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UNIVERSITY OF SPLIT
**FACULTY OF CHEMISTRY AND
TECHNOLOGY**

3RD ZORH CONFERENCE

SPLIT, APRIL, 28TH - 29TH, 2022

Program



**Fakulta materiálov,
metalurgie a recyklácie**



3rd ZORH CONFERENCE PROGRAM

WEDNESDAY / April 27th, 2022	
18:00 - 19:00	REGISTRATION OF PARTICIPANTS Next to amphitheatre A02, Faculty of Chemistry and Technology, Ruđera Boškovića 35

THURSDAY / April 28th, 2022	
08:30 - 09:00	REGISTRATION OF PARTICIPANTS Next to amphitheatre A02
09:00 - 09:30	Conference opening (in amphitheatre A02, Faculty of Chemistry and Technology, Ruđera Boškovića 35)
Plenary lecture	
9:30 - 10:15	Igor Jerković – <i>Selected methods for green extraction of phytochemicals</i>
10:15 - 10:45	COFFEE BREAK
Section A (moderator: Ante Matošin)	
10:45 – 11:00	Maroš Halama , Peter Slovenský, Michal Petřík, Ladislav Falát, Lucia Ćiripová – <i>Degradation of materials in green technologies. Hydrogen embrittlement of X60, X70 steel</i>
11:00 - 11:15	Marek Minich , Martina Repková, Lucie Báborská – <i>Application of pressure-driven membrane processes for direct urban wastewater reuse</i>
11:15 - 11:30	Petra Přibilová , Martina Repková – <i>Anxiety drugs in the environment and their removal by a conventional and root-zone wastewater treatment plant</i>
11:30 - 11:45	Petra Procházková , Helena Zlámalová Gargošová – <i>Impact of polyhydroxybutyrate microparticles on aquatic organism ‘Daphnia Magna’</i>
11:45 - 12:00	Jan Fućik , Tereza Tulková, Zdeňka Kozáková, Ludmila Mravcová, - <i>Degradation of sulfamethoxazole by non-thermal plasma discharge</i>
12:00 - 12:15	Ivana Románeková , Jiří Kućerík – <i>Analysis of bioplastics in sewage sludge</i>
12:15 - 12:30	Marijana Bubalo , Ivana Šumelj – <i>Experiences in the work of the wastewater treatment plant in Ljubuški</i>
12:30 - 12:45	Ajla Mandalović , Mediha Biberović – <i>Removal of lead ions from contaminated aqueous solution using bentonite</i>
12:45 – 15:00	Lunch
Section B (moderator: Jelena Sedlar)	
15:00 - 15:30	David C. Magri – <i>Applications of Pourbaix sensors: molecular logic gates for acidity and oxidisability</i>

15:30 – 15:45	Naia Martínez López - <i>Marine phanerogams and their relationship with climate change</i>
15:45 – 16:00	Danijela Marić, Sanja Tipurić-Spužević, Leonardo Pavlović – <i>Exponential function modelling in environmental protection</i>
16:00 – 16:15	Leonardo Pavlović, Sanja Tipurić-Spužević, Danijela Marić – <i>Linear function modelling in environmental protection</i>
16:15 – 16:30	Duje Donadić, Mario Podrug, Antonela Matijaš, Maja Firić, Ivan Plenković – <i>Composition and quantity of medical waste and its impact on the environment before and during the COVID-19 pandemic</i>
16:30 – 16:45	Edina Ibrić, Ajla Mandalović, Mediha Biberović, Elma Zehić, Haris Glušac, Zehrudin Osmanović – <i>Bioremediation of areas devastated by municipal and industrial waste</i>
16:45 – 17:00	Matea Matić, Ivana Smoljko - <i>Assessment of the life cycle of municipal solid waste management systems: A case study of the city of Dubrovnik</i>
17:00 – 17:15	Eliška Kameníková, Jakub Fojt, Martin Brtnický, Jiří Kučerík – <i>Fate of PET microplastics in soil</i>
17:15 - 18:15	POSTER SECTION + coffee break
18:15 – 18:45	Faculty Tour
21:00	Karaoke show

FRIDAY / April 29th, 2022

Section C (moderator: Petra Brajković)

9:15 – 9:45	Robert Vianello – <i>Green, Greener, In Silico! The role of computational methods in chemistry and biochemistry</i>
9:45 - 10:00	Elena Gherasimov-Cerbusca, Aurica Precupaş, Ancuţa Sofronie, Vlad T. Popa, Andrei Rotaru – <i>Thermal, calorimetric and computational study of some widely used commercial azo dyes</i>
10:00 – 10:15	Ivana Drventić, Iva Šimić, Ana Kroflič, Urša Skube, Marjan Bele, Ivana Jakovljević, Zdravka Sever Štrukil, Ranka Godec – <i>Polycyclic aromatic hydrocarbons in particle fractions (PM₁₀, PM_{2.5} and PM₁) – Monitoring study</i>
10:15 - 10:30	Ranka Godec, Iva Šimić, Martina Šilović Hujčić, Martin Mihaljević – <i>Monitoring of carbon mass concentrations in PM_{2.5} at Plitvice Lakes National Park</i>
10:30 - 11:00	COFFEE BREAK
11:00 – 11:15	Ana Romana Armanda, Krešimir Roguljić, Darija Lemić, Helena Virić Gašparić, Gabriela Bartulin, Mario Bjeliš – <i>Ecologically acceptable methods for the control of Box tree moth 'Cydalis Perspectalis'</i>
11:15 - 11:30	Luka Alešković, Mirko Marušić – <i>Noise and light pollution in the area of the city of Split – Current state and vision of the future</i>

