTOX, Novi Sad, Serbia
9. **Ivana Jagodić¹, Dina Tenjić², Teodora Vidović¹, Jovana Cvetić¹, Nemanja Banić¹, Reusable Fe₂O₃/TiO₂/PVC photocatalysts synthesis and application for the removal of methylene blue in the presence of simulated solar radiation**, ¹University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection,

Novi Sad, Serbia, ²University of Novi Sad, Faculty of Sciences, Department of Biology and Ecology, Laboratory for Ecophysiology and Ecotoxicology - LECOTOX, Novi Sad, Serbia

10. *Milica Košević, Marija Mihailović, Vladimir Panić, In-situ hydrothermal synthesis of Pt/TiO₂ nanocomposites for electrochemical application*, University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia
11. *Jelena D. Lović, Nebojša D. Nikolić, Impact of deposition conditions on the electrocatalytic performances of Sn-Pd catalysts in ethanol oxidation reaction*, University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia
12. *Nebojša D. Nikolić, Jelena D. Lović, Dragana L. Milošević, Sanja I. Stevanović, Phenomena of Nucleation and Growth of Tin Dendrites from the Alkaline Solution*, University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia
13. *Regina Fuchs–Godec¹, Marija Riđošić², Miomir. G. Pavlović², Milorad. V. Tomić², Anti-corrosion investigation of curcumin as a green and sustainable corrosion inhibitor for copper*, ¹Faculty of Chemistry and Chemical Engineering, University of Maribor, Maribor, Slovenia, ²Faculty of Technology Zvornik, University of Eastern Sarajevo, Zvornik, Republic of Srpska
14. *Regina Fuchs–Godec, Corrosion resistance of hydrophobic FDTS self-assembly layer on silver-coated copper in acidic solution*, Faculty of Chemistry and Chemical Engineering, University of Maribor, Maribor, Slovenia
15. *D. Vuksanović¹, J. Šćepanović¹, D. Radonjić¹, J. Ćeman², S. Arabelović², Production of Landfill Biogas and Examination of the Possibility of its Utilization at the Možura Landfill in Bar*, ¹University of Montenegro, Faculty of Metallurgy and Technology, Podgorica, Montenegro, ²Možura d.o.o. Bar, Montenegro
16. *J. Šćepanović, B. Zindović, D. Radonjić, D. Vuksanović, Investigation of the Influence of Inorganic and Organic Inhibitors on the Corrosion Kinetics of AISI 304 Steel (1.4301) in Acidic and Neutral Solutions*, University of Montenegro, Faculty of Metallurgy and Technology, Podgorica, Montenegro
17. *Danijel Milošević¹, Stana Stanišić^{2*}, Regina Fuchs – Godec³, Marija Mitrović¹, Snježana Vučićević¹, Zorica Ristić², Milorad Tomić¹, Influence of Temperature on Hard-Chrome Coatings Properties*, ¹University of East

Sarajevo, Faculty of Technology, Zvornik, Republic of Srpska, ²Orao Company, Bijeljina, Republic of Srpska, ³University of Maribor, Faculty of Chemistry and Chemical Engineering, Maribor, Slovenia

18. **Dragana Aščerić¹, Jelena Vulinović¹, Slađana Petronić², Endemic and protected taxa in subclasses Asteridae and Liliidae in Nature Park Trebević**, ¹Faculty of Technology Zvornik, University of East Sarajevo, Zvornik, Bosnia and Herzegovina, ²Faculty of Agriculture, University of East Sarajevo, East Sarajevo, Bosnia and Herzegovina
19. **Dragana L. Milošević, Sanja I. Stevanović, Nebojša D. Nikolić, Dušan V. Tripković, Formic acid electrooxidation on Ni-supported platinum thin film catalyst**, University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia
20. **Dragana L. Milošević¹, Dušan V. Tripković¹, Vladan R. Čosović¹, Vesna M. Maksimović², Nebojša D. Nikolić¹, Sanja I. Stevanović^{1*}, Methanol electrooxidation on carbon-supported binary and ternary platinum catalysts**, ¹University of Belgrade- Institute of Chemistry, Technology and Metallurgy – National Institute of the Republic of Serbia, Belgrade, Serbia, ² Vinča Institute of Nuclear Sciences, National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia
21. **Vesna S. Cvetković*, Nebojša D. Nikolić¹, Nataša M. Petrović¹, Tanja S. Barudžija², Silvana B. Dimitrijević³, Jovan N. Jovičević¹, Zn/Au alloys formation by Zn electrodeposition from a deep eutectic system**, ¹Department of Electrochemistry, Institute of Chemistry Technology and Metallurgy, National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia; ²Institute for Nuclear Sciences Vinča, University of Belgrade, Belgrade, Serbia; ³Mining and Metallurgy Institute, Bor, Serbia
22. **Jovan P. Šetrajčić*, Stevo K. Jaćimovski², Siniša M. Vučenović³, Quasi Linear Spread of Air Pollution and the Environment Caused by a Periodic Source**, ¹Academy of Sciences and Arts of the Republic of Srpska, Banja Luka, Republic of Srpska, Bosnia and Herzegovina; ²University of Criminalistics and Police Studies, Belgrade, Serbia, ³Univerzity of Banja Luka, Faculty of Sciences and Mathematics, Banja Luka, Republic of Srpska, Bosnia and Herzegovina
23. **Bojana Kuzmanović¹, Nenad Ivanović¹, Nataša Tomić², Bojana Paskaš Mamula¹, Katarina Batalović¹, Mirjana Medić Ilić¹, Milica Vujković³, The influence of the brookite/anatase TiO₂ nanoparticles on structural and electrochemical properties of conducting polyaniline form**, ¹Vinča Institute of Nuclear Sciences, National Institute of the Republic of Serbia,

University of Belgrade, Belgrade, Serbia, ²Institute of Physics, University of Belgrade, Belgrade, Serbia, ³Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia

24. *Mirjana Medić Ilić¹, Bojana Kuzmanović¹, Bojana Paskaš Mamula¹, Katarina Batalović¹, Nenad Bundaleski^{1,2}, Long-term air exposure surface modification-XPS first principle approach study*, ¹Vinča Institute of Nuclear Sciences – National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia, ²CEFITEC, Faculdade de Ciências e Tecnologia – Universidade Nova de Lisboa, Lisboa, Portugal
25. *Božidarka Arsenović, The Life of Humanity on an Environmentally Unstable Planet From the Aspect of Environmental Reality and Development*, "ORAO" AD for production and overhaul of Bijeljina; Republic of Srpska; Bosnia and Herzegovina

20.30 GALA DINNER with CLOSING CEREMONY | *SVEČANA VEČERA sa CEREMONIJOM ZATVARANJA*

WEDNESDAY | Sreda 31.05.2023.

10.00-14.00 EXCURSION | *IZLET* – Registration on Conference desk is mandatory on the first day | *Obavezna prijava na pultu za registraciju prvog dana*

EXCURSION includes visiting: Ribnica Monastery, Mionica, Ribnička cave, Struganik, Visiting birth house of Živojin Mišić, Vrujci | *IZLET uključuje posetu Manastiru Ribnica, Mionici, Ribničkoj pećini, Struganiku, Posetu kuće Živojina Mišića, Vrujci*

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