Programme

Tuesday, 25th November 2025

National Center for Mechatronics and Clean Technologies, Geo Milev Campus, Bulgarian Academy of Sciences, Sofia
Foyer 1st floor

09:30 – 10:00	**Registration and information**	
Big hall		
10:00 – 10:10	**Opening ceremony**	K. Chakarova Vice-president Bulgarian Catalysis Society
10:10 – 12:30	**Session 1**	Chair: H. Aleksandrov
10:10 – 10:40	**L1. Invited lecture:** Sample Preparation for Powder X-ray Diffraction. Combining PXRD Results with Elemental Analysis (XRF) Data	P. Tzvetkov *Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences*
10:40 – 11:10	**L2. Invited lecture:** The Use of ED-XRF and ICP-OES Methods for the Elemental Analysis of Catalysts	P. Ivanov*, D. Wissmann *SPECTRO Analytical Instruments GmbH, Germany*
11:10 – 11:40	**Coffee break**	
11:40 – 12:10	**O1.** Investigation of Mechanochemically Recycled Waste Nd-Fe-B Magnets Towards Their Reuse	Z. Cherkezova-Zheleva*, D. Paneva, A. Vasileva, K. Ivanov, R. R. Piticescu, M. Burada, S. A. Fironda, O. Jay, S. G. Ghalamestani, G. Heunen *Institute of Catalysis, Bulgarian Academy of Sciences*
12:10 – 12:20	**YO1.** CO_2 Methanation Using 3D Printed Ni-Mn Modified Mesoporous SiO_2 Catalysts: Experimental and Theoretical Approaches	G. Theochari*, D. Kovacheva, D. Karashanova, B. Karapenchev, I. Koleva, H. Aleksandrov, M. Popova *Institute of Catalysis, Bulgarian Academy of Sciences, National Centre of Excellence Mechatronics and Clean Technologies*
12:20 – 12:30	**YO2**. Novel Synthetic Strategy for the Preparation of Piperazine Functionalized Mesoporous Silica Materials as Highly Effective CO_2 Adsorbents	S. Grozdanova*, I. Trendafilova, M. Popova *Institute of Catalysis, Bulgarian Academy of Sciences, National Centre of Excellence Mechatronics and Clean Technologies*

12:30 – 13:30	**Lunch break**	
13:30 – 14:15	**Session 2**	Chair: M. Gabrovska
13:30 – 14:00	**O2.** Catalytic Behaviour of Transition Metal Cations and Clusters Located in Zeolite Pores: A DFT Study	I. Z. Koleva*, H. A. Aleksandrov, K. Khivantsev, J. Szanyi *Faculty of Chemistry and Pharmacy, Sofia University "St. Kliment Ohridski"*
14:00 – 14:15	**YO3.** Catalytic Oxidation of VOC's over Cobalt Loaded Hierarchical ZSM-5 Zeolite	B. Grahovski*, R. Velinova, I. Hristova, H. Kolev, A. Naydenov, S. Todorova *Institute of Catalysis, Bulgarian Academy of Sciences*

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14:15 – 16:30	**Poster session P1-P16 and demonstrations**

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Big hall

10:00 – 12:20	**Session 3**	Chair: H. Kolev
10:00 – 10:30	**L3. Invited lecture:** CO_2 Capture from Biomass Combustion Using Adsorbents Derived from Waste Materials	M. Popova*, M. Dimitrov, I. Dimitrov, I. Slavchev, S. Simeonov, Y. Mitrev, P. Shestakova, S. Grozdanova, I. Trendaflova *Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences*
10:30 – 11:00	**O4:** Nickel and Nickel–Palladium Catalysts on Carbon Supports for Sunflower Oil Hydrogenation Process	V. Radonjić*, D. Nikolova, M. Gabrovska, Ts. Parvanova-Mancheva, G. Zarkova, P. Tzvetkov, M. Ristić, J. Krstić *University of Belgrade, Institute of chemistry, technology and metallurgy, National institute of the Republic of Serbia*
11:00 – 11:30	**Coffee break**	
11:30 – 12:00	**O5.** DFT Modelling of Catalytic Detoxication of CO and NO by Zeolite Systems	H. A. Aleksandrov*, I. Z. Koleva, G. N. Vayssilov, K. Khivantsev, J. Szanyi *Faculty of Chemistry and Pharmacy, Sofia University "St. Kliment Ohridski"*
12:00 – 12:10	**YO4.** Optimization of the Synthesis of CuZnAl Layered Double Hydroxide as a Catalyst for Water-Gas Shift Reaction	G. Zarkova*, Ts. Parvanova-Mancheva, I. Ivanov, M. Gabrovska, D. Nikolova *Institute of Catalysis, Bulgarian Academy of Sciences*
12:10 – 12:20	**YO4**. Preparation and Characterization of Nanosized Manganese Ferrite Oxide Glass-Ceramics	P. Takov*, R. Harizanova, I. Mihailova, D. Paneva, Z. Cherkezova-Zheleva, G. Avdeev *University of Chemical Technology and Metallurgy*

12:20 – 13:30	**Lunch break**	
13:30 – 14:15	**Session 4**	Chair: M. Popova
13:30 – 13:45	**YO6.** Formamide as a Key Catalyst for Pyrimidines Formation	Sofia Slavova*, Venelin Enchev *Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences*
13:45 – 14:15	**O3.** Chemical Evolution: from Pure Formamide to Nucleobases, Pterins, Amino Acids and Nucleosides. The Role of Formamide as a Catalyst	V. Enchev*, S. Slavova, I. Angelov, I. Dincheva, N. Stoyanova, M. Kapralov, N. Markova *Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences*

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14:15 – 16:30	**Poster session P17-P32 and demonstrations**	
	Get-together party	

Thursday, 27th November 2025

Big hall

10:00 – 12:00	**Session 5**	Chair: I. Spasova
10:00 – 10:30	**L4. Invited lecture:** Lessons Learned from 10 Years Commercial Experience with Vacuum Residue Ebullated Bed Reactor Hydrocracking Technology	D. Stratiev *LUKOIL Neftohim Burgas*
10:30 – 11:00	**O6:** Understanding Catalytic Chemistry of Cerium Dioxide Systems Using Computational Modelling	G. N. Vayssilov*, H. A. Aleksandrov, I. Z. Koleva *Faculty of Chemistry and Pharmacy, Sofia University "St. Kliment Ohridski"*
11:00 – 11:30	**Coffee break**	
11:30 – 12:00	**O7.** Lab Success Doesn't Guarantee Scale-Up: Transferring CuZnAl Layered Double Hydroxide Precursor from Laboratory Synthesis to a Pilot-Scale Reactor for One-Step Water-Gas Shift Catalyst	D. Nikolova*, M. Gabrovska, T. Parvanova-Mancheva, T. Tabakova, I. Ivanov *Institute of Catalysis, Bulgarian Academy of Sciences*
12:00 – 12:10	**Closing ceremony**	D. Nikolova President Bulgarian Catalysis Society