

**SUNDAY, 4.09.2022, Lecture Hall 1 Broadway**

**16:00 – 17:30 Registration and accomodation**

**17:30 – 17:50 Welcome and Opening**

J. Ryczkowski

**Chair: A. Kotarba**

**17:50 – 18:50 Plenary lecture 1**

**Zeolite nanosheets in solution obtained by soft-chemical exfoliations as a versatile platform for synthesis of nanoscale composite and hierarchical catalysts**

Wiesław J. ROTH

*Jagiellonian University, Cracow, Poland*

**19:00-20:30 Welcome reception**

**MONDAY, 5.09.2022, Lecture Hall 1 Broadway**

**Chair: J. Ryczkowski**

**9:00 – 10:00 Plenary lecture 2**

**Solar-driven selective methane conversion into platform molecules at ambient temperature**

Andrei KHODAKOV

*University of Lille, Lille, France*

**Chair: J.S. Pap**

**10:00 – 10:20**

**O1 Mechanism of Soot Oxidation over Cryptomelane Catalysts in Presence of NO and SO<sub>2</sub> – Isotopic Studies Combined with XAS, TEM/STEM/EELS, Work Function and X-ray Tomography Investigations supported by DFT Modelling**

M. Fedyna, P. Legutko, J. Gryboś, B. Leszczyński, A. Kotarba, X. Yu, Zh. Zhao, Z. Sojka

*Jagiellonian University, Cracow, Poland*

**10:20 – 10:40**

**O3 Graphene-Derived Single Atom Catalysts**

A. Bakandritsos, R. Zbořil

*Technical University of Ostrava, Ostrava, Czech Republic*

**10:40 – 11:00**

**O5 Identifying the reaction path: from basic adsorption and diffusion property of the catalyst to reaction intermediates by time-resolved IR spectroscopy**

K. Tarach, K. Gołabek, K. Góra-Marek

*Jagiellonian University, Cracow, Poland*

**11:00 – 11:30 Coffee break**

**Chair: D. Kubička**

**11:30 – 12:10 Keynote lecture 1**

**Materials science in the development proton exchange membrane fuel cell components: recent trends and new results**

I. Borbáth, E. Tálas, Z. Pászti, G.P. Szijjártó, A.K. Mohamed Selim, A. Tompos  
*Research Centre for Natural Sciences, Budapest, Hungary*

**Chair: B. Gil**

**12:10 – 12:30**

**O7 Small changes – big impact: How tuning the morphology of exsolved nanoparticles influences the catalytic activity and stability**

H. Drexler, L. Lindenthal, F. Schrenk, T. Berger, T. Ruh, C. Rameshan

*Technical University Wien, Vienna, Austria*

**12:30 – 12:50**

**O9 Controlled silica core removal from SiO<sub>2</sub>@LDH core-shell system as a tool to prepare well-oriented and highly active catalysts**

T. Kondratowicz, S. Slang, L. Dubnová, O. Kikhtyanin, P. Bělina, L. Čapek

*University of Pardubice, Pardubice, Czech Republic*

**12:50 – 13:10**

**O11 Electrochemically controlled Nanoparticle Exsolution – An In-situ Study**

L. Lindenthal, R. Rameshan, F. Schrenk, T. Ruh, A. Nenning, A.K. Opitz,

C. Rameshan

*Technical University Wien, Vienna, Austria*

**13:10 – 14:40 Lunch**

**Chair: D. Lazar**

**14:40 – 15:00**

**O13 Catalytic performance of Ni-SiOC in CO<sub>2</sub> methanation**

E. Szoldatits, J. Eßmeister, L. Schachtner, T. Konegger, K. Föttinger  
*Technical University Wien, Vienna, Austria*

**15:00 – 15:20**

**O15 Catalytic conversion of bioethanol to unsaturated hydrocarbons**

B. Horváth, R. Barthos, B. Szabó, Gy. Novodárszki, T. Soták,  
D. Gašparovičová, K. Fulajtárová  
*Slovak University of Technology in Bratislava, Bratislava, Slovakia*

