



# 2<sup>nd</sup> Young Scientists Days - Conference

## Conference Programme PROGRAM SKUPA

23<sup>rd</sup> - 24<sup>th</sup> May 2019

Department of Biology Osijek  
Department of Chemistry Osijek



$$E = mc^2$$



### ORGANIZERS:

Josip Juraj Strossmayer University of Osijek • Department of Biology Osijek • Department of Chemistry Osijek •  
Department of Physics Osijek • Faculty of Food Technology Osijek • Faculty of Medicine Osijek •  
Faculty of Agrobiotechnical Sciences Osijek

## 2<sup>nd</sup> Young Scientists Days –Young Scientists Conference, Osijek

### Organizing Committee *Organizacijski odbor*

Josip Juraj Strossmayer University of Osijek  
Department of Biology  
Department of Chemistry

Tanja Žuna Pfeiffer (Department of Biology) – President  
Jelena Bijelić (Department of Chemistry) – President  
Anamarija Stanković (Department of Chemistry)  
Silvija Šafranko (Faculty of Food Technology Osijek)  
Tatjana Šafarik (Department of Chemistry)  
Igor Derd (Department of Chemistry)  
Ivna Štolfa Čamagajevac (Department of Biology)  
Mirna Velki (Department of Biology)  
Dubravka Špoljarić Maronić (Department of Biology)  
Anita Galir Balkić (Department of Biology)  
Stela Jokić (Faculty of Food Technology Osijek)  
Kristina Selthofer-Relatić (Faculty of Medicine Osijek)  
Zvonko Antunović (Faculty of Agrobiotechnical Sciences  
Osijek)  
Igor Lukačević (Department of Physics Osijek)

### Honorary Committee *Počasni odbor*

Vlado Guberac (Josip Juraj Strossmayer University of Osijek)  
Dražan Kozak (Josip Juraj Strossmayer University of Osijek)  
Sonja Vila (Josip Juraj Strossmayer University of Osijek)  
Drago Šubarić (Josip Juraj Strossmayer University of Osijek)  
Robert Raponja (Josip Juraj Strossmayer University of Osijek)  
Ljiljana Krstin (Department of Biology)  
Berislav Marković (Department of Chemistry)  
Jurislav Babić (Faculty of Food Technology Osijek)  
Krunoslav Zmaić (Faculty of Agrobiotechnical Sciences  
Osijek)  
Vanja Radolić (Department of Physics Osijek)  
Jure Mirat (Faculty of Medicine Osijek)

### Published by / *Izdavači*

Josip Juraj Strossmayer University of Osijek  
Department of Biology  
Department of Chemistry  
Faculty of Food Technology Osijek

### Editors / *Urednici*

Anamarija Stanković, Silvija Šafranko, Ivna Štolfa  
Čamagajevac, Tanja Žuna Pfeiffer, Tihomir Živić

### Supporting Publications / *Podupirući časopisi*

Chemistry in Industry / *Kemija u industriji*  
Croatica Chemica Acta  
Croatian Journal of Food Science and Technology

### Scientific Committee *Znanstveni odbor*

Martina Medvidović-Kosanović  
(Department of Chemistry)  
Martina Šrajer Gajdošik (Department of  
Chemistry)  
Tomislav Balić (Department of Chemistry)  
Elvira Kovač-Andrić (Department of  
Chemistry)  
Rosemary Vuković (Department of  
Biology)  
Zorana Katanić (Department of Biology)  
Mirta Sudarić Bogojević (Department of  
Biology)  
Lidija Begović (Department of Biology)

### Proofreading / *Lektoriranje*

Tihomir Živić

### Design and Layout / *Grafička priprema*

Silvija Šafranko

---

**2<sup>nd</sup> Young Scientists Days – Young Scientists Conference**

2. Dani mladih istraživača – Skup mladih znanstvenika

May 23<sup>rd</sup> and 24<sup>th</sup> 2019, Osijek, Croatia

23. i 24. svibnja 2019., Osijek, Hrvatska

---

**Conference Programme / Program Skupa**

---

**Thursday, 23<sup>rd</sup> May 2019 / Četvrtak, 23. svibnja 2019.**

**09:00 – 10:00**

**Registration of participants**

*Prijava i registracija sudionika*

**10:00 – 11:00**

**Opening ceremony**

*Svečano otvaranje*

**11:00 – 12:00**

**Oral presentations / Usmena izlaganja**

Moderators / *Moderatori:*

Igor Đerđ, Kristina Selthofer-Relatić, Zvonko Antunović

11:00 – 11:15

**The Consumption of the Omega-3-Enriched Eggs Reduces an Oxidative Stress in Granulocytes of the Healthy Male Participants**

