



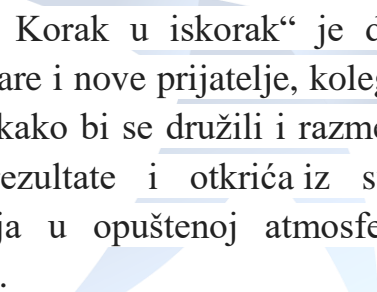
*Univerzitet u Beogradu*

*Institut za hemiju, tehnologiju i metalurgiju*

*Institut od nacionalnog značaja za Republiku Srbiju*

***Prva  
konferencija  
Instituta za  
hemiju,  
tehnologiju i  
metalurgiju***

**IHTM – KORAK  
U ISKORAK**



„IHTM - Korak u iskorak“ je događaj koji okuplja stare i nove prijatelje, kolege i saradnike IHTM-a, kako bi se družili i razmenili iskustva, znanja, rezultate i otkrića iz svojih oblasti istraživanja u opuštenoj atmosferi i divnom ambijentu.

14. decembar 2023. Hotel Jugoslavija, Banket sala  
Beograd



## ***O institutu IHTM***

## *O IHTM-u*

Institut za hemiju, tehnologiju i metalurgiju (IHTM), Institut od nacionalnog značaja za Republiku Srbiju, osnovan je 1961. godine. Osnovne delatnosti Instituta su fundamentalna i primenjena multidisciplinarna istraživanja, razvoj tehnoloških procesa u okviru hemije, tehnologije, mikroelektronike i metalurgije, kao i njihova primena u industriji, medicini i zaštiti životne sredine. Naučno-istraživačke aktivnosti se odvijaju u šest specijalizovanih centara, koji okupljaju stručnjake i doktorande iz oblasti hemije, fizičke hemije, tehnologije, elektrotehnike, hemijskog i mašinskog inženjerstva, a koji su podržani zajedničkim administrativnim službama.

Direktor instituta dr Jasmina Stevanović.

### *Centar za hemiju*

Biohemija, biotehnologija, hemija biomakromolekula, polimerni materijali, hemija životne sredine, geohemija, organska hemija, bioorganska i medicinska hemija, neorganska hemija, računarska hemija, instrumentalna analiza, hemija prirodnih proizvoda.

Rukovodilac dr Bojan Bondžić.

### *Centar za elektrohemiju*

Elektrokataliza, elektrohemijsko taloženje i rastvaranje metala i legura, baterije i superkondenzatori, korozija i zaštita od korozije.

Rukovodilac dr Nebojša Nikolić.



### *Centar za katalizu i hemijsko inženjerstvo*

Dizajn, sinteza i karakterizacija katalizatora, nosača i prekursora katalizatora, kao i adsorbenasa; modelovanje i proučavanje katalitičkih procesa i hemijsko inženjerstvo.

Rukovodilac dr Predrag Banković.

### *Centar za mikroelektronske tehnologije*

Fundamentalna i primenjena istraživanja u oblasti mikroelektronskih, optoelektronskih i mikrosistemskih tehnologija i materijala, sa naglaskom na razvoju senzorskih komponenti primenljivih u praksi.

Rukovodilac dr Dana Vasiljević-Radović.

### *Centar za ekologiju i tehnoekonomiku*

Primenjena istraživanja u oblasti zaštite životne sredine, održivog korišćenja prirodnih resursa, ublažavanja efekata klimatskih promena, kao i tehnoekonomske analize.

Rukovodilac dr Slobodan Cvetković.

### *Centar za materijale i metalurgiju*

Istraživanja i razvoj magnetnih, kompozitnih i sinterovanih materijala i višekomponentnih metalnih sistema, kao i optimizacija membranskih i tehnoloških procesa u pogledu povećanja energetske efikasnosti.

Rukovodilac dr Jasna Stajić-Trošić.

*Centri izuzetnih vrednosti:*

*Centar za hemiju i inženjering životne sredine,  
akreditovan od 2017.*

Proučavanje migracija, transformacija i interakcija polutanata u životnoj sredini; pronalaženje rešenja za uklanjanje polutanata na izvorima emisija uključujući dobijanje novih materijala korišćenjem otpadnog poli(etilen tereftalata) i prirodnih polimera; reciklaža istrošenih elektrodnih sistema.

Rukovodilac dr Dragana Đorđević.

*Centar za mikroelektronske tehnologije, akreditovan  
od 2014.*

Centar za mikroelektronske tehnologije je u celini, kao organizaciona jedinica u okviru IHTM, akreditovan kao centar izuzetnih vrednosti u oblasti tehničko-tehnoloških nauka – mikrosistema i nanosistema.

Rukovodilac dr Dana Vasiljević-Radović.

*Akreditovana laboratorija: Laboratorija centra za  
hemiju, 01-105, akreditovana od 2005.*

Standardi: ISO/IEC 17025:2005 (2005. god) i SRPS ISO/IEC 17025:2017 (2020. god) za hemijska ispitivanja organskih i neorganskih jedinjenja i njihovih smeša primenom infracrvene (IC) spektroskopije, nuklearno magnetno rezonantne (NMR) spektroskopije i elementalne mikroanalize.

Rukovodilac dr Dejan Gođevac.