11:30 - 11:45	Marija Stojanović , Nediljka Vukojević Medvidović, Ladislav Vrsalović, Sandra Svilović – <i>Influence of electrode distance on compost leachate treatment using hybrid electrocoagulation and natural zeolite</i>
11:45 – 12:00	Josipa Šarić , Ladislav Vrsalović, Nediljka Vukojević Medvidović, Sandra Svilović – <i>Waste metals application as an anode material in the treatment of compost leachate</i>
12:00– 14:30	Lunch
12:00 - 13:30	ROUND TABLE (closed section for invited industry representatives) - Faculty hall
Section D (moderator: Verena Šučurović)	
14:30 - 15:00	Silvija Petković , Aleksandra Anić-Vučinić – <i>Implementation of circular economy in waste solvents recovery</i>
15:00 - 15:15	Mile Matijević , Biljana Rađenović Kozić, Marija Knežević - <i>Ecological and tourist potentials of the Una National Park, on the border of Bosnia and Herzegovina and Croatia</i>
15:15 – 15:30	Vilim Boroša - <i>CRISPR technology and Cupriavidus metallidurans as the future of environmental sustainability</i>
Section E (moderator: Leonardo Pavlović)	
15:30 – 15:45	Kristína Zgodavová, Kristina Lengyelova, Lenka Girmanová, Pavol Palfy, Marek Šolc (Presented by Maroš Halama) – <i>Benchmarking for e-Learning quality assurance: Green Pathway Approach in VET course</i>
15:45 – 16:00	Farzet Bikić – <i>Launching the new journal in the field of environmental protection</i>
16:00 – 16:15	Nikolina Pervan – <i>Experiences while working in Plantics B.V.</i>
16:15 – 16:30	Anita Štrkalj – <i>Association for the promotion of the holistic approach to the environment (Online)</i>
16:30 – 16:45	Zvonimir Jukić , Katarina Bunoza, Tina Slatina – <i>UniCompoST - Development of devices that combine biowaste treatment and indoor gardening</i>
16:45 – 17:00	Conference closing

Poster section

P1. Zvonimir Jukić, Katarina Bunoza, Tina Slatina – *UniCompoST - Development of devices which combine biowaste treatment and indoor gardening*

P2. Marija Grgičević, Jelena Jakić, Miroslav Labor, Vanja Martinac – *Disposal of sea bittern through further technological treatment*

P3. Kristina Šimić, Zoran Grubač – *Electrocatalytic activity of nickel for hydrogen evolution reaction*

P4. Maja Donkov, Luciana Brstilo – *Green Faculty library*

P5. Marija Kvesić, Morena Galešić Divić, Mak Kišević, Toni Kekez, Marin Miletić, Roko Andričević - *Integration of multi-parameter and multi-modal systems in water quality monitoring*

P6. Ena Dadić, Ana Terzić, Nediljka Vukojević Medvidović – *Assessment of water footprint component based on students' consumer habits*

P7. Bruno Raguz – *Lessons from the past: Ideas on disposal and use of waste from 70's and 80's of the last century*

P8. Martina Trtinjak, Ivana Stojmilović, Marija Vuković Domanovac – *Biostimulation of microorganisms for the wastewater treatment*

P9. Iva Polonji, Ivana Stojmilović, Monika Šabić Runjavec, Marija Vuković Domanovac – *Microorganisms as a tool for remediation of soil contaminated with herbicides*

P10. Dejana Kasapović – *Application of raspberry fruit (*Rubus idaeus* L.) extract as green corrosion inhibitor for brass in 3% NaCl medium*

P11. Mladen Bugarčić, Gvozden Jovanović, Nela Petronijević, Branislav Marković, Srećko Stopić, Bernd Friedrich, Miroslav Sokić – *Approach on recycling of printed circuit boards (PCB) via hydrometallurgical procedures: Principle and methodology*

P12. Aleksandar Jovanović, Mladen Bugarčić, Natalija Čutović, Jovana Bošnjaković, Nataša Knežević, Aleksandar Marinković – *Modification of titanium-dioxide surface with silver(I)-oxide as a catalyst for photocatalytic degradation of fungicide*