*Konsumacija jaja obogaćenih omega-3 masnim kiselinama smanjuje oksidativni stres u granulocitima zdravih muških ispitanika*

Nikolina Kolobarić, M. Mihalj, A. Matić, A. Stupin, L. Barić, Z. Kralik, G. Kralik, I. Drenjančević

11:15 – 11:30

**The Prevalence and Risk Factors for Peer Violence among Adolescents**

*Učestalost i rizični čimbenici za pojavu međuvršnjačkog nasilja u populaciji adolescenata*

Terezija Berlančić, I. Miškulin

11:30 – 11:45

**A Synthesis of Coumarin Derivatives via Knoevenagel Condensation in Green Solvents**

*Sinteza derivata kumarina Knoevenagelovom kondenzacijom u zelenim otapalima*

Melita Lončarić, M. Molnar

11:45 – 12:00 **The Advantages of Lime Application on Acid Soils**

*Prednosti kalcizacije kiselih tala*

Dario Iljkić, M. Rastija, V. Kovačević

12:00 – 13:00

**Lunch Break**

*Pauza za ručak*

13:00 – 14:00

**Oral presentations / Usmena izlaganja**

Moderators / Moderatori:

Dubravka Špoljarić Maronić, Martina Šrajcer Gajdošik,  
Silvija Šafranko

13:00 – 13:15

**The Increase of Selenium Content in Eggs by the Usage of Biofortified Maize in Hen Mixtures**

*Povećanje sadržaja selena u jajima korištenjem biofortificiranog kukuruza u hrani kokoši*

Bojana Ljuboja, Z. Kralik

13:15 – 13:30

**The Influence of Processing Parameters on the Retention of Aroma Compounds during Wine Concentration by a Reverse Osmosis and Nanofiltration**

*Utjecaj procesnih parametara na zadržavanje spojeva arome tijekom koncentriranja vina reverznom osmozom i nanofiltracijom*

Ivana Ivić, A. Pichler

13:30 – 13:45

**The Application of Low-Cost Sensor Systems in Lemna Toxicity Tests**

*Primjena niskobudžetnih senzorskih sustava u Lemna-testu*

Tamara Đerd, V. Peršić, D. K. Hackenberger, B. K. Hackenberger

13:45 – 14:00

**The Use of Injectable Biphasic Calcium Phosphate in a Guided Bone Regeneration: A study Plan and Preliminary Results**

*Uporaba injekcijskog bifaznog kalcijeva fosfata u vođenoj regeneraciji kosti: plan studije i preliminarni rezultati*

Marija Pejakić, Ž. Perić Kačarević, M. Matijević

14:00 – 14:30

**Coffee Break**

*Pauza za kavu*

14:30 – 15:30

**Oral presentations / Usmena izlaganja**

Moderators / *Moderatori:*

Anamarija Stanković, Lidija Begović, Mirna Velki

14:30 – 14:45

**Efflux Pump Activity in Enchytraeidae**

*Aktivnost efluks-pumpe enhitreida*

Marija Kovačević, D. K. Hackenberger, Ž. Lončarić, B. K. Hackenberger

14:45 – 15:00

**The Barcoding of the Croatian Mosquito Fauna**

*Barkodiranje faune komaraca Hrvatske*

Nataša Graovac, B. Bruvo Madarić, A. Klobučar, N. Landeka, T. Žitko, E. Merdić, M. Kučinić

15:00 – 15:15

**The Influence of Selection on the Traits of the Carniolan Honey Bee (*Apis mellifera carnica*) in Croatia**

*Utjecaj selekcije na osobine sive medonosne pčele (*Apis mellifera carnica*) na području Hrvatske*

Marin Kovačić, Z. Puškadija, R. Büchler

15:15 – 15:30

**The Interaction of Fullerenol C<sub>60</sub>(OH)<sub>24</sub> Nanoparticles with the Aflatoxigenic Foodborne Fungi**

*Interakcija nanočestica fulerenola C<sub>60</sub>(OH)<sub>24</sub> s aflatoksikogenom plijesni prisutnom u hrani*