### ***Naučni odbor***

1. Dr Vladan Ćosović, predsednik
2. Dr Željko Čupić, zamenik predsednika
3. Dr Biljana Dojnov, član
4. Dr Tatjana Šolević Knudsen, član
5. Dr Goran Janjić, član
6. Dr Nataša Božić, član
7. Dr Irena Novaković, član
8. Dr Milka Jadranin, član
9. Dr Slobodan Cvetković, član
10. Dr Sanja Stevanović, član
11. Dr Sanja Sakan, član
12. Dr Bojana Ostojić, član
13. Dr Srđan Petrović, član
14. Dr Ivana Jokić, član
15. Dr Marija Pergal, član
16. Dr Jovana Perendija, član

### ***Organizacioni odbor***

1. Dr Biljana Dojnov, predsednica
2. Dr Tatjana Šolević Knudsen, zamenica predsednice
3. Dr Željko Čupić, član
4. Dragana Zlatović, član
5. Branko Ćirković, član
6. Dr Milana Zarić, član
7. Dr Jovana Ilić Pajić, član
8. Teodora Vićentić, član
9. Jelena Stevanović, član
10. Dr Sanja Stojanović, član
11. Kristina Kasalica, član
12. Željka Milovanović, član
13. Katarina Antić, član
14. Tamara Tadić, član
15. Dr Sandra Bulatović, član
16. Stefan Lekić, član
17. Danica Savić, član
18. Vladimir Jezdić, član



## ***Program konferencije***



*09:00-10:00 h – registracija učesnika*

**10:00 - 11:30 h – Predstavljanje organizacione strukture IHTM-a**

predsedavajući: Biljana Dojnov

- Obraćanje direktorke IHTM, **Jasmina Stevanović**
- Obraćanje gostiju
- Obraćanje pomoćnika direktora i predsenika naučnog veća IHTM, **Dana Vasiljević Radović, Dejan Opsenica, Predrag Banković, Vladimir Panić, Željko Čupić**
- Predstavljanje aktivnosti Instituta u okviru programa **SAIGE, Matija Zlatar**
- Predstavljanje Kancelarije za projekte IHTM, **Vladan Ćosović**
- Predstavljanje Tima za transfer tehnologija, **Dana Vasiljević Radović**
- Predstavljanje Administracije IHTM, **Branko Ćirković**

*11:30 - 12:00 h Kafe pauza, posterska sekcija*

**12:00 - 13:00 h – Predstavljanje projekata IHTM**

predsedavajući: Vladan Ćosović, Nataša Božić, Goran Janjić

- Boosting Institute of Chemistry, Technology and Metallurgy in Water Biomonitoring – Podsticanje Instituta za hemiju, tehnologiju i metalurgiju u biomonitoringu voda (**BIOLAWEB**), *Projekat iz okvira Horizont Evropa*, **Miloš Ćirić**



- Coupling of Ca metal anodes with metallic oxide cathodes for high energy Ca-O<sub>2</sub> (Ca-air) batteries (CaO-Bat) – Spajanje kalcijum metalnih anoda sa katodama od metalnog oksida za visokoenergetske Ca-O<sub>2</sub> (Ca-vazduh) baterije, *NATO - program SPS*, **Vladimir Panić**
- Smart Patch for Life Support Systems (**SP4LIFE**) – Pametni multisenzorski flaster za praćenje vitalnih parametara, *NATO - program SPS*, **Marko Spasenović**
- Mono- i poli- komponentni katalitički sistemi za prečišćavanje otpadnih voda i zagađenog vazduha od modelnih kontaminanata, *Međunarodni projekti SANU*, **Nenad Radić**
- *Startup kompanija*, „SavAntiVir“, antiviralni proteini, **Uroš Anđelković**
- *Startup kompanija*, „Flexisense“, nosivi senzori, **Marko Spasenović**

13:00-14:00 h – Ručak, posterska sekcija

#### 14:00 – 15:00 h – Predstavljanje projekata IHTM

predsedavajući: Vladan Ćosović, Nataša Božić, Goran Janjić

- Kreiranje molekulskih magneta i katalizatora zasnovanih na kompleksima prelaznih metala (**TMMagCat**), *Fond za nauku Republike Srbije – Program IDEJE*, **Matija Zlatar**
- Savremeni katalizatori u niskotemperaturnim gorivnim spregovima: od model sistema do realnih katalizatora (**AdCatFC**), *Fond za nauku Republike Srbije – Program IDEJE*, **Sanja Stevanović**



- Fizičko-hemijski aspekti ritmičnosti NeuroEndokrinih Sistema: Dinamička i kinetička istraživanja reakcionih i njihovih glavnih jedinjenja koja leže u njihovoj osnovi (**NES**), *Fond za nauku Republike Srbije – Program IDEJE*, **Željko Čupić**
- MEMS multisenzorski instrument za merenje aerodinamičkog pritiska (**MEMSAERO**), *Fond za nauku Republike Srbije – Program IDEJE*, **Miloš Frantlović**
- Obnavljanje otpadnih anoda koje razvijaju kiseonik iz hidrometalurgije i njihova poboljšana aktivnost za ekonomiju vodonika, otpadne vode i remedijaciju zemljišta (**OxyRePair**), *Fond za nauku Republike Srbije – Zeleni program saradnje nauke i privrede*, **Vladimir Panić**
- Dezinfekciono sredstvo inkapsulirano u polimeru. Potencijal za dezinfekciju širokog spektra mikroba i nekih patogenih vrsta koronavirusa, *Fond za inovacionu delatnost Republike Srbije – Program transfera tehnologije*, **Ivana Đorđević**
- Kompaktni, Modularni Fortoreaktor za primenu u mikrofluidnoj i klasičnoj hemiji, *Fond za inovacionu delatnost Republike Srbije – Program transfera tehnologije*, **Bojan Bondžić**

15:00-15:30 h – Kafe pauza, posterska sekcija

**15:30-16:30h – Uručenje nagrada, zahvalnica i pohvalnica**

predsedavajući: Irena Novaković, Slobodan Cvetković

- Promocija istraživača koji su odbranili doktorsku disertaciju tokom 2023. i njihovih mentora iz IHTM
- Pozdrav kolegama koji su otišli u penziju tokom ove godine
- Nagrade za najuspešnije istraživače
- Pohvale zaposlenima za izuzetan doprinos razvoju Instituta





## *Posterska sekcija*

Na prvoj internoj konferenciji „IHTM-Korak u iskorak“ istraživači IHTM-a su prikazali svoje rezultate ostvarene tokom 2023. godine i predstavljene na različitim međunarodnim i nacionalnim naučnim konferencijama.