**15:20 – 15:40**

**O17 Improvement of Ni-based catalysts via Indium promotion for dry reforming of methane**

A. Horváth, M. Németh, A. Beck, A. Pintar, V. La Parola  
*Centre for Energy Research, Budapest, Hungary*

**15:40 – 16:00**

**O19 Theoretical description of catalytic systems for methane coupling**

D. Rutkowska-Żbik, V. Kaipanchery, R. Tokarz-Sobieraj  
*Jerzy Haber Institute of Catalysis and Surface Chemistry, Cracow, Poland*

**16:00 – 16:30 Coffee break**

**Chair: L. Čapek**

**16:30 – 17:10 Keynote lecture 2**

**CO<sub>2</sub> transformation in value-added compounds catalysed by Ni based materials with controlled porosity**

M.D. Lazar, M. Dan, M. Mihet

*National Institute for Research and Development for Isotopic and Molecular Technologies, Cluj-Napoca, Romania*

**Chair: K. Kočí**

**17:10 – 17:30**

**O21 CO<sub>2</sub> methanation over heterogeneous catalysts hydrotalcite**

M. Mališová, K. Föttinger, G.A.S. Alves, M. Latschka, M. Hornáček  
*Slovak University of Technology in Bratislava, Bratislava, Slovakia*

**17:30 – 17:50**

**O23 Experimental and theoretical studies of oxygen dynamics in soot combustion over Na<sub>2</sub>Mn<sub>3</sub>O<sub>7</sub> catalyst**

J. Gryboś, M. Fedyna, P. Legutko, B. Leszczyński, A. Wach, D. Wierzbicki, A. Kotarba, X. Yu, Z. Zhao, Z. Sojka

*Jagiellonian University, Cracow, Poland*

**17:50 – 18:50 Poster session 1**

**19:00 – 20:30 Dinner**

**MONDAY, 5.09.2022, Lecture Hall 2 Manhattan**

**Chair: J. Grams**

**10:00 – 10:20**

**O2 Fast and selective reduction of nitroarenes under visible light with an Earth-abundant plasmonic photocatalyst**

Aby Cheruvasthoor Poulouse, G. Zoppellaro, I. Konidakis, E. Serpetzoglou, E. Stratakis, M. Beller, A. Bakandritsos, R. Zbořil

*Technical University of Ostrava, Ostrava, Czech Republic*

**10:20 – 10:40**

**O4 „Problems with solutions” – in the search of the role of copper(II)-bis-aryliminoisondoline complexes in water oxidation**

D. Lukács, J.S. Pap, T. Benkó, M. Li, N.V. May, L. Vayssieres

*Centre for Energy Research, Budapest, Hungary*

**10:40 – 11:00**

**O6 Continuous flow synthesis of antibiotics catalyzed by free enzymes in modular microfluidic devices**

M. Příbyl, L. Vobecká, A. Romanov, Z. Slouka

*University of Chemistry and Technology, Prague, Czech Republic*

**11:00 – 11:30 Coffee break**

**Chair: B. Gil**

**12:10 – 12:30**

**O8 Organocatalytic Mannich reaction catalyzed by bifunctional Pro-Pro dipeptide-thiourea**

B. Zahradníková, P. Čmelová, P. Šramel, M. Mečiarová, R. Šebesta

*Comenius University in Bratislava, Bratislava, Slovakia*

**12:30 – 12:50**

**O10 Shifting mechanisms and new phases: The exciting world of high temperature dry reforming of methane observed with *in-situ* spectroscopy**

F. Schrenk, L. Lindenthal, R. Rameshan, H. Drexler, T. Berger, C. Rameshan  
*Technical University Wien, Vienna, Austria*

**12:50 – 13:10**

**O12 Designing mixed-oxides catalysts derived from hydrotalcites for efficient CO<sub>2</sub> methanation under both thermal and plasma conditions**

