



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

September 13-16, 2021, Tara Mountain, Serbia

PROGRAM

MONDAY | Ponedjeljak 16.09.2021.

- 10.00-20.00 Registration of the participants | *Registracija učesnika*
17.00-17.20 Opening ceremony | *Otvaranje Konferencije*

Plenary lectures | *Plenarna predavanja*

- 17.20-17.55 **Plenary lecture: Nediljka Vukojević Medvidović, Environmental protection with natural zeolite – a circular economy approach**, University of Split, Faculty of Chemistry and Technology in Split, Split, Croatia
17.55-18.30 **Plenary lecture: Vlada Veljković, Where is biodiesel technology going – a critical view on raw materials, catalysts and processes**, University of Niš, Faculty of Technology, Leskovac, Serbia; Serbian Academy of Sciences and Arts, Belgrade, Serbia

Invited lecture | *Predavanje po pozivu*

- 18.30-18.50 **Traian-Dinu Pasatoiu^{1,*}, Radu Cristian Dascalu², Catalin Maxim¹, and Marius Andruh¹, New Porous Coordination Polymers Based on 3d Metal Ions**, ¹University of Bucharest, Faculty of Chemistry, Department of Inorganic Chemistry, Bucharest, Romania; ²National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest, Romania

Oral presentations | *Usmena saopštenja*

- 18.50-19.05 **Maja Stevanović¹, Jelena Lović^{2,*}, Sanja Stevanović², Marija Mihailović², Electrochemical properties of pigment extracts from dark red corn grains**, ¹Innovation Centre of the Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ²University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia

- 19.05 **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/>

TUESDAY | Utorak 14.09.2021.

Plenary lectures | *Plenarna predavanja*

09.30-10.05 **Plenary lecture: Svetomir Hadži Jordanov, „Raw materials supply in future – A duck soup issue ???“**, Faculty of Technology and Metallurgy, University UKIM Skopje, N. Macedonia

Oral presentations | *Usmena saopštenja*

10.05-10.20 **Jelena Lović¹, Dušan Mijin², Milka Avramov Ivić^{1*}, Electrochemical quantitative determination of sertraline in pharmaceutical formulation using a gold electrode in bicarbonate solution**, ¹University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia, ²Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia

10.20-10.35 **Marija Matić^{*}, Dragana Pavlović, Veljko Perović, Dragan Čakmak, Miroslava Mitrović, Pavle Pavlović, Ecophysiological response of *Tilia sp* and *Pinus nigra* to Pb in urban environment**, Department of Ecology, Institute for Biological Research “Siniša Stanković”, University of Belgrade, Belgrade, Serbia

10.35-10.50 **Prezentacija kompanije HELIOS SRBIJA a.d., Gornji Milanovac**

10.50-11.20 **BREAK | PAUZA**

Invited lecture | *Predavanje po pozivu*

11.20-11.40 **Dragana Pavlović^{*}, Marija Matić, Veljko Perović, Zorana Mataruga, Milica Marković, Miroslava Mitrović, Pavle Pavlović, Photosynthetic efficiency and morphological damage symptoms of *Juglans regia L. leaves* in urban environment**, Department of Ecology, Institute for Biological Research “Siniša Stanković”, University of Belgrade, Belgrade, Serbia

Oral presentations | *Usmena saopštenja*

11.40-11.55 **Branko Matović, Synthesis and characterization of silver-doped ceria nanopowders**, Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia

11.55-12.10 **Sanja Stevanović^{1*}, Marijana Ponjavić¹, Jasmina Nikodinović Runić², Vesna Maksimović³, Vladan Ćosović¹, Bacterial nanocellulose as green support for platinum catalysts in methanol electrooxidation reaction**, ¹University of Belgrade,

Institute of Chemistry, Technology and Metallurgy, Belgrade, Serbia, ²Institute of Molecular Genetics and Genetic Engineering, University of Belgrade, Belgrade, Serbia, ³ University of Belgrade, Institute of Nuclear Sciences Vinča, Belgrade, Serbia