Posterske prezentacije su organizovane u 7 sekcija razvrstanih po naučnim oblastima. Posebno su izdvojene posterske prezentacije koje su nagrađene na konferencijama na kojima su prikazane tokom godine – sekcija *Nagrađeni poster*. Na konferenciji su u posterskoj sekciji prikazani i projekti naših istraživača koji nisu predstavljani usmeno u programu skupa.

### 1. Hemija - HEM

#### **HEM-1**

Mihajlo J. Krunić, Jelena Z. Penjišević, Slađana Kostić-Rajčić, Vladimir B. Šukalović, Deana B. Andrić and Ivana I. Jevtić, *Pyrazole/tacrine derivatives as potential cholinesterase inhibitors*, 2nd International Conference on Chemo and Bioinformatics (ICCBIG), 28-29. 9. 2023, Kragujevac, Serbia.

#### **HEM-2**

Igor A. Topalović, Olivera S. Marković, Miloš P. Pešić, Mufaddal Kathawala, Abu T. M. Serajuddin, Alex Avdeef, and Tatjana Ž. Verbić *Clofazimine acid-base solubilization: influence of small organic acids' concentration*, 10th IAPC Meeting: 10th World Conference on Physico-Chemical Methods in Drug Discovery and Development, 4-6. 9. 2023, Belgrade, Serbia.

**HEM-3**

Milana Zarić, Ivona Radović, and Mirjana Kijevčanin, *Molecular Dynamic Simulations in Binary Liquid Mixtures*, 26th Congress of the Society of Chemists and Technologists of Macedonia (SCTM), 20-23 September, 2023 Ohrid, R. Macedonia.

**HEM-4**

Milka Jadranin, Gordana Krstić, Danica Savić, Miroslav Novaković, Stefan Lekić, Vele Tešević, Milica Pešić, Ana Podolski-Renić, Ema Lupšić, and Slobodan Milosavljević, *Analysis of terpenoids from the latex of Euphorbia cyparissias by liquid chromatography electrospray ionization mass spectrometry*, 5th International Conference on Natural Products Utilization: from Plants to Pharmacy Shelf, ICNPU-2023, 30. 5. - 2. 6. 2023, Varna, Bulgaria.

**HEM-5**

Danijela S. Kretić, Vesna B. Medaković and Ivana S. Veljković, *Relationship between geometry and energy of interactions in S8 dimers*, 9th Conference of Young Chemists of Serbia, 4. 11. 2023 Novi Sad, Serbia.

**HEM-6**

A. Ivanović-Šašić, S. Maćešić, J. Maksimović, Ž. Čupić, and Lj. Kolar-Anić, *Perturbation technique in oscillatory reactions for characterization of biological active molecules*, Dynamics Days Europe 2023, 3-8 September 2023, Naples, Italy.

**HEM-7**

Ana A. Filipović, Zdravko D. Džambaski, and Bojan P. Bondžić, *Microreactor technology for green and sustainable photo- and organo- catalytic synthesis*, Natural resources, green technology and sustainable development - GREEN2022, 14 -16. 9. 2022, Zagreb, Croatia.

**HEM-8**

Milica Savić, Mima Jevtović, Božidar Čobeljić, Maja Gruden, and Matija Zlatar, *Spin states of Mn(II) and Fe(III) complexes with thiosemicarbazone*, 6th EuChemS Inorganic Chemistry Conference, Vienna, Austria, September 3-7, 2023.

**HEM-9**

Irena Novaković, Ana Matošević, Vukan Milovanović, Marija Bartolić, Dejan M. Opsenica, Dušan Sladić, Anita Bosak, *1,4-benzoquinones as potent agents for Alzheimer's disease treatment*, IX International Symposium on Advances in Synthetic and Medicinal Chemistry (EFMC-ASMC 2023), Zagreb, Croatia, 03.-07. September 2023.

**HEM-10**

Mila Ilić, Tamara Tadić, Sandra Bulatović, Bojana Marković, Aleksandra Nastasović, *Validation of an adsorption kinetic model for lindane removal by a porous polymer*, 28th Croatian Meeting of Chemists and Chemical Engineers (28HSKIKI), Rovinj, Croatia, 28-31 March, 2023.



### **HEM-11**

Stefan Lekić, Dejan Gođevac, Ljubodrag Vujisić, *Portable VIS/NIR spectrometry as hotzone detector of plant poisoning*, 9th Conference on Environmental Chemistry, Kladovo 4th - 7th June 2023.

### **HEM-12**

Željka Milovanović\*, Aleksandra Marković, Vladimir Petrović, Danijela Vidaković, Biljana Dojčinović, Jelena Avdalović, Srđan Miletić i Miloš Ćirić, *Čudesni svet u kapi vode – od mikroskopa do DNK*, Noć istraživača u Muzeju tehnike i nauke, Beograd, Srbija, 29. 9. 2023

## 2. Elektrohemija i elektrohemijsko inženjersvo - EH

### **EH-1**

Sanja Stevanović, Dragana Milošević, Dušan Tripković, Nebojša Nikolić, *Stability tests investigations for PtZn/C catalyst in methanol, ethanol and formic acid electrooxidation reaction*, 5th International Symposium on corrosion and materials protection, environmental protection and protection against fire, 26th-29th September, Bar, Montenegro, 2023.

### **EH-2**

T. Novaković, D. Pjević, N. Abazović, Z. Mojović, *The influence of anion on properties of ion-exchange Cu-alumina*, Serbian Ceramic Society Conference – Advanced Ceramics and Applications XI, 18-20th September, Belgrade, 2023.

### **EH-3**

N. D. Nikolić, J. D. Lović, V. M. Maksimović, S. I. Stevanović, *Correlation Between Morphology and Structure of Galvanostatically Electrodeposited Tin Dendrites*, Book of Abstracts, 26th Congress of SCTM with International Participation, 20–23th September, Metropol Lake Resort Ohrid, N. Macedonia, 2023.

