



# CzePoCat 2022

## 10<sup>th</sup> Czech-Polish Catalytic Symposium

April 29, 2022 from 8:00 to 22:00

*Meeting room UA 178, Aula VŠB-Technical University of Ostrava*

## Program

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**8:00 – 8:20 – Registration**

**8:20 – 8:30 – Lucie Obalová, Jana Kukutschová** (VSB- Technical University of Ostrava)  
*Opening speech*

### 1. Section

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**Chairman: Anna Srebowata** (Polish Academy of Sciences)

**9:00 – 9:15 – Aleksandra Pietraszek** (Jagiellonian University in Krakow)

Mesoporous silicas modified by TIE method as the basis of catalysts for selected environmental processes

**9:15 – 9:30 – Rudolf Ricka** (VSB- Technical University of Ostrava)

Hydrogen production from methanol-water mixture over NiO/TiO<sub>2</sub> nanorods structure photocatalysts

**9:30 – 9:45 – Tomasz Kondratowicz** (University of Pardubice)

Controlled silica core removal from SiO<sub>2</sub>@MgAl core-shell system as a tool to prepare well-oriented and highly active catalysts

**9:45 – 10:00 – Kasidid Yaemsunthorn** (Jagiellonian University in Krakow)

Phase-based optimization of TiO<sub>2</sub> photocatalyst and the application on selective nitro-to-amine reduction

**10:00 – 10:15 – Tereza Bílková** (VSB- Technical University of Ostrava)

Potassium surface and bulk promotion of cobalt based mixed oxides for direct NO decomposition

**10:15 – 10:30 – Jáchym Mück** (University of Pardubice)

Potential of mixed oxides with transition metal in ethanol valorisation

**10:30 – 10:45 – Coffee break**

### 2. Section

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**Chairman: Lucjan Chmielarz** (Jagiellonian University in Krakow)

**10:45 – 11:00 – Emil Kowalewski** (Polish Academy of Sciences)

Catalytic hydrogenation of nitrocyclohexane as an alternative pathway for synthesis of value-added products

**11:00 – 11:15 – Martyna Przydacz** (Lodz University of Technology)

Influence of Fe addition to Ni-based catalysts for the hydrodeoxygenation of hydroxymethylfurfural to value-added molecules

**11:15 – 11:30 – Alena Kulišťáková** (VSB- Technical University of Ostrava)

Photochemical treatment (UV/O<sub>3</sub>+UV/H<sub>2</sub>O<sub>2</sub>) of waste gas emissions containing organic pollutants in pilot plant unit

**11:30 – 11:45 – Sridhar Gowrisankaran** (The Comenius University in Bratislava)

New insights into the mechanism of photocatalysis and Fenton based processes

**11:45 – 12:00 – Anna Jakimińska** (Jagiellonian University in Krakow)

Fluorescent probes in monitoring photocatalytic processes induced in hybrid plasmonic metal-semiconductor systems

**12:00 – 12:15 – Barbora Grycová** (VSB-Technical University of Ostrava)

LRI ENREGAT enters the 4th year of operation

**12:15 – 13:30 – Lunch**

### **3. Section**

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**Chairman: Agnieszka Ruppert** (Lodz University of Technology)

**13:30 – 13:45 – Magdalena Saramok** (LRN – New Chemical Syntheses Institute)

Removal of NO<sub>x</sub> on a Zeolite Catalyst from Nitric Acid Plant

**13:45 – 14:00 – Viktoriia Liapun** (The Comenius University in Bratislava)

Anodic TiO<sub>2</sub> nanotubes: past accomplishments and future perspectives

**14:00 – 14:15 – Kaja Spilarewicz-Stanek** (Jagiellonian University in Krakow)

Investigation of the heterojunction systems for photocatalytic reduction of CO<sub>2</sub>

**14:15 – 14:30 – Marcel Šihor** (VSB-Technical University of Ostrava)

Anodization of large area Ti: versatile material for photocatalytic process

**14:30 – 14:45 – Krystian Mróz** (Jagiellonian University in Krakow)

Impact of synthesis factors on the electronic structure of Zinc Sulfide

**14:45 – 15:00 – Aneta Smýkalová** (VSB-Technical University of Ostrava)

Photocatalytic decomposition of Ofloxacin and Ampicillin using g-C<sub>3</sub>N<sub>4</sub>

**15:00 – 15:15 – Coffee break**

### **4. Section**

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**Chairman: David Kubička** (University of Chemistry and Technology)

**15:15 – 15:30 – Bartosz Zawadzki** (Polish Academy of Sciences)

Continuous-flow hydrogenation of 2-methyl-2-pentenal using cobalt-based catalysts

**15:30 – 15:45 – Kamil Urbanek** (Jagiellonian University in Krakow)

SnFe<sub>3</sub>O<sub>4</sub> as a semiconductor CO<sub>2</sub> reduction photocatalyst

**15:45 – 16:00 – Kateřina Klemencova** (VSB-Technical University of Ostrava)

Catalytic pyrolysis of polypropylene

**16:00 – 16:15 – Chaiyasit Phawa** (Jagiellonian University in Krakow)

Matching facet pairs of anatase TiO<sub>2</sub> for photoelectrochemical water splitting reaction

**16:15 – 16:30 – Guru Karthikeyan Thirunavukkarasu** (The Comenius University in Bratislava)

2D TiO<sub>2</sub> nanostructures: promising material for bacterial eradication

**16:30 – 16:45 – Pavel Izák** (Institute of Chemical Process Fundamentals)

Game with chiral matter

**16:45 – 22:00 – Discussion and closing ceremony**

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