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Book of Abstracts

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ИНОВАЦИЈА

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Contents

Plenary Lecture	1
Invited Lectures	5
Oral presentations	11
Poster presentations	25
Chemistry and Society	27
Chemistry meets Biology	31
Developments in chemical synthesis	63
Environmental awareness	79
Physical and computational chemistry	97
Phytochemistry and Food Chemistry	117
Solution chemistry and Chemical equilibrium	149
Supramolecular Chemistry and Functional Materials	151
Author index	167

Scientific Program

Time schedule	Program
	<i>Registration of the participants</i>
8:30	Mounting posters for the Poster Session 1 (ODD POSTER NUMBERS)
	<i>Conference opening</i>
	Serbian Chemical Society
9:30	Scientific Committee Serbian Young Chemists' Club presentation
	<i>Plenary Lecture</i>
	PP OP 01 – Gordana Krstić
9:45	University of Belgrade, Faculty of Chemistry, Belgrade, Serbia <i>“Determining the structure of natural products using NMR spectroscopy - is it enough or not?”</i>
	<i>Popular Scientific Lecture</i>
10:20	Luka Mihajlović (Analysis doo)
	<i>Invited Lecture</i>
	PPP OP 01 – Jelena Lazić
10:50	University of Belgrade, Institute of Molecular Genetics and Genetic Engineering, Belgrade, Serbia <i>“From waste streams to biotherapeutics: making a connection using bacteria”</i>
11:15	<i>Coffee break</i>
	<i>Invited Lecture</i>
	PPP OP 02 – Alen Albreht
11:30	National Institute of Chemistry, Ljubljana, Slovenia <i>“Towards future food supplement ingredients: chemical modification of natural antioxidants”</i>
	<i>European Young Chemists' Network (EYCN)</i>
	Gaia De Angelis – Global Connection Team Leader
11:55	Soft-skill presentation

12:25	<i>Oral presentations, Session 1</i>
	DSC OP 01 – Nikola Radnović University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia <i>“Syntheses and structures of Ag(I) complexes with pyrazole-type ligand”</i>
	PFC OP 02 – Nikola Horvacki Innovation Centre of Faculty of Chemistry Ltd., Belgrade, Serbia <i>“Comparative assessment of preeminent sugars and organic acids in fruits of several apple cultivars”</i>
	PCC OP 02 – Katarina Čeranić Innovation Centre of Faculty of Chemistry Ltd., Belgrade, Serbia <i>“Benzene coordination strengthens cation-π interactions: A DFT study”</i>
	SCCE OP 01 – Andrija Vukov University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia <i>“Hydration properties of the antidiabetic drug metformin in the presence of selected artificial sweeteners”</i>
	SCFM OP 01 – Daliborka Odoboša University of Belgrade, Vinča Institute of Nuclear Sciences, National Institute of the Republic of Serbia, Belgrade, Serbia <i>“A novel gamma rays dosimeter based on organic dye and PVA: microwave synthesis and spectroscopic studies”</i>
	PFC OP 03 – Nikolina Sibinčić Innovation Centre of Faculty of Chemistry Ltd., Belgrade, Serbia <i>“Arthrospira platensis and Porphyra sp. – prospective serum-substitute in HEK293T cell culture”</i>
13:25	*GROUP PHOTO*
13:30	<i>Poster session 1 (ODD POSTER NUMBERS)</i>
	<i>Lunch</i>
14:20	Removing posters from Poster Session 1 Mounting posters for Poster Session 2 (EVEN POSTER NUMBERS)