M. Nguyen-Quang, F. Azzolina-Jury, B. Samojeden, M. Motak, P. Da Costa  
*University of Science and Technology, Cracow, Poland*

**13:10 – 14:40 Lunch**

**Chair: A. Horváth**

**14:40 – 15:00**

**O14 Catalytic hydrogenation of CO<sub>2</sub> using cobalt-based catalysts**

Z. Kovarova, L. Kvitek  
*Palacký University in Olomouc, Olomouc, Czech Republic*

**15:00 – 15:20**

**O16 CO<sub>2</sub> hydrogenation on iron-based catalysts**

M. Kubikova, L. Kvitek, R. Pucek  
*Palacký University in Olomouc, Olomouc, Czech Republic*

**15:20 – 15:40**

**O18 Anodization of large area Ti: versatile material for caffeine photodegradation and hydrogen production**

M. Sihor, M.B. Hanif, G. Thirunavukkarasu, V. Liapun,  
M. Filip-Edelmannova, T. Roch, L. Satrapinsky, T. Plecenik, S. Rauf,  
K. Hensel, O. Monfort, M. Motola  
*Technical University of Ostrava, Ostrava, Czech Republic*

**15:40 – 16:00**

**O20 Catalysis on spherical zeolites. Hit or miss?**

M. Rutkowska, W. Dubiel, A. Jankowska, Z. Piwowarska, A. Kowalczyk,  
K. Maćkosz, J. Kawałko, L. Chmielarz  
*Jagiellonian University, Cracow, Poland*

**16:00 – 16:30 Coffee break**

**Chair: Z. Sojka**

**17:10 – 17:30**

**O22 From hydrophobic to redox-active – evolution of ligands in molecular water splitting electrocatalysts**

J.S. Pap, M. Li, S. Shen, L. Vayssieres

*Centre for Energy Research, Budapest, Hungary*

**17:30 – 17:50**

**O24 Single-atom-based co-catalysts for photocatalytic water splitting**

M. Shahrezaei, R. Sourav, S. Hejazi, G. Cha, H. Kmentova, A. Naldoni,

P. Schmuki, Š. Kment, R. Zbořil

*Technical University of Ostrava, Ostrava, Czech Republic*

**17:50 – 18:50      Poster session 1**

**19:00 – 20:30      Dinner**

**Chair: A. Ruppert**

**9:00 – 10:00 Plenary lecture 3**

**Challenges and bottlenecks in heterogeneous photocatalysis : moving beyond the state of the art**

Nicolas KELLER

*University of Strasbourg, Strasbourg, France*

**Chair: K. Góra-Marek**

**10:00 – 10:20**

**O25 Usage of various carbonaceous materials in mixed oxide - carbon composite supported Pt electrocatalysts for PEMFCs: synthesis and characterization**

