

Srpsko hemijsko društvo



Serbian Chemical Society

# 56. SAVETOVANJE SRPSKOG HEMIJSKOG DRUŠTVA

# KRATKI IZVODI RADOVA

56<sup>th</sup> MEETING OF  
THE SERBIAN CHEMICAL SOCIETY  
**Book of Abstracts**

Niš 7. i 8. juni 2019.  
Niš, Serbia, June 7-8, 2019

**Naučni Odbor**  
**Scientific Committee**

*Dušan Sladić, predsednik/chair*

*Vesna Mišković-Stanković*

*Niko Radulović*

*Gordana Stojanović*

*Snežana Tošić*

*Aleksandra Pavlović*

*Aleksandra Zarubica*

*Tatjana Andelković*

*Miloš Đuran*

*Ljiljana Jovanović*

*Marija Sakač*

*Janoš Čanadi*

*Organising Committee*

*Velimir Popsavin*

*Mirjana Popsavin*

*Katarina Andelković*

*Dragica Trivić*

*Maja Gruden Pavlović*

**Tanja Ćirković Veličković**

*Maja Radetić*



**Organizacioni Odbor**

*Niko Radulović, predsednik/chair*

*Aleksandar Dekanski*

*Danijela Kostić*

*Dragan Đorđević*

*Emilija Pecev Marinković*

*Marija Genčić*

*Ana Miltojević*

*Milan Stojković*

*Milan Nešić*

*Milica Nikolić*

*Marko Mladenović*

*Dragan Zlatković*

*Miljana Đorđević*

*Milena Živković*

*Sonja Filipović*

*Milica Stevanović*

*Jelena Aksi*



**Savetovanje podržalo / Supported by**



**Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije**  
*Ministry of Education, Science and Technological Development of Republic of Serbia*

Ova knjiga sadrži **kratke izvode**  
dva Plenarna predavanja (**PP**),  
šest Predavanja po pozivu (**PPP**) i  
93 saopštenja prihvaćena  
za prezentovanje na **56. savetovanju SHD**,  
od čega 14 usmenih (**O**) i 79 posterskih (**P**) saopštenja.

**Radovi** (obima od najmanje četiri stranice)  
pojedinih saopštenja publikovani su elektronski,  
u posebnoj publikaciji dostupnoj na adresi:  
[www.shd.org.rs/56SHD/Knjiga-radova.pdf](http://www.shd.org.rs/56SHD/Knjiga-radova.pdf)

Na desnoj strani iznad naslova njihovih kratkih izvoda  
nalazi se informacija o tome.

This book contains **Short Abstracts** of  
2 Plenary Lectures (**PP**), 6 Invited Lectures (**PPP**) and  
93 contributions accepted  
for the presentation at the **56<sup>th</sup> SCS Meeting**,  
of which 14 oral (**O**) and 79 poster (**P**) presentations.

The **Proceedings** of some of the contributions  
are published at: [www.shd.org.rs/56SHD/Knjiga-radova.pdf](http://www.shd.org.rs/56SHD/Knjiga-radova.pdf)  
Information on this is placed on the right-hand side,  
above titles of Abstracts.

Grant Certificates given by Poster prize award FoodEnTwin committee composed of the following members: Prof. T. Cirkovic-Velickovic, prof. J.Mutic, prof. M. Gruden



## HTH P 3

### Određivanje toksičnih elemenata (žive, kadmijuma, olova i arsena) u uzorcima školjki

Slađana Đurđić, Vesna Jovanović, Sofija Tomić, Tanja Ćirković Veličković<sup>1,2,3</sup>, Jelena Mutić

Univerzitet u Beogradu-Hemijski fakultet, Beograd, Srbija

<sup>1</sup>Ghent University Global Campus, Incheon, Južna Koreja;

<sup>2</sup>Centar izuzetnih vrednosti za molekularne nauke o hrani, Univerzitet u Beogradu Hemijski fakultet, Beograd;

<sup>3</sup>Srpska Akademija nauke i umetnosti, Beograd, Srbija

Morski plodovi imaju visoku nutritivnu vrednost, ali sa druge strane postoji rizik od kontaminacije toksičnim elementima. Sadržaj As, Cd, Hg i Pb je određen u četiri vrste školjki *Ruditapes philippinarum* (Manila clam, MC), *Yesso scallop* (YS), *Tegillarca granosa* (TG) i *Anadara broughtonii* (AB) kupljene u Incheonu, Koreja. Uzorci su analizirani induktivno spregnutom plazmom - masenom spektrometrijom (ICP-MS) nakon mikrotalasne digestije. Izračunati su dnevni/nedeljni unosi za ove elemente u mg/300 g uzorka. Ukupan sadržaj As (neoganski i organski) u svim vrstama je bio veći od dozvoljenog limita preporučenog od Svetske zdravstvene organizacije (WHO). Procenjeni dnevni unosi ostalih elemenata (Hg, Cd i Pb) su niži od maksimalnih podnošljivih granica (MDI) koje je odredila Evropska agencija za bezbednost hrane (EFSA) što ukazuje da nema rizika za konzumante.

### Determination of toxic elements (mercury, cadmium, lead and arsenic) in shellfish samples

Slađana Đurđić, Vesna Jovanović, Sofija Tomić, Tanja Ćirković Veličković<sup>1,2,3</sup>, Jelena Mutić

University of Belgrade-Faculty of Chemistry, Belgrade, Serbia <sup>1</sup>Ghent University

Global Campus, Incheon, South Korea; <sup>2</sup>University of Belgrade, Faculty of Chemistry,

Centre of Excellence for Molecular Food Sciences

<sup>3</sup>Serbian Academy of Sciences and Arts, Belgrade, Serbia

Bivalve molluscs, which include mussels, oysters and clams, have high nutritional value. On the other hand, seafood may also contain harmful contaminants and other undesirable substances such as mercury and persistent halogenated compounds. Four species of bivalve molluscs *Ruditapes philippinarum* (Manila clam, MC), *Yesso scallop* (YS), *Tegillarca granosa* (TG) and *Anadara broughtonii* (AB) were bought in Incheon, Korea, in order to determine content of As, Cd, Hg, and Pb and consequently, to estimate the health hazards associated to dietary intake. The samples were analyzed by inductively coupled plasma mass spectrometry (ICP-MS) after microwave digestion. All species showed As content higher than the maximum tolerable limit specified by EFSA. Estimated daily intake of Hg, Cd and Pb from consumption of 300 g was very low and hence poses no toxicological risk.

**Acknowledgments:** This research was financially supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia, project no. 172030 and the European Commision, under the Horizon 2020, FoodEnTwin project grant agreement no. 810752.