### **EH-4**

Vesna S. Cvetković, Nebojša D. Nikolić, Nataša M. Petrović, Tanja S. Barudžija, Silvana B. Dimitrijević, Jovan N. Jovićević, *Zn/Au alloys formation by Zn electrodeposition*

*from a deep eutectic system*, XXIV YuCorr, Meeting Point of the Science and Practice in the Fields of Corrosion, Materials and Environmental Protection, 28-31th May, Divčibare, Serbia, 2023.

#### **EH-5**

Vesna S. Cvetković, Nataša M. Petrović, Dominic Feldhaus, Laras Prasakti, Bernd Friedrich, Jovan N. Jovićević, *Greenhouse gas emission from the rare earth metals electrolysis*, 26th Congress of the Society of Chemists and Technologists of Macedonia (SCTM), 20-23th Septembra, Ohrid, N. Macedonia, 2023.

#### **EH-6**

Jelena Šćepanović, Dragan Radonjić, Darko Vuksanović, Marijana R. Pantović Pavlović, Miroslav M. Pavlović, *Investigation of Corrosion Behavior by Electrochemical Impedance Spectroscopy of Al Alloys in Al-Mg Systems*, 8th International Congress "Engineering, Environment and Materials in Process Industry" - EEM2023, 20th - 23rd March, Jahorina Mountain, Bosnia and Herzegovina, 2023.

#### **EH-7**

Milica Košević, Marija Mihailović, Vladimir Panić, *The pseudo-capacitance of hydrous RuO<sub>2</sub> accompanied by mass changes*, 5th International Symposium on corrosion and materials protection, environmental protection and protection against fire, 26th-29th September, Bar, Montenegro, 2023.

**EH-8**

Andela R. Simović, Bojana M. Radojković, Bore V. Jegdić, Milica Milojević, Jelena B. Bajat, *Cerium lactate as green corrosion inhibitor of AA2024 alloy*, 58th Meeting of the Serbian Chemical Society, June 9-10th, Belgrade, 2023.

**EH-9**

Andela R. Simović, Sanja Stevanović, Branislav Milovanović, Mihajlo Etinski, Jelena B. Bajat, *Peptides and their constituents as steel corrosion inhibitors: an experimental and theoretical approach*, 58th Meeting of the Serbian Chemical Society, June 9-10th, Belgrade, 2023.

**EH-10**

Katarina Đ Božić, Miroslav M. Pavlović, Đorđe V. Gjumišev, Đorđe N. Veljović, Marijana R. Pantović Pavlović, *The influence of the voltage on formation and morphology of hydroxyapatite/titanium composite coatings*, XXIV YUCORR - International Conference - Meeting point of the science and practice in the fields of corrosion, materials and environmental protection, May, Divcibare, 2023.

**EH-11**

D. Milošević, S. Stevanović, D. Tripković, I. Vukašinović, V. Čosović, N. Nikolić, *The influence of Zn content on the activity of PtZn catalysts in methanol electrooxidation reaction*, 5th International Symposium on corrosion and

materials protection, environmental protection and protection against fire, 26th-29th September, Bar, Montenegro, 2023.

#### **EH-12**

D.L. Milošević, S.I. Stevanović, D.V. Tripković, *Formic acid alectrooxidation on Cr-supported platinum thin film catalyst*, 26th Congress of the Society of Chemists and Technologists of Macedonia, 20–23 September, Ohrid, N. Macedonia, 2023.

#### **EH-13**

D. Milošević, S. Stevanović, N. Nikolić, D. Tripković, *The influence of thermal annealing of Pt-based thin films on electro-oxidation of formic acid*, 7th Conference of the Serbian Society for Ceramic Materials, 14th–16th June, Belgrade, Serbia, 2023.

#### **EH-14**

D. L. Milošević, S. I. Stevanović, N. D. Nikolić, D.V. Tripković, *Formic acid electrooxidation on Ni-supported platinum thin film catalyst*, International conference XXIV YUCORR, Meeting Point of the Science and Practice in the Fields of Corrosion, Materials and Environmental Protection, 28th-3st May, Divčibare, Serbia, 2023.

#### **EH-15**

Maja D. Obradović, Vuk V. Radmilović, Velimir R. Radmilović, Snežana Lj. Gojković, *Palladium-copper bimetallic nanocatalyst for electrochemical ethanol oxidation and oxygen reduction in alkaline media*, 74th Annual Meeting

of the International Society of Electrochemistry, Bridging Scientific Disciplines to Address the World's Challenges, September 3rd–8th, Lyon, France, 2023.

#### **EH-16**

Vesna Cvetković, *Towards sustainable rare earth elements recovery* (Plenary Lecture), International conference XXIV YUCORR, Meeting Point of the Science and Practice in the Fields of Corrosion, Materials and Environmental Protection, 28th-3st May, Divčibare, Serbia, 2023.

#### **EH-17**

J. D. Lović, N. D. Nikolić, P. M. Živković, M. Stevanović, *Facile synthesis of Sn-Pd catalysts with high performances for ethanol electro-oxidation in alkaline medium*, 26th Congress of the Society of Chemists and Technologists of Macedonia (SCTM), 20–23 September, Ohrid, N. Makedonia, 2023.

#### **EH-18**

K. Joksimović, M. Lješević, B. Lončarević, A. Žerađanin, I. Kodranov, D. Randjelović, V. Beškoski, *Decolorization of azo dye through the utilization of microbial fuel cells connected in parallel configuration*, 23rd European Meeting on Environmental Chemistry, Budva, Montenegro, 3-6 December 2023.

### 3. Mikroelektronske tehnologije, nanotehnologije i senzori - (MET-HAHO)

#### **MET-NANO-1**

Teodora Vićentić, Immacolata Greco, Danica Bajuk-Bogdanović, Katarina Radulović, Igor Pašti, Carlo Saveiro Iorio, Marko Spasenović, *Laser-Induced Graphene on Sodium Alginate*, European Graphene Forum 2023, Albufeira, Portugal, 25-27 October 2023.