Tihomir Kovač, I. Borišev, A. Lončarić, C. N. Ezekiel, M. Sulyok, R. Krska, B. Šarkanj

15:30 – 15:45

**Discussion and conclusions**

*Rasprava i zaključci*

---

## 2<sup>nd</sup> Young Scientists Days – Young Scientists Conference

2. Dani mladih istraživača – Skup mladih znanstvenika

May 23<sup>rd</sup> and 24<sup>th</sup> 2019, Osijek, Croatia

23. i 24. svibnja 2019., Osijek, Hrvatska

---

### Conference Programme / Program Skupa

---

Friday, 24<sup>th</sup> May 2019 / Petak, 24. svibnja 2019.

08:00 – 09:00

#### Registration of participants

*Prijava i registracija sudionika*

09:00 – 10:00

#### Invited lectures / Pozvana predavanja

Moderators / Moderatori:

Tanja Žuna Pfeiffer, Anamarija Stanković,

Tatjana Šafarik

09:00 – 09:20

#### Scientific Centre of Excellence for Personalized Health Care

*Znanstveni centar izvrsnosti za personaliziranu brigu o zdravlju*

Aleksandar Széchenyi, T. Šafarik

09:20 – 09:40

#### Research Projects - Opportunities for New Jobs, Modern Equipment and Scientific Achievements

*Znanstveni projekti-prilika za nova radna mjesta, suvremenu opremu i znanstvena dostignuća*

Stela Jokić

09:40 – 09:50

#### Inspecto Ltd. as a Partner in Collaborative Research of Mycotoxin Occurrence

*Inspecto d.o.o. kao partner u istraživanju pojavnosti mikotoksina*

Marija Kovač, M. Bulaić, B. Šarkanj, T. Kovač, A. Nevistić

**Public Institution Kopački rit Nature Park 2012 - 2019. Good Practice Examples and Models of Business Cooperation**

**09:50 – 10:00**

*JU Park Prirode Kopački rit 2012.- 2019. Primjeri dobre prakse i modeli poslovne suradnje*  
Tomislav Bogdanović, S. Marić

**10:00 – 10:30**

**Coffee Break**  
*Pauza za kavu*

**10:30 – 11:30**

**Oral presentations / Usmena izlaganja**

Moderators / Moderatori:  
Stela Jokić, Ivna Štolfa Čamagajevac, Jelena Bijelić

10:30 – 10:45

**The Identification of Headspace Compounds, Volatiles, Fatty Acid Content and Antifungal Activity of the Extracts of Macroalga *Codium bursa***  
*Identifikacija vršnih para, isparljivih komponentata, sastava masnih kiselina te antifungalna aktivnost ekstrakata makroalge *Codium bursa**  
Ana-Marija Cikoš, I. Jerković, B. Šarkanj, S. Jokić

10:45 – 11:00

**A Coprecipitation Synthesis and Modification of Magnetic Spinel Ferrite  $\text{CoFe}_2\text{O}_4$  Nanoparticles with Gold**  
*Koprecipitacijska sinteza i modifikacija zlatom magnetskih spinelnih feritnih nanočestica  $\text{CoFe}_2\text{O}_4$*   
Mirna Bjelić, T. Šafarik, A. Széchenyi

11:00 – 11:15

**The Optimization of Hydrothermal Method for the Synthesis of Triple Perovskites with a  $\text{Sr}_3\text{Mn}_2(\text{W/Te})\text{O}_9$  Structure Type**  
*Optimizacija hidrotermalne metode za sintezu trostrukih perovskita tipa  $\text{Sr}_3\text{Mn}_2(\text{W/Te})\text{O}_9$*   
Dominik Goman, J. Bijelić, A. Stanković, M. Medvidović-Kosanović, P. Cop, B. Smarsly, I. Đerđ

11:15 – 11:30

**Electrochemical Detection of  $\text{As}^{3+}$  Ions**  
*Elektrokemijska detekcija iona  $\text{As}^{3+}$*   
Žana Kajinić, J. Vešligaj Turkalj, Ž. Romić, A. Stanković, M. Medvidović-Kosanović

11:30 – 12:00

**Coffee Break**

*Pauza za kavu*

12:00 – 13:00

**Oral presentations / Usmena izlaganja**

Moderators / Moderatori:

