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Belgrade, 29th October 2022

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European Young Chemists' Network

Dr. Maximilian Menche, chair of the EYCN

Sponsorship

The organizing committee is grateful for the donations of the selected sponsor participants

European Young Chemists' Network



Analysis doo



Ministry of Education, Science and Technological Development, Republic of Serbia



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Scientific Program

Time	Program
9:00	Registration of the participants Mounting posters for the Poster Session 1 (ODD POSTER NUMBERS)
10:00	Conference opening Serbian Chemical Society – Dušan Sladić Scientific Committee – Vuk Filipović Serbian Young Chemists' Club presentation – Mihajlo Jakanovski
10:15	Plenary Lecture (PP OP 01) Ilija Cvijetić <i>University of Belgrade, Faculty of Chemistry</i>
11:00	Oral presentations, Session 1 Zorica Novaković (CMN OP 01) <i>University of Novi Sad, Faculty of Sciences</i> Marija Kaluderović (OC OP 01) <i>University of Montenegro, Faculty of Metallurgy and Technology</i> Marija Milošević (MS OC 01) <i>University Of Belgrade, Faculty of Technology and Metallurgy</i>
11:35	Coffee break
11:50	European Young Chemists' Network (EYCN) ZOOM presentation Maximillian Menche – Chair of the EYCN “The European Young Chemists' Network and the Power of Networking”
12:05	Invited Lecture (PPP OP 01) Ivana Kuzminac <i>University of Novi Sad, Faculty of Sciences</i>
12:40	Oral presentations, Session 2 Dušica Jovanović (TC OP 01) <i>University of Belgrade, Institute of Nuclear Science Vinča</i> <i>University of Niš, Faculty of Science and Mathematics</i> Milica Đukić (IAC OP 01) <i>University Of Belgrade, Faculty of Technology and Metallurgy</i> Jovana Jovanović (OC OP 02) <i>University of Montenegro, Faculty of Medicine</i> Slađana Đorđević (TC OP 02) <i>University of Kragujevac, Faculty of Science</i>
13:25	*GROUP PHOTO*
13:30	Poster session 1 (ODD POSTER NUMBERS) Lunch
14:15	Removing posters from Poster Session 1 Mounting posters for Poster Session 2 (EVEN POSTER NUMBERS)

15:00	<i>Invited Lecture (PPP OP 02)</i> Branko Kordić <i>University of Novi Sad, Faculty of Sciences</i>
15:35	<i>Oral presentations, Session 3</i>
	Dušan Ružić (MC OP 01) <i>University of Belgrade, Faculty of Pharmacy</i>
	Ana-Andrea Holik (CE OP 01) <i>University of Belgrade, Faculty of Chemistry</i>
	Aleksa Savić (BB OP 01) <i>University of Belgrade, Faculty of Chemistry</i>
16:10	<i>Poster session 2 (EVEN POSTER NUMBERS)</i>
17:00	<i>Break</i>
	<i>Closing ceremony</i>
	<ul style="list-style-type: none"> • <i>Best Oral Presentation Award</i>
17:15	Board: Vuk Filipović, Ivana Kuzminac, Ilija Cvijetić
	<ul style="list-style-type: none"> • <i>Best Poster Presentation Award</i> Board: Jelena Milovanović, Branko Kordić
17:45	<i>End of the Conference</i>

POSTER NUMBER is the last part of contribution code, e.g. XY PP **15**.

VENUE:

- Lectures and oral presentations will be taken place at the **large chemistry amphitheater (VHA)** on the ground floor.
- The Poster sessions will take place in the **hallway in front of the library** on the 1st floor.

Characterization and application of sunflower husk for removing heavy metals from aqueous solution and wastewater

Marina B. Radenković¹, Jelena D. Petrović¹, Miloš D. Momčilović¹, Sanja M. Živković¹

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The industrial wastewater produced from various industries contains a significant amount of pollutants among which are heavy metals and represents one of the leading environmental problems facing public health. Conventional wastewater treatment technologies unsuccessfully remove heavy metals completely. As an alternative to various conventional treatment technologies such as ion exchange, chemical precipitation, and electrochemical treatment which have a lot of drawbacks, biosorption is a process characterized by the use of low-cost and abundant agricultural materials with no significant costs and high sorption potentials of biosorbent due to the presence of carboxylic and phenolic groups in lignocellulose matrix. In Serbia, sunflower is the most common oil plant and grows on about 180 000 ha. After industrial processing between 325, 000 and 360, 000 t of sunflower waste ends up in landfills or is used as a source of energy (1). In this work, the sunflower husk was used to remove Ni from aqueous solutions and wastewater sample. The sunflower husk treated with 1% hydrochloric acid was characterized by Fourier transform infrared spectroscopy (FTIR) and scanning electron microscopy with energy dispersive X-ray spectroscopy (SEM-EDX). In addition, under optimal conditions, the concentration of Ni in wastewater sample was obtained and compared by two techniques, induced coupled plasma optical emission spectrometry (ICP-OES) as a standard reference method and laser-induced plasma spectroscopy (LIBS) as a non-standard analytical method. The results of these two methods were compared, to investigate the possibility of using laser-induced plasma spectroscopy as a green alternative for the evaluation of biosorption efficiency.

References

1. M. Radenković, M. Momčilović, J. Petrović, A. Mraković, D. Relić, A. Popović, S. Živković, *J. Serb. Chem. Soc.* **2022**, *87*, 939.

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