#### **MET-NANO-2**

Ivana O. Mladenović, Marija M. Vuksanović, Vladislav Jovanov, Željko Radovanović, Marko Obradov, Nebojša D. Nikolić, Dana G. Vasiljević-Radović, *Metal matrix composite coatings based on Ni matrix and biosilica fillers obtained from rice husks*, 33rd IEEE International Conference on Microelectronics, MIEL 2023, Niš, Serbia, 16-18 October 2023.

#### **MET-NANO-3**

Marko Obradov, Zoran Jakšić, Ivana Mladenović, Milena Rašljić Rafajilović, Dana Vasiljević Radović, *All-dielectric optical metasurfaces for sensing of substances with identical real parts of refractive index*, IX International School and Conference on Photonics, PHOTONICA 2023, Belgrade, Serbia, August 28 - September 01, 2023.

#### **MET-NANO-4**

Ivan Pešić, Dana Vasiljević Radović Sanja Ostojić, Milena Rašljić Rafajilović Vesna Radojević, Marija V. Pergal, *Preparation of MXene reinforced polymer nanocomposites*, 11th International Conference on radiation, natural sciences, medicine, engineering, echnology and ecology, RAD 2023, Herceg Novi, Montenegro, 19-23 June 2023.

#### **MET-NANO-5**

Marija V. Pergal, Jelena Brkljačić, Dana Vasiljević Radović, Miodrag M. Pergal, Ivan Pešić, Gordana Dević, Gordana Tovilović-Kovačević, *Characterization of polyurethane/ferrite nanocomposites*, Advanced Ceramic and Application Conference XI, Belgrade, Serbia, 18-20 September 2023.

#### **MET-NANO-6**

Marija V. Pergal, Jelena Brkljačić, Ivan Pešić, Gordana Dević, Biljana P. Dojčinović, Bratislav Antić, Gordana Tovilović-Kovačević, *Organic-inorganic nanocomposites for biomedical applications*, 11th International Conference on radiation, natural sciences, medicine, engineering, echnology and ecology, RAD 2023, Herceg Novi, Montenegro, 19-23 June 2023.

#### **MET-NANO-7**

Marija V. Pergal, Milena Rašljić-Rafajilović, Teodora Vićentić, Igor Pašti, Danica Bajuk-Bogdanović, Katarina





Radulović, Marko Spasenović, *Laser-induced graphene on PEO/PDMS composites*, Advanced Ceramic and Application Conference XI, Belgrade, Serbia, 18-20 September 2023.

### **MET-NANO-8**

Marija V. Pergal, Milena Rašljjić-Rafajilović, Teodora Vićentić, Ivana Mladenović, Sanja Ostojić, Marko Spasenović, *Structural and thermal properties of PDMS/Triton/laser-induced graphene composites*, Advanced Ceramic and Application Conference XI, Belgrade, Serbia, 18-20 September 2023.

### **MET-NANO-9**

Milena Rašljjić-Rafajilović, Teodora Vićentić, Marko Spasenović, Danica Bajuk-Bogdanović, Igor Pašti, Katarina Radulović, Marija V. Pergal, *Optimal laser parameters for laser induction of graphene on poly(dimethylsiloxane)-based materials*, 16th International Scientific Conference „Contemporary Materials“, Banja Luka, Bosnia and Hercegovina, 8-9 September 2023.

### **MET-NANO-10**

Milena Rašljjić Rafajilović, Marko Bošković, Milija Sarajlić, Ivana Mladenović, Ivan Pešić, Dana Vasiljević-Radović, Marija V. Pergal, *Photolithography-based Fabrication of Interdigitated Electrodes with Integrated Gold Microheater: Temperature Distribution Study*, 10th International Conference on Electrical, Electronic and Computing



Engineering, IcETRAN 2023, East Sarajevo, Bosnia and Hercegovina, 5-8 June 2023.

### **MET-NANO-11**

Ivana Jokić, Olga Jakšić, Miloš Frantlović, Zoran Jakšić, Katarina Radulović, *Refractive index change caused by biomolecular adsorption and structural transformations of adsorbed molecules in ultrasensitive plasmonic biosensors*, IX International School and Conference on Photonics, PHOTONICA 2023, Belgrade, Serbia, August 28 - September 01, 2023.

### **MET-NANO-12**

Dušan Nešić, *Application of conductive tapes and foils in textile electronics* (Invited paper), 10th International Conference on Electrical, Electronic and Computing Engineering, IcETRAN 2023, East Sarajevo, Bosnia and Hercegovina, 5-8 June 2023.

### **MET-NANO-13**

Sajam nauke, *Nova generacija bez baterije prenosni detektor disanja i vitalnih parametara*, Sajam nauke 2023.



#### 4. Kataliza i hemijsko inženjerstvo - KHI

##### **KHI-1**

H. Šalipur, M. Huš, A. Prašnikar, J. Dostanić, D. Lončarević, *Influence of butanol isomers on photocatalytic hydrogen production over Pt doped titanate catalyst*, EuropaCat 2023, 27.8.2023.-1.9.2023. Prag, Češka Republika.

##### **KHI-2**

Katarina S. Šučurović, Darko R. Jaćimovski, Mihal M. Đuriš, Zorana Lj. Arsenijević, Nevenka Bošković-Vragolović, *Mass transfer on rotating disk by adsorption and electrochemical methods*, Novel technologies and sustainable development", 20. i 21. oktobra 2023. Leskovac.

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Dalibor Marinković, Daliborka Nikolić, *Nonlinear Frequency Response analysis: The best scenario of forced periodic operations for methanol synthesis*, DFG Priority Program SPP 2080 „Catalysts and reactors under dynamic conditions for energy storage and conversion” Erlangen, Nemačka, 2023.

##### **KHI-4**

Gordana Stevanović, Nataša Jović-Jovičić\*, Sanja Marinović, Tihana Mudrinić, Zorica Mojović, Predrag Banković, Marija Ajduković, *Ciprofloxacin adsorption onto CO/chitosan-derived carbon/smectite nanocomposite obtained by the hydrothermal synthesis*, „Advanced Ceramic and Application Conference XI”, Beograd, 18-20 septembar 2023.