	<i>Workshop</i>
15:10	University of Novi Sad, Faculty of Sciences – Parliament University of Belgrade, Faculty of Chemistry – Parliament Young Division of Croatian Chemical Society
	<i>Invited Lecture</i>
	PPP OP 02 – Tatjana Majkić
15:55	University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia <i>“Polyphenols as modulators of prostaglandin E₂ and thromboxane A₂ production”</i>
16:20	<i>Oral presentations, Session 2</i>
	PCC OP 01 – Milica Bogdanović
	University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia <i>“The crystal structure of 3-(1-pyrazolyl)-L-alanine and its Ag(I) polymeric complex”</i>
	PFC OP 01 – Mihajlo Jakanovski
	Innovation Centre of Faculty of Chemistry Ltd., Belgrade, Serbia <i>“Validation and optimization of ion chromatography based method for citric acid determination in Robinia pseudoacacia honey”</i>
	CS OP 01 – Branislav Kokić
	Innovation Centre of Faculty of Chemistry Ltd., Belgrade, Serbia <i>“Teaching chirality on dynamic systems”</i>
	CB OP 01 – Ana Matošević
	Institute for Medical Research and Occupational Health, Zagreb, Croatia) <i>“Design, synthesis and biological evaluation of carbamates as cholinesterases inhibitors in the treatment of Alzheimer`s disease”</i>
	EA OP 01 – Marija Kuč
	University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia <i>“Photodegradation of organic UV filters in water using UV/chlorine and UV/H₂O₂”</i>
	EA OP 01 – Sara Pepić
	University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia <i>“Physico-chemical and structural characterization of the pharmacologically active ionic liquid tetracainium-ibuprofenate”</i>

17:10	<i>Poster session 2 (EVEN POSTER NUMBERS) and Coffee break</i>
	<i>Closing ceremony</i>
18:00	<ul style="list-style-type: none">• Best Oral Presentation Award• Best Poster Presentation Award
18:15	<i>End of the Conference</i>

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

VENUE:

- Lectures and oral presentations will be taken place at the “Mihajlo Pupin“ amphitheater on the ground floor at the Department of Mathematics and Informatics and the Department of Physics, Faculty of Science, University of Novi Sad (address: Trg Dositeja Obradovića 4, Novi Sad).
- The Poster sessions will take place in the hallway in front of the “Mihajlo Pupin“ amphitheater.

A novel gallium activated macroporous glycidyl methacrylate based copolymer and its antimicrobial potential

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Cross-linked macroporous copolymers based on glycidyl methacrylate (GMA) have been used as sorbents for metals, support for enzymes, as biomaterials etc. In this research GMA copolymer was prepared by copolymerization of GMA (glycidyl methacrylate) and EGDMA (ethylene glycol dimethacrylate), in the presence of inert component (90 mass% of cyclohexanol and 10 mass% of dodecanol), and functionalized with diethylenetriamine (DETA). Presence of epoxy groups in GMA-based copolymers allows chemical modifications on the polymer in order to achieve its different applications. GMA-based copolymer was activated with 0.1 M solution of Ga(NO₃)₃, at pH 3, and 25 °C [1].

Antimicrobial activity of functionalized and activated GMA-based copolymer, GMA/Ga, was analyzed against *Staphylococcus aureus* (Gram positive bacteria), *Escherichia coli* (Gram negative bacteria), *Candida albicans* (yeast) and *Aspergillus niger* (fungi) [2]. The agar-well diffusion method was used to evaluate antimicrobial activity of GMA/Ga polymer. Nutrient agar plates were inoculated with broth of 1 MFU microbial suspensions. Wells of 5 mm diameter were punched in the inoculated plates using a sterile metallic borer, and then filled with 100 µL of water solution containing nanoparticles of GMA/Ga copolymer, at various concentrations: 10, 20, and 30 mg/mL. Control wells were filled with 100 µL of distilled water. Inoculated plates were incubated at 37 °C/24 h for bacteria and yeast, and at 30 °C/48 h for fungus. Antimicrobial activity of Ga activated copolymer was evaluated by measuring the inhibition zone diameter around the wells. The GMA/Ga copolymer displayed good antimicrobial activity against *Escherichia coli* and *Candida albicans*, which makes it selective for Gram negative bacteria and yeasts, and as a material that can be potentially used for biomedical applications, in food industry etc.

References

1. A. Nastasović, B. Marković, Lj. Suručić, A. Onjia, *Metals*. **2022**, 12(5), 814.
2. D. Hanna, A. Youssef, E. El-Metwally, M. Abdelaal, *Egypt. J. Chem.* **2019**, 62(12), 2245.

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