P13. Patricia Topić, Maša Buljac – *Influence of digestate from a biogas plant on chemical characteristics of soil*

P14. Ivana Martinović, Dijana Bošnjak, Kristina Drmić, Patricija Milićević– *Eco-friendly corrosion inhibitors from expired pharmaceuticals*

P15. Anja Antanasković, Zorica Lopčić, Tatjana Šoštarić, Vladimir Adamović, Jelena Milojković, Marina Orlić, Milan Milivojević - *From Waste to Eco Materials – the Application of Sour Cherry Stone Sorbents in Heavy Metal Removal*

P16. Lorena Valek, Katarina Stipković, Kristina Bule, Martina Miloloža, Viktorija Prevarić, Matija Cvetnić, Marinko Markić, Tomislav Bolanča, Dajana Kučić Grgić, Šime Ukić – *Pre-treatment of PVC microplastics by advanced oxidation processes*

P17. Marija Kuštro, Dubravka Tavra, Kristina Bule, Martina Miloloža, Viktorija Prevarić, Matija Cvetnić, Šime Ukić, Tomislav Bolanča, Marinko Markić, Dajana Kučić Grgić – *Biodegradation of PVC and PS microplastic using yeast 'Candida parapsilosis' isolated from the environment*

P18. Iva Šimić, Ranka Godec, Ivana Jakovljević, Zdravka Sever Štrukil – *Presence of polycyclic aromatic hydrocarbons in PM1 particle fraction*

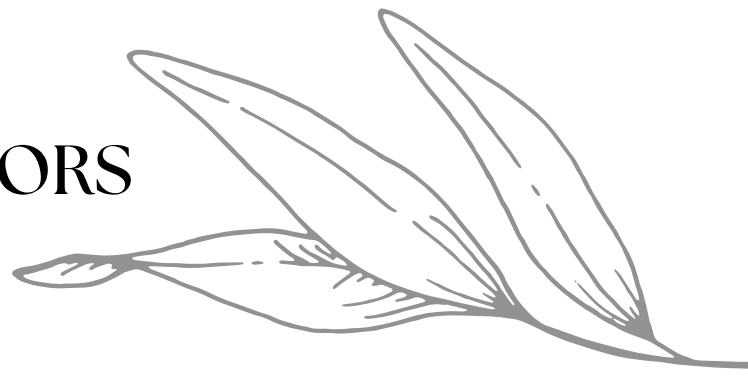
P19. Ivana Čulić, Ana Kovačić, Tina Kosjek, David Heath, Ester Heath – *Aerobic biodegradation of TMBPF with activated sludge: Kinetics*

P20. Marika Puškarić, Martina Miloloža, Dajana Kučić Grgić – *Bioremediation of water contaminated with PVC microplastic particles by use of bacterial culture 'Pseudomonas alcaligenes'*

P21. Anica Skelin, Ivona Nuić – *Treatment of wastewater polluted by heavy metals using biosorbents*

- P22. Mediha Biberović**, Edina Ibrić, Elma Zehić, Ajla Mandalović, Haris Glušac, Belmin Poljić, Amina Ahmić, Zehrudin Osmanović – *Composite materials based on Portland cement with the addition of sheep's wool, wood (Paulownia) and glass*
- P23. Matej Viljevac**, Ana-Marija Pitner, Aleksandra Brenko, Stefani Tonković, Anamarija Pulitika, Josipa Papac, Marin Kovačić, Ana Lončarić Božić – *Adsorption of pesticides on UV-aged microplastics: Mechanism and toxicity evaluation*
- P24. Irena Forgić**, Marija Mioč – *Wastewater treatment plant at Rijeka refinery*
- P25. Barbara Novosel** – *Preparation and blending of biofuels in Rijeka refinery*
- P26. Marija Mioč**, Irena Forgić – *Treatment of used catalyst in refinery processes*
- P27. Mira Brnić**, Petra Čerdić – *Air quality in Rijeka refinery*
- P28. Kristina Knezović**, Mirna Vujnović – *Fluid catalytic cracking: Compliance with environmental requirements*
- P29. Magdy Lučić Lavčević**, Luka Gujinović – *Nanostructures for photocatalytic water treatment*
- P30. Katarina Duić**, Minea Pranjić, Kristina Tolić Čop, Dragana Mutavdžić Pavlović – *Determination of sorption affinity of Imatinib for TiO₂ immobilized photocatalysts*
- P31. Luka Gujinović**, Magdy Lučić Lavčević – *Morphology of hierarchical ZnO flower-like structures obtained by green synthesis*
- P32. Milena Czeszejko**, Emilia Iłowska – *Self-assembly antimicrobial peptides: Small step in environmental protection*
- P33. Filippo Parisi**, Luciana Sciascia, Davide Lenaz – *Kinetic and equilibrium studies for the adsorption of metal ions and organic compounds onto montmorillonite*
- P34. Nikolina Krišto**, Senka Gudić – *Determination of heavy metal ion concentration by electrochemical methods*

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