Anita Galir Balkić, Tatjana Šafarik,

Martina Medvidović – Kosanović

12:00 – 12:15

**Plant Substances and Inert Dusts – Natural Insecticide Formulations in the Storage Insects Control**

*Biljne supstance i inertna prašiva — prirodne formulacije insekticida u kontroli skladišnih kukaca*

Pavo Lucić, V. Rozman

12:15 – 12:30

**The Prospects for an Experimental Realization of Two-Dimensional Aluminum Allotropes**

*Mogućnosti eksperimentalnog ostvarenja dvodimenzionalnog aluminija*

I. Lukačević, M. Varga-Pajtler, Matko Mužević, S. K. Gupta

12:30 – 12:45

**An Aqueous Sol-Gel Synthesis of Double and Triple Perovskites with an  $A_2Ni(Te/W)O_6$  and  $A_3Co_2TeO_9$  Structure Type**

*Vodena sinteza sol-gel dvostrukih i trostrukih perovskita tipa  $A_2Ni(Te/W)O_6$  i  $A_3Co_2TeO_9$*

Marina Sekulić, J. Bijelić, A. Stanković, M.

Medvidović-Kosanović, P. Cop, B. Smarsly, I. Đerd

12:45 – 13:00

**The Influence of Physical and Chemical Properties of Different Soil Types on the Optimal Soil Moisture for Tillage**

*Utjecaj fizikalnih i kemijskih svojstava različitih tipova tla na optimalno stanje vlažnosti za obradu*

V. Zebec, Z. Semialjac, M. Marković, V. Tadić,

Domagoj Radić, D. Rastija

13:00 – 14:00

**Lunch Break**

*Pauza za ručak*



**Oral presentations / Usmena izlaganja**

Moderators / Moderatori:

Elvira Kovač-Andrić, Tanja Žuna Pfeiffer,  
Zorana Katanić

**14:00 – 15:00**

- 14:00 – 14:15 **The Differences in Biochemical Mechanisms of Cadmium Tolerance in Three Soybean Cultivars**  
*Razlike u biokemijskim mehanizmima tolerancije na kadmij kod tri kultivara soje*  
Josipa Čosić, M. Dugić, R. Vuković, I. Štolfa  
Čamagajevac, A. Vuković, S. Šormaz, L. Zubaj, M. Matić, Z. Lončarić
- 14:15 – 14:30 **A Synthesis and Characterization of Cu(II), Fe(III), and Cr(III) Polynuclear Carboxylate Complexes**  
*Sinteza i karakterizacija polinuklearnih karboksilatnih kompleksa bakra(II), željeza(III) i kroma(III)*  
Sanja Zorić, T. Balić
- 14:30 – 14:45 **The Impact of High-Voltage Electrical Discharge on Winter Wheat under Drought**  
*Utjecaj visokonaponskog električnog pražnjenja na ozimu pšenicu u uvjetima suše*  
Maja Ižaković, K. Jukić, T. Marček
- 14:45 – 15:00 **Floral Diversity of a Sub-Pannonic Steppic Grassland in Bistrinci**  
*Raznolikost flore subpanonskog travnjaka u Bistrincima*  
Tomislav Mandir, M. Kovačević, M. Šimić, M. Grgošević, T. Žuna Pfeiffer, D. Špoljarić Maronić

**15:00 – 15:30**

**Awards and Conference closing**

*Podjela nagrada i zatvaranje Skupa*

**19:00 – 21:00**

**Garden party – After-Conference Gathering**

(Department of Biology and Chemistry, Ulica cara Hadrijana 8/A, 31 000 Osijek)

## Sponsors and donors / Sponzori i donatori



Under the high auspices of  
the President of the  
Republic of Croatia  
Kolinda Grabar - Kitarović



Ministry of Science and  
Education of the Republic  
of Croatia



2<sup>nd</sup> Young Scientists Days - Young Scientists Conference  
May 23<sup>rd</sup> and 24<sup>th</sup> 2019, Osijek, Croatia

2. Dani mladih istraživača – Skup mladih znanstvenika  
23. i 24. svibnja 2019. godine, Osijek, Hrvatska



# 2<sup>nd</sup> Young Scientists Days - Conference

23<sup>rd</sup> - 24<sup>th</sup> May 2019

**2<sup>nd</sup> Young Scientists Days - Young Scientists Conference I Osijek 2019**  
**Conference Programme / Program Skupa**