- 12.10-12.25** *Isak Karabegović^{1,*}, Ermin Husak², Lejla Mehmedović Banjanović³, Safet Isić⁴, Research on the application of mobile robots for disinfection of contaminated space with virus "COVID-19", ¹Academy of Sciences and Arts of Bosnia and Herzegovina, Sarajevo, Bosnia and Herzegovina, ²University of Bihać, Technical faculty of Bihać, Bihać, Bosnia and Herzegovina, ³University of Tuzla, Tuzla, Bosnia and Herzegovina, ⁴University „Džemal Bijedić“ Mostar, Mostar, Bosnia and Herzegovina*
- 12.25-12.40** **Prezentacija kompanije METAL CINKARA d.o.o., Indija**

14.00 **PICNIC | RUČAK U PRIRODI**

18.00-20.00 **POSTER SESSION | POSTER SEKCIJA**

- 1. Darko Vuksanović, Dragan Radonjić, Jelena Šćepanović, Impact of noise during the reconstruction of the section of the Tivat-Jaz main road and during traffic on the local population, University of Montenegro, Faculty of Metallurgy and Technology, Podgorica, Montenegro**
- 2. Jelena Šćepanović, Darko Vuksanović, Dragan Radonjić, Level of environmental quality improvement by disposal of municipal waste in sanitary cell, University of Montenegro, Faculty of Metallurgy and Technology, Podgorica, Montenegro**
- 3. Dragan Radonjić, Darko Vuksanović, Jelena Šćepanović, Analysis of the possibility of collection, transport, storage and processing of waste tires in order to improve the quality of the environment, University of Montenegro, Faculty of Metallurgy and Technology, Podgorica, Montenegro**
- 4. Regina Fuchs–Godec¹, Marija Riđošić², Milorad. V. Tomić², Miomir G. Pavlović², Commercial food supplements of ‘bee products’ as inhibitors of corrosion processes, ¹Faculty of Chemistry and Chemical Engineering, University of Maribor, Maribor, Slovenia, ²Faculty of Technology Zvornik, University of Eastern Sarajevo, Zvornik, Republic of Srpska**
- 5. Regina Fuchs–Godec, Thin TiO₂-based coatings for the purpose of corrosion protection, Faculty of Chemistry and Chemical Engineering, University of Maribor, Maribor, Slovenia**
- 6. Vesna M. Maksimović^{1,2,*}, Aleksandra D. Čairović³, Ivana Lj. Cvijović-Alagić^{1,2}, Influence of recasting on the structure and properties of Ni-Cr**

- dental alloy**, ¹Institute of Nuclear Sciences “Vinča”, Nacional Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia, ²Centre of Excellence “CextremeLab”, Centre for synthesis, processing, and characterization of materials for application in extreme conditions, Belgrade, Serbia, ³School of Dental Medicine, University of Belgrade, Belgrade, Serbia
7. **Ivana Cvijović-Alagić^{1,*}**, *Sladana Laketić¹, Dejan Zagorac¹, Jelena Bajat², Đorđe Veljović², Vesna Kojić³, Marko Rakin²*, **Microstructural refinement influence on the Ti-45Nb alloy properties in physiological conditions**, ¹Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia, ²Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ³Oncology Institute of Vojvodina, Sremska Kamenica, Serbia
 8. **Milica Gvozdrenović^{1,*}**, *Branimir Jugović², Bojan Jokić³, Enis Džunuzović¹, Branimir Grgur¹*, **The influence of self-doping on electrochemical synthesis and behaviour of polyaniline**, ¹Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ²Institute of Technical science, SASA, Belgrade, Serbia, ³Faculty of Applied Arts, University of Arts in Belgrade, Belgrade, Serbia
 9. **Vesna S. Cvetković^{1,*}**, *Dominic Feldhaus², Nataša M. Vukićević¹, Nebojša D. Nikolić¹, Bernd Friedrich², Jovan N. Jovićević¹*, **Electrodeposition of Nd and Pr onto W from fluoride based melts**, ¹Department of Electrochemistry, Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ²IME Process Metallurgy and Metal Recycling, Institute of RWTH Aachen University, Aachen, Germany
 10. **Nebojša D. Nikolić^{1,*}**, *Vesna M. Maksimović², Zvezdana Baščarević³, Predrag M. Živković⁴, Miomir G. Pavlović¹*, **Influence of regime of electrolysis on morphology and structure of copper dendrites**, ¹ICTM – Department of Electrochemistry, University of Belgrade, Belgrade, Serbia, ²Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia, ³Institute for Multidisciplinary Research, University of Belgrade, Belgrade, Serbia, Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia
 11. *Biljana Babić¹, Ana Kalijadis², Marko Nikolić¹, Martina Gilić¹, Branislav Jelenković¹*, **Bojan Jokić^{2,*3}**, **Low cost hydrothermal synthesis of shining carbon quantum dots**, ¹Institute of Physics Belgrade, University of Belgrade, 11000 Belgrade, Serbia, ²Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia, ³Faculty of Applied Arts, University of Arts in Belgrade, Belgrade, Serbia