**KHI-5**

G. Stevanović, M. Ajduković, N. Jović-Jovičić, S. Marinović, B. Pantić, P. Banković, T. Mudrinić, *Co supported chitosan-derived carbon–smectite–catalyst for oxygen evolution reaction in simulated alkaline seawater solution*, „Advanced Ceramic and Application Conference XI”, Beograd, 18-20 septembar 2023.

**KHI-6**

Višnja Kosić, Nataša Božić, Biljana Dojnov, Gordana Stevanović, Predrag Banković, Zorica Knežević-Jugović, Aleksandra Milutinović-Nikolić, *Stable, environmentally friendly and inexpensive biocatalysts for obtaining important ingredients applicable in the food industry*, EuroFood Chem XXII Belgrade, Serbia, Jun 14-16, 2023.

**KHI-7**

Mihal M. Đuriš, Katarina S. Šućurović, Darko R. Jaćimovski, Tatjana S. Kaluđerović Radoičić, Zorana Lj. Arsenijević, *Material holdup in the fluidized bed dryer with inert particles*, Novel Technologies and Sustainable development, Leskovac, 20- 21. oktobar 2023.

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**KHI-9**

T. Novaković, D. Pjević, N. Abazović, Z. Mojović, *The influence of anion on properties of ion-exchange Cu-alumina*, Advanced Ceramics and Applications XI 2023, Belgrade, septembar 18 – 20, 2023.

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## 5. Biohemija i biotehnologije – BIO

### **BIO-1**

Marija Pavlović, Marinela Šokarda Slavić, Marina Ristović, Aleksandra Margetić, Sanja Stojanović, Miloš Momčilović, Zoran Vujčić, *Highly active endo-pectinase from Aspergillus tubingensis: A novel enzyme for fruit processing*, XXII Congress EuroFoodChem, Belgrade, Serbia, Jun-14-16, 2023.

### **BIO-2**

Aleksandra Margetić, Marinela Šokarda Slavić, Marina Ristović, Sanja Stojanović, Marija Pavlović, Zoran Vujčić, *Reusing biomass in textile dyes removing from wastewater*, EFB Biotechnology for a Circular Bioeconomy, online event, 28 - 29 mart 2023.

### **BIO-3**

Marinela Šokarda Slavić, Aleksandra Margetić, Biljana Dojnov, Miroslava Vujčić, Marina Ristović, Nataša Božić, Zoran Vujčić, *An innovative process for the production of bioethanol: Optimization and kinetic assessment*, 15th Meeting of the Slovenian Biochemical Society, Portorož, Slovenija, September 20–23, 2023.

### **BIO-4**

K. Joksimović, M. Lješević, B. Lončarević, K. Kasalica, N. Lugonja, J. Radulović, V. Beškoski, *Exploring the potential of plants for the degradation of perfluorooctanoic acid*, 23rd

European Meeting on Environmental Chemistry, Budva, Montenegro, 3-6 December 2023.

### **BIO-5**

Marina Ristović, Sanja Stojanović, Marija Pavlović, Aleksandra Margetić, Marinela Šokarda-Slavić, Zoran Vujčić, Biljana Dojnov, *Highly active xylanase used in juice clarification*, XXII Congress EuroFoodChem, Belgrade, Serbia, Jun-14-16, 2023.

### **BIO-6**

Sanja Stojanović, Aleksandra Margetić, Marinela Šokarda-Slavić, Nataša Božić, Zoran Vujčić, Biljana Dojnov, *Obtaining of FOS by controlled hydrolysis of inulin with Aspergillus welwitschiae FAW1 endoinulinase*, XXII Congress EuroFoodChem, Belgrade, Serbia, Jun-14-16, 2023.

### **BIO-7**

Nikoleta Lugonja, Dalibor Stanković, Vesna Marinković, Jelena Avdalović, Snežana Spasić, Miroslav Vrvic, *Every drop counts–The current methods for determining the quality of human milk*, 14th European Nutrition Conference, FENS 2023, Beograd, 2023.

### **BIO-8**

Sonja Grubišić, *Parametrization and validation of an accurate force-field for molecular dynamics simulations of bimolecular systems*, Contributed Talk COST CA21169 DYNALIFE CONFERENCE MAY 2-4, 2023.

**BIO-9**

Nemanja Aksic and Uros Andjelkovic, *Identification of proteins shed from the surface of Caco-2 cells by cysteine protease actinidin: comparison of two MS based-proteomic techniques*, 15th Mass Spectrometry School in Biotechnology and Medicine, 2-8 July 2023, Dubrovnik, Croatia.







## 6. Materijali i hemijske tehnologije – MAT

### **MAT-1**

Olga J. Pantić, Vesna V. Panić, Maja D. Marković, Pavle M. Spasojević, Sanja I. Savić, Melina T. Kalagasidis Krušić, *Composite materials prepared from waste eggshells and biobased unsaturated polyester resin*, 59th Meeting of the Serbian Chemical Society, Novi Sad, Serbia, 2023.

### **MAT-2**

Sanja Savić, Vesna Panić, Pavle Spasojević, Olga Pantić, Maja Marković, Filipa A. Vicente, Uroš Novak, Blaž Likozar, *Perspectives of deep eutectic solvents for extraction of pectin from waste apple pomace*, 29th Polychar World Forum on Advanced materials 2023, Nice, France, September 25th-29th, 2023.

### **MAT-3**

Katarina R. Pantović Spajić, Marijana R. Pantović Pavlović, Katarina Đ. Božić, Đorđe V. Gjumišev, Vladimir V. Panić, Miroslav M. Pavlović, Ksenija Stojanović, *Study of the effects of active bromine species presence in electrolytic desulfurization of subbituminous coal*, "8th International Congress "Engineering, Environment and Materials in Process Industry" - EEM2023, Jahorina Mountain, Bosnia and Herzegovina, March 20th - 23rd 2023.