I. Ayyubov, E. Tálás, I. Borbáth, T. Szabó, Z. Pászti, A. Tompos

*Research Center for Natural Sciences, Budapest, Hungary*

**10:20 – 10:40**

**O27 Using perovskites for methanol steam reforming: challenges in experiment and material design**

T. Berger, F. Schrenk, H. Drexler, L. Lindenthal, C. Rameshan

*Technical University Wien, Vienna, Austria*

**10:40 – 11:00**

**O29 The role of potassium as a promoter in nickel catalysts for steam reforming of ethanol**

M. Grełuk, M. Rotko, G. Słowik, S. Turczyniak-Surdacka, G. Grzybek,

K. Góra-Marek, A. Kotarba

*University of Maria Curie-Skłodowska in Lublin, Lublin, Poland*

**11:00 – 11:30 Coffee break**

**Chair: P. Hudec**

**11:30 – 12:10 Keynote lecture 3**

**NO direct catalytic decomposition over cobalt based mixed oxides modified by potassium**

K. Pacultová, K. Karásková, T. Bílková, K. Jirátová, L. Obalová

*Technical University of Ostrava, Ostrava, Czech Republic*

**Chair: M. Králik**

**12:10 – 12:30**

**O31 Hydrogen production using cobalt-containing zeolite catalysts.**

**Tuning the catalyst properties towards desired reaction efficiency**

G. Grzybek, P. Patulski, K. Góra-Marek, K. Tarach, M. Greluk, G. Słowik,  
M. Rotko, A. Kotarba

*Jagiellonian University, Cracow, Poland*

**12:30 – 12:50**

**O33 Supported heteropolyacid based on shape-controlled TiO<sub>2</sub> as**

**(photo)catalyst in alcohol conversion**

A. Micek-Ilnicka, M. Synowiec, M. Radecka

*Jerzy Haber Institute of Catalysis and Surface Chemistry, Cracow, Poland*

**12:50 – 13:10**

**O35 Coadsorption of NH<sub>3</sub> and NO<sub>x</sub> species on Cu-SSZ-13 in NH<sub>3</sub>-SCR process  
- spectroscopic and DFT insight**

B. Mozgawa, F. Zasada, M. Fedyna, K. Góra-Marek, P. Pietrzyk, Z. Sojka

*Jagiellonian University, Cracow, Poland*

**13:10 – 14:40 Lunch**

**Chair: M. Inger**

**14:40 – 15:00**

**O37 The influence of metal loading on the performance of cobalt catalyst  
supported on magnesium–lanthanum mixed oxide for ammonia synthesis**

H. Ronduda, M. Zybert, W. Patkowski, D. Moszyński, W. Raróg-Pilecka

*Warsaw University of Technology, Warsaw, Poland*

**15:00 – 15:20**

**O39 Rare-earth metal oxide supported cobalt catalysts for ammonia synthesis**

W. Patkowski, M. Zybert, H. Ronduda, B. Mierzwa, A. Albrecht,

D. Moszyński, A. Fidler, P. Dłużewski, W. Raróg-Pilecka

*Warsaw University of Technology, Warsaw, Poland*

**15:20 – 15:40**

**O41 NO oxidation over Cu-SSZ-13 zeolite catalyst – DFT and experimental  
insights into the mechanism of the catalyst reoxidation halfcycle of the  
NH<sub>3</sub>-SCR reaction**

F. Zasada, P. Pietrzyk, B. Mozgawa, M. Fedyna, Z. Sojka

*Jagiellonian University, Cracow, Poland*



**15:40 – 16:00**

**O43 Binuclear iron species in Fe-FER as active centers in oxidative dehydrogenation of propane**

A. Kornas, E. Tabor, K. Mlekodaj, M. Lemishka, H. Jirglová, J. Dedecek, M. Smoliło-Utrata, K. Samson, M. Śliwa, D. Rutkowska-Zbik  
*Czech Academy of Sciences, Prague, Czech Republic*

**16:00 – 16:30 Coffee break**

**Chair: M. Příbyl**

**16:30 – 17:10 Keynote lecture 4**

**Studies of different zeolite catalysts in petrochemical and refinery conversions of hydrocarbons in Slovakia**

P. Hudec

*Slovak University of Technology in Bratislava, Bratislava, Slovakia*

**Chair: Š. Kment**

**17:10 – 17:30**

**O45 Mn/Co containing perovskite catalyzed dehydrogenative synthesis of pyrimidine compounds**

S.B. Nagy, A.A. Ádám, G. Varga, P. Sipos, I. Pálinkó  
*University of Szeged, Szeged, Hungary*

**17:30 – 17:50**

**O47 Preparation of cyclopentyl ethyl ether in the presence of zeolites**

Z. Magyarová, M. Hronec, P. Lopatka, T. Soták

*Slovak University of Technology in Bratislava, Bratislava, Slovakia*

**17:50 – 18:50 Poster session 2**

**20:00 – 02:00 Symposium dinner**

**Chair: B. Horváth**

**10:00 – 10:20**

**O26 Plant-mediated synthesis of silver nanoparticles and their catalytic activity in the reduction of 4-nitrophenol**

A. Wirwis, J. Feder-Kubis, Z. Sadowski

*Technical Wroclaw University, Wroclaw, Poland*

**10:20 – 10:40**

**O28 Catalytic activity of Co<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub> nanorattles in total oxidation of volatile organic compounds**