12. **Đenđi Vaštag^{1,*}, Špiro Ivošević², Chemometric approach in the monitoring of the TiNi alloy corrosion behaviour under different coastal conditions**, ¹University Novi Sad, Faculty of Sciences, Novi Sad, Serbia, ²Faculty of Maritime Studies Kotor, University of Montenegro, Kotor, Montenegro
13. **Ladislav Vrsalović^{1,*}, Senka Gudić¹, Ines Garvanović¹, Dražan Jozić¹, Ivana Ivanić², Mirko Gojić², Stjepan Kožuh², The influence of electrolyte temperature on corrosion of CuAlMnZn alloy in Na₂SO₄ solution**, ¹University of Split, Faculty of Chemistry and Technology, Split, Croatia, ²University of Zagreb, Faculty of Metallurgy, Sisak, Croatia
14. **Dusan Milojkov^{1,*}, Vaso Manojlovic², Miroslav Sokic¹, New biomedical materials based on metal-doped fluorapatite**, ¹Institute for Technology of Nuclear and Other Mineral Raw Materials, Belgrade, Serbia, ²Faculty of Technology and Metallurgy, University of Belgrade, Serbia
15. **Marija Riđošić¹, Mihael Bučko², Regina Fuchs Godec³, Milorad Tomić^{1,*}, Jelena Bajat⁴, Miomir Pavlović¹, Influence of Current Density and Ultrasound on the Morphology and Roughness of Zn-Mn-CeO₂ Nanocomposite Coatings**, ¹University of East Sarajevo, Faculty of Technology, Zvornik, Republic of Srpska, ²University of Defense, Military Academy, Belgrade, Serbia, ³Faculty of Chemistry and Chemical Engineering, University of Maribor, Maribor, Slovenia, ⁴University of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia
16. **Branko Bojić¹, Ljubica Vasiljević^{1,*}, Danijela Rajić¹, Solvent extraction of copper from oxide ore by organic extragens**, ¹University of East Sarajevo, Faculty of Technology Zvornik, Zvornik, Republic of Srpska, Bosnia and Herzegovina
17. **Srđan Bulatović^{1,*}, Vujadin Aleksić¹, Bojana Zečević², Corrosion protection of ship structures**, ¹Institute for Materials Testing (IMS), Belgrade, Serbia, ²Innovation centre of Faculty of Technology and Metallurgy, Belgrade, Serbia
18. **Milan Kostić^{1,*}, Olivera Stamenković¹, Vlada Veljković¹, Oil recovery from roadside pennycress (*Thlaspi alliaceum* L.) seeds and its application for biodiesel production**, ¹Faculty of Technology, University of Niš, Leskovac, Serbia
19. **Jonas Mitterecker^{1,*}, Marija Mihailović², Milica Košević², Jasmina Stevanović², Srećko Stopić¹, Vladimir Panić², Bernd Friedrich¹, Precipitation behaviour in pH adjusted lateritic ore solution**, ¹IME Process Metallurgy and Metal Recycling, RWTH Aachen University, Aachen, Germany, ²University of Belgrade - Institute of Chemistry,

Technology and Metallurgy – National Institute of the Republic of Serbia, Belgrade, Serbia