**MAT-4**

Sandra S. Bulatović, Tamara T. Tadić, Bojana M. Marković, Aleksandra B. Nastasović, Mila V. Ilić, Natalija Ž. Nedić, *Sorpcija lindana iz vode pomoću makroporoznog kopolimera na bazi glicidilmetakrilata*, 59. Savetovanje Srpskog hemijskog društva, Novi Sad, 01.06.2023.

**MAT-5**

Jovanka Pejić, Bojana Radojković, Anđela Simović, Dunja Marunkić, Bore Jegdić, Miroslav Pavlović, Jelena Bajat, *Green Corrosion Inhibitors with Cysteine and Cerium-Cysteine Complex on 7000 series Aluminum Alloy*, XXIII YuCorr, Divčibare, Serbia, 16-19 May 2022.

**MAT-6**

Aleksandar Grujić, Vladan Čosović, Jasna Stajić-Trošić, Aleksandar Čosović, Mirko Stijepović, Tomaš Žak, *Fabrication of NiFe<sub>2</sub>O<sub>4</sub> Nanofibers/Net Via Comined Sol-Gel and Electrospinning Method*, Conference on Electron Microscopy of Nanostructures ELMINA 2022, Belgrade, Serbia, August 22nd 2022 – August 26th 2022.

**MAT-7**

Lana Putić, Jasna Stajić-Trošić, Branka Pilić, Aleksandar Čosović, Aleksandar Grujić, *Characterization of composite polymer membranes modified by electrospinning method*, Conference on Electron Microscopy of Nanostructures ELMINA 2022, Belgrade, Serbia, August 22nd 2022 – August 26th 2022.

## 7. Zaštita životne sredine i geochemija (EKO-GEO)

### **EKO-GEO – 1**

Danijela Vidaković, Zlatko Levkov, Jelena Krizmanić, Bank Beszteri, Bojan Gavrilović, Miloš Ćirić, *Metabarcoding and morphological data of Mayamaea species from soda pans in Serbia*, 14th European Diatom Meeting, Meise, Belgium, 9-11 May 2023.

### **EKO-GEO – 2**

Katarina Antić, Milena Stošić, Jelena Radonić, Tatjana Šolević Knudsen, *Phytotoxicity of endocrine disrupters Nonylphenol and Bisphenol A in Pelargonium Zonale*, 22nd European Meeting on Environmental Chemistry, Ljubljana, Slovenia, 5-8 December 2022.

### **EKO-GEO – 3**

Vladimir Petrović, Miroљjub Milinčić, Radoje Banković, Stevan Radojčić, Mirko Borisov, *Using new technology in geographical research of water resources in Republic of Serbia*, Fifth International Geography Education Congress (UCEK-2023), Antalya, Turkey 5 – 8 October 2023.

### **EKO-GEO – 4**

T. Tadić, B Marković, V Pavlović, S Bulatović, A Nastasović, A Onjia, *Synthesis and characterization of magnetic molecularly imprinted polymer for aniline recognition*, 26th Congress of Society of Chemists and Technologists of Macedonia SCTM, Ohrid, N. Macedonia, 20 – 23 September 2023.

**EKO–GEO – 5**

N. Lugonja, S Spasić, S Miletić, J Avdalović, A Žerađanin, M Ilić, VB Beškoski, *Bioremedijacija kao tehnologija budućnosti održivog razvoja*, 9. Simpozijum Hemija i zaštita životne sredine „ENVIROCHEM2023”, Kladovo, od 4 - 7. Jun 2023.

**EKO–GEO – 6**

Sanja Sakan, Aleksandra Mihajlidi Zelić, Igor Kodranov, Dragana Đorđević, *Assessment of the status of river sediments at the StaraPlaninaMt. in the zone affected by wildfire*, Final WG4 Meeting "Water and fire", COST Action 18135 FireLinks, Niš, Serbia, 31 May – 2 June 2023.

**EKO–GEO – 7**

Aleksandra Mihajlidi Zelić, Sanja Sakan, Igor Kodranov, Ljubiša Ignjatović, Dragana Đorđević, *The quality of river water in the area of Stara Planina Mt. affected by the wildfire*, Final WG4 Meeting "Water and fire", COST Action 18135 FireLinks, Niš, Serbia, 31 May – 2 June 2023.

**EKO–GEO – 8**

Vukašin Rončević, Nikola Živanović, John H. van Boxel, Thomas Iserloh, Snežana Štrbac, *Dripping rainfall simulators performance for soil research*, 2nd Rainfall Simulator Workshop, Towards harmonization in the use of rainfall simulators, Coimbra, Portugal, 22-24 May 2023.

**EKO-GEO – 9**

S. Stojadinović, M Kašanin-Grubin, S Štrbac, G Veselinović, N Antić, C Ferreira, B Jovančičević, *Organic geochemical characterization of the coastal sediments of the Sava River and the wetlands of Obrenovac Zabran (Serbia)*, 9. Simpozijum Hemija i zaštita životne sredine „ENVIROCHEM2023”, Kladovo, od 4-7. Jun 2023.

**EKO-GEO – 10**

K. Joksimović, M Lješević, B Lončarević, A Žerađanin, I Kodranov, D Randjelović, V Beškoski, *Decolorization of azo dye through the utilization of microbial fuel cells connected in parallel configuration*, 23rd European Meeting on Environmental Chemistry, Budva – Montenegro, 3-6 December 2023.

**EKO-GEO – 11**

K. Joksimović, M Lješević, B Lončarević, K Kasalica, N Lugonja, J Radulović, V Beškoski, *Exploring the potential of plants for the degradation of perfluorooctanoic acid*, 23rd European Meeting on Environmental Chemistry, Budva – Montenegro, 3-6 December 2023.

**EKO-GEO – 12**

Nevena Antić, Milica Kašanin-Grubin, Laszlo Bertalan, Violeta Gajić, Lazar Kaluđerović, Nevenka Mijatović and Branimir Jovančičević, *How bad volcano clastic badlands actually are?*, 23rd European Meeting on Environmental Chemistry, Budva – Montenegro, 3-6 December 2023.

