

**8<sup>th</sup> Conference of Young Chemists of Serbia**

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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



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## Scientific Program

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

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 ( <b>MC OP 01</b> ) <i>University of Belgrade, Faculty of Pharmacy</i>
	Ana-Andrea Holik ( <b>CE OP 01</b> ) <i>University of Belgrade, Faculty of Chemistry</i>
	Aleksa Savić ( <b>BB OP 01</b> ) <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"> <li>• <b>Best Oral Presentation Award</b></li> </ul>
17:15	Board: Vuk Filipović, Ivana Kuzminac, Ilija Cvijetić
	<ul style="list-style-type: none"> <li>• <b>Best Poster Presentation Award</b></li> </ul>
	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 1<sup>st</sup> floor.

## Solvothermally synthesized copper doped bismuth vanadate

Marko B. Jelić<sup>1</sup>, Željko V. Mravik<sup>1</sup>, Zoran M. Jovanović<sup>1</sup>, Sonja M. Jovanović<sup>1</sup>

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Photoelectrochemical (PEC) water splitting is a promising method for clean energy production and different oxide materials have been explored to find the right solution. Among them, as one of the most promising photoanode materials, bismuth vanadate ( $\text{BiVO}_4$ ) has attracted a lot of attention due to the suitable band gap edge alignment, low-cost synthesis method and great visible light harvesting features. Nowadays, research related to the  $\text{BiVO}_4$  is mostly oriented towards repairing poor charge transfer properties which exist due to the high rate of electron–hole recombination. Metal doping is one of the strategies to improve these intrinsic drawbacks. Herein, we report physicochemical properties of solvothermally synthesized pristine  $\text{BiVO}_4$ , 1%-, 2.5%- and 5%- Cu-doped  $\text{BiVO}_4$  powders at 180 °C for 8 h. X-ray diffraction (XRD) study indicates that, depending on the degree of doping, material exists in monoclinic or tetragonal scheelite phase. Pure monoclinic phase was formed in a case of pristine, 1%- and 2.5%- Cu doped samples. After doping with 5 %, phase transition occurred and material showed tetragonal phase. Scanning electron microscopy (SEM) reveals that samples with monoclinic phase consists of worm-like and prismatic structures while tetragonal samples exhibited spherical shape. Furthermore, structure was examined with Raman and FTIR spectroscopy. The results were in accordance with diffraction study where band positions were well matched with phase composition. Optical properties were characterized with UV–Vis diffuse reflectance spectroscopy (DRS) and photoluminescence (PL) spectroscopy. Monoclinic samples showed band gap around 2.4 eV, while sample with tetragonal phase has band gap around 2.8 eV. PL showed that that monoclinic samples possess better recombination features than tetragonal ones. Photoelectrochemical measurements suggest that material is sensitive towards visible light and, after doping, improved its performance towards oxygen evolution reaction.