20. **Jonas Mitterecker^{1,*}, Milica Košević², Marija Mihailović², Jasmina Stevanović², Srećko Stopić¹, Bernd Friedrich¹, Vladimir Panić², Electrochemical investigation of lateritic ore leachates for metal ions extraction,** ¹IME Process Metallurgy and Metal Recycling, RWTH Aachen University, Aachen, Germany, ²University of Belgrade - Institute of Chemistry, Technology and Metallurgy – National Institute of the Republic of Serbia, Belgrade, Serbia
21. **Marijana R. Pantović Pavlović^{1,2}, Miroslav M. Pavlović^{1,2}, Jasmina S. Stevanović^{1,2}, Vladimir V. Panić^{1,3,2}, Nenad L. Ignjatović⁴, Comparison of bioactivity, cytotoxicity, antimicrobial and corrosive behavior of ceramic coatings with and without polymer on titanium,** ¹Institute of Chemistry, Technology and Metallurgy, Institute of national importance for the Republic of Serbia, University of Belgrade, Belgrade, Serbia, ²Centre of Excellence in Environmental Chemistry and Engineering - ICTM, University of Belgrade, Belgrade, Serbia, ³State University of Novi Pazar, Department of Chemical-Technological Sciences, Novi Pazar, Serbia, ⁴Institute of Technical Science of the Serbian Academy of Sciences and Arts, Belgrade, Serbia
22. **Traian-Dinu Pasatoiu, Catalin Maxim, Augustin Madalan, Marius Andruh, Synthesis and Characterization of New Coordination Polymers Obtained Using 3d and 3d-4f Nodes,** University of Bucharest, Faculty of Chemistry, Department of Inorganic Chemistry, Bucharest, Romania
23. **Maria Uzelac, Katarina Modić, Nemanja Banić, Method development and removal study of amoxicillin by RP-HPLC,** University of Novi Sad Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia
24. **Božidarka Arsenović, Darinka Jevtić, Zorica Ristić, Overview of fuel A 1 and lubricants for mlas motors,** „Orao“ corp. for production and overhaul Bijeljina; Republic of Srpska; Bosnia and Herzegovina
25. **Emina Dzindo, Rodoljub Milicevic, Damage and defects in welded joints,** Faculty of mechanical Engineering, Belgrade, Serbia
26. **Veljko Đukić, Risk of harmful effects of water in the Republic of Srpska in the conditions of climate change,** Center for humane technologies, Gradiška, Bosnia and Herzegovina
27. **Vujadin Aleksić^{1,*}, Marina Dojčinović², Ljubica Milović², Bojana Aleksić³, Ana Prodanović³, Mechanisms and morphologies of cavitation damage of NN 70 steel,** ¹Institute for Testing Materials-IMS Institute, Belgrade, Serbia, ²University of Belgrade, Faculty of Technology and Metallurgy,

Belgrade, Serbia, ³Innovation Centre, Faculty of Technology and Metallurgy, Belgrade, Serbia

28. *Jelena P. Maksimović¹, Maja C. Pagnacco^{2*}*, **Electrochemical examination of the pyrocatechol influence on the Bray-Liebhafsky reaction after the oscillatory period**, ¹Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia, ²University of Belgrade, Institute of Chemistry, Technology and Metallurgy, Center of Catalysis and Chemical Engineering, Belgrade, Serbia

WEDNESDAY | Sreda 15.09.2021.

10.00-18.00 EXCURSION | *IZLET* – Registration on Conference desk is mandatory on the first day | *Obavezna prijava na pultu za registraciju prvog dana*

20.30 GALA DINNER | *SVEČANA VEČERA*

THURSDAY | Četvrtak 16.09.2021.

Plenary lecture | *Plenarno predavanje*

10.00-10.35 *Plenary lecture: Vaso Novaković, Nikola Nikolić*, “**Optimization of preventive activities and maintenance of water wells exposed to corrosion and encrustation processes**”, Institute for applied geology and water engineering , Bijeljina, Republic of Srpska, Bosnia and Herzegovina

10.35-11.10 *Plenary lecture: Aleksandar Marinković*, „**Intelligent biobased anticorrosive coatings**“, Univesity of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia

Oral presentations | *Usmena saopštenja*

11.10-11.25 *Željko Krivačević, Dejan Grgić, Saša Stojanović, Aleksandar Pešić*, **Protection against electrochemical corrosion of steel tank floors by installing a cathodic protection system**, „Transnafta „ corp., Pančevo, Serbia

11.25-11.40 *Isak Karabegović^{1*}, Edina Karabegović,²Ermin Husak² Mehmed mahmić²*, **Application of collaborative robots in the fourth industrial revolution - Industry 4.0**, ¹Academy of Sciences and Arts of Bosnia and Herzegovina, Sarajevo, Bosnia and Herzegovina, ² University of Bihać, Technical faculty of Bihać, Bihać, Bosnia and Herzegovina