**EKO-GEO – 13**

I. Trajković, M. Sentić, A. Miletić, A. Onjia, *The potential ecological risk assessment of heavy metals in an urban shallow lake*, 26th Congress of Society of Chemists and Technologists of Macedonia SCTM, Ohrid, N. Macedonia, 20 – 23 September 2023.

**EKO-GEO – 14**

I. Trajković, M. Sentić, I. Deršek-Timotić, S. Cvetković, Z. Stojanović, A. Onjia, *Polycyclic aromatic hydrocarbons in dry herbs: source identification, quantification, and health risk assessment*, 26th Congress of Society of Chemists and Technologists of Macedonia SCTM, Ohrid, N. Macedonia, 20 – 23 September 2023.

**EKO-GEO-15**

Željka Milovanović, Slavica Lazarević, Ivona Janković-Častvan, Željko Radovanović, Slobodan Cvetković, Đorđe Janačković, Rada Petrović, *Preparation and characterization of sepiolite/ZrO<sub>2</sub> composites for phosphate removal from aqueous solutions*, 7th Conference of the Serbian Society for Ceramic Materials, 14-16-jun, Beograd

### Nagrađeni posteri – N

Poglavlje predstavlja postere nagrađene na konferencijama održanim tokom 2023. godine.

#### **N-1**

Gordana Stevanović, Nataša Jović-Jovičić, Jugoslav Krstić, Sanja Marinović, Predrag Banković, Marija Ajduković, *Evaluation of cobalt supported chitosan-derived carbon-smectite catalysts in Oxone® induced dye degradation*, „Advanced Ceramic and Application Conference XI”, Beograd, 18-20 septembar 2023

#### **N-2**

Sanja Marinović, Tihana Mudrinić, Marija Ajduković, Nataša Jović-Jovičić, Gordana Stevanović, Predrag Banković, Tatjana Novaković, *Simultaneous degradation of two textile dyes Orange G and Basic blue 41*, „Advanced Ceramic and Application Conference XI”, Beograd, 18-20 septembar 2023

#### **N-3**

Danica Savić, Gordana Krstić, Milka Jadranin, Miroslav Novaković, Stefan Lekić, Vele Tešević, Slobodan Milosavljević, *Tigliane diterpenes isolated from the latex of Euphorbia Lucida*, 5th International Conference on Natural Product Utilization: from Plants to Pharmacy Shelf, Varn, Bugarska, 30. maj - 2. jun 2023.

**N-4**

Ivan Pešić, Milena Rašljic Rafajilović, Dana Vasiljević Radović, Sanja Ostojić, Miloš Petrović, Vesna Radojević, Marija V. Pergal, *Optimization of reaction parameters for preparation of MXene based polymer nanocomposites*, 10th International Conference on Electrical, Electronic and Computing Engineering, IcETRAN 2023, East Sarajevo, Bosnia and Hercegovina, 5-8 June 2023.

**N-5**

Ivan Pešić, Sanja Ostojić, Dana Vasiljević Radović, Miloš Petrović, Vesna Radojević, Marija V. Pergal, *Impact of the synthesis parameters on the properties of polymer MXene/nanocomposites*, Advanced Ceramic and Application Conference XI, Belgrade, Serbia, 18-20 September 2023.

**N-6**

Ivana Jokić, Olga Jakšić, Miloš Frantlović, Zoran Jakšić, Koushik Guha, *Adsorption-based Microsensors for Protein Detection: Influence of Protein Structural Transformations and Adsorption-induced Depletion of the Analyzed Sample on the Sensor Noise*, 10th International Conference on Microelectronics Circuits and Systems, Micro2023, Guwahati, Assam, India, 1-3 July 2023

**N-7**

Aleksandra A. Rakić, M. Minić, Petar Stanić, Goran V. Janjić, *Crystallographic and quantum-chemical analysis of DMSO*



*coordination to platinum*, 28th Conference of the Serbian Crystallographic Society, Čačak, Serbia, June 14–15th, 2023

## N-8

Aleksandra A. Rakić, Tamara D. Lazarević-Pašti, Slavica Porobić, Đurica Katnić, Marija Kojić, Goran V. Janjić, *Synergy between experimental and molecular docking for identifying natural therapeutic compounds against Alzheimer's disease*, STED 2023, XII International Conference on Social and Technological Development, Trebinje, Republic of Srpska, B&H, June 15–18th, 2023

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Posterska sekcija Projekti - PROJ

**PROJ-1**

BIOLAWEB - „Boosting Institute of Chemistry Technology and Metallurgy in Water Biomonitoring“

HORIZON Coordination and Support Actions (HORIZON - CSA), project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement No 1010792

Dr Miloš Ćirić

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**PROJ-2**

Razvoj novog održivog procesa recikliranja Dy iz permanentnih NdFeB magnetna

Međunarodni bilateralni projekat između Republike Srbije i Savezne Republike Nemačke-DAAD

Dr Vesna S. Cvetković

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**PROJ-3**

Fitoremedijacija za in situ tretman poljoprivrednog zemljišta i površinskih voda zagađenih per- i polifluoro alkil jedinjenjima – istraživanje na PFOS i PFOA kao model jedinjenjima: PhytoPFAS

Projekat finansira Fond za nauku Republike Srbije kroz Zeleni program saradnje nauke i privrede (#6684)

prof. dr Vladimir Beškoski i dr Marija Lješević

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#### **PROJ-4**

From Biowaste to Biocosmetics

EU za zelenu agendu u Srbiji

Dr Natasa Jović Jovičić

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#### **PROJ-5**

Jedinstvena enzimaska rešenja za dobijanje proizvoda dodatne vrednosti iz kukuruza: UniCorn

PRIZMA, Fond za nauku RS, 01.12.2023.-01.12.2026.

dr Biljana Dojnov, naučni savetnik

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