11.40-12.00 BREAK | *PAUZA*

Oral presentations | Usmena saopštenja

- 12.00-12.15** **Nemanja Banić^{1,*}, Jugoslav Krstić², Maria Uzelac¹, Removal of methyl orange using combined ZnO/Fe₂O₃/ZnO-Zn composite coated to the aluminium foil 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 Belgrade, Institute of Chemistry, Technology and Metallurgy, Department of Catalysis and Chemical Engineering, Belgrade, Serbia
- 12.15-12.30** **Marija Janačković¹, Milica Gvozdencić^{2,*}, Branimir Jugović³, Branimir Grgur², Aqueous electrolyte polypyrrole | zinc cell with supercapattery performance,** ¹Faculty of Technical Sciences, Kosovska Mitrovica, Serbia, ²Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ³Institute of Technical Science, SASA, Belgrade, Serbia
- 12.30-12.45** **Dejana Kasapović¹, Fehim Korać², Farzet Bikić¹, Testing the effectiveness of raspberry flower extract as an inhibitor of copper's corrosion in 3%NaCl,** ¹University of Zenica, Faculty of Metallurgy and Technology, Zenica, Bosnia and Herzegovina; ²University of Sarajevo, Faculty of Science, Sarajevo, Bosnia and Herzegovina
- 12.45-13.00** **Mladen Bugarčić^{1,*}, Miroslav Sokić¹, Branislav Marković¹, Milan Milivojević², Aleksandar Marinković², Jovana Perendija³, Zorica Lopičić¹, Fabrication and characterization of manganese ferrite/expanded vermiculite as a magnetic,** ¹Institute for Technology of Nuclear and Other Mineral Raw Materials, Belgrade, Serbia, ²Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ³SI Institute of Chemistry, Technology and Metallurgy National Institute, Center of Ecology and Technoeconomics, University of Belgrade, Belgrade, Serbia
- 13.00** **CLOSING CEREMONY | ZATVARANJE KONFERENCIJE**

**XXII YUCORR IS ORGANIZED BY
ORGANIZATORI XXII YUCORR-a**



Serbian Society of Corrosion and Materials Protection
UDRUŽENJE INŽENJERA SRBIJE ZA KOROZIJU I ZAŠTITU MATERIJALA



Institute of Chemistry, Technology and Metallurgy, Belgrade
INSTITUT ZA HEMIJU, TEHNOLOGIJU I METALURGIJU



Union of Engineers and Technicians of Serbia, Belgrade
SAVEZ INŽENJERA I TEHNIČARA SRBIJE



Engineering Academy of Serbia
INŽENJERSKA AKADEMIJA SRBIJE

**XXII YUCORR IS ORGANIZED UNDER THE AUSPICES OF THE
*XXII YUCORR JE FINANSIJSKI POMOGLA***

**MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGICAL
DEVELOPMENT OF THE REPUBLIC OF SERBIA**



***MINISTARSTVO PROSVETE, NAUKE I TEHNOLOŠKOG RAZVOJA
REPUBLIKE SRBIJE***

SPONSORS | SPONZORI

**INTERNATIONAL SOCIETY OF ELECTROCHEMISTRY,
Switzerland**

SAVEZ INŽENJERA I TEHNIČARA SRBIJE, Beograd

INŽENJERSKA KOMORA SRBIJE, Beograd

HELIOS SRBIJA a.d., Gornji Milanovac

METAL CINKARA d.o.o., Inđija

SURTEC ČAČAK d.o.o., Čačak

ALFATERM d.o.o., Čačak

INSTITUT ZA PREVENTIVU d.o.o., Novi Sad

EKP ELKER a.d., Prijedor, Republika Srpska, B&H

EKO ZAŠTITA d.o.o., Bijeljina, Republika Srpska, B&H

IPIN d.o.o., Bijeljina, Republika Srpska, B&H

HEMIPRODUKT d.o.o., Novi Sad

INSTITUT ZA OPŠTU I FIZIČKU HEMIJU, Beograd

SZR "GALVA", Kragujevac

NOVOHEM d.o.o., Šabac



Савез инжењера и техничара Србије
Union of Engineers and Technicians of Serbia



HELIOS ALFATERM

je "Moj Stil"

Metal sink ara



ELKER



EKO
zaštita



Institut za preventivu

zaštitu na radu, protivpožarnu zaštitu, i razvoj d.o.o.



IPIN d.o.o.

institut za primijenjenu geologiju i vodoinženjering



HEMIPRODUKT
BOJE I LAKOVI

СЗР ТАЛВА

површинска заштита метала