A. Rokicińska, M. Żurowska, P. Łątka, H. Stefańska, M. Drozdek,  
M. Michalik, P. Kuśtrowski

*Jagiellonian University, Cracow, Poland*

**10:40 – 11:00**

**O30 Transition-metal-doped alkali glasses as soot combustion catalysts**

E. Jarosz, D. Knutelska, P. Legutko, M. Dziadek, M. Marzec, A. Adamski

*Jagiellonian University, Cracow, Poland*

**11:00 – 11:30 Coffee break**

**Chair: K. Foettinger**

**12:10 – 12:30**

**O32 Enhanced photoelectrochemical water oxidation activity of BiVO<sub>4</sub> using a hydrophobic iron complex**

T. Benkó, S. Shen, M. Nemeth, Á. Szamosvölgyi, A. Sági, G. Sáfrán,  
S.M. Al-Zuraiji, L. Illés, J.S. Pap

*Centre for Energy Research, Budapest, Hungary*

**12:30 – 12:50**

**O34 Efficient Ni-based catalysts for hydrogen-rich gas production from lignocellulosic biomass**

J. Grams

*Lodz University of Technology, Łódź, Poland*

**12:30 – 12:50**

**O36 Removal of phenolic pollutants from water by dual adsorption-photocatalytic system based on lignin-derived activated carbon combined with TiO<sub>2</sub>**

M. Żurowska, A. Rokicińska, P. Łątka, B. Olszański, M. Dębosz,  
P. Kuśtrowski  
*Jagiellonian University, Cracow, Poland*

**13:10 – 14:40 Lunch**

**Chair: W. Gac**

**14:40 – 15:00**

**O38 Mesoporous silicas of MCM-41 type modified with copper by TIE method as effective catalysts of low-temperature NH<sub>3</sub>-SCR process**

L. Chmielarz, A. Jankowska, A. Kowalczyk, M. Rutkowska  
*Jagiellonian University, Cracow, Poland*

**15:00 – 15:20**

**O40 Investigations of the ammonia oxidation process**

M. Inger, M. Ruszak, J. Rajewski, A. Dobrzyńska-Inger, M. Wilk  
*Łukasiewicz Research Network – New Chemical Syntheses Institute,  
Puławy, Poland*

**15:20 – 15:40**

**O42 The use of PKR catalyst in the purification of gases in the nitric acid plants**

M. Ruszak, J. Rajewski, K. Antoniak-Jurak, M. Inger, M. Wilk  
*Łukasiewicz Research Network – New Chemical Syntheses Institute,  
Puławy, Poland*

**15:40 – 16:00**

**O44 Possibilities of using the PKR catalyst in the technology of hydroxylamine production**

J. Rajewski, M. Ruszak, M. Inger, R. Sylwestrowicz, K. Koniarz, M. Wilk  
*Łukasiewicz Research Network – New Chemical Syntheses Institute,  
Puławy, Poland*

**16:00 – 16:30 Coffee break**

**Chair: A. Śrębowata**

**17:10 – 17:30**

**O46 Spectroscopic study of photoinduced processes on graphene and noble metal decorated titania nanoparticles**

D. Dvoranová, K. Czikhardtová, Z. Dyrčíková, D.M. Tobaldi

*Slovak University of Technology in Bratislava, Bratislava, Slovakia*

**17:30 – 17:50**

**O48 Catalytic R&D in VUCHT, j.s.c. Bratislava**

P. Kelemen, M. Kučera, B. Brežný, M. Králik

*VUCHT, j.s.c., Bratislava, Slovakia*

**17:50 – 18:50      Poster session 2**

**20:00 – 02:00      Symposium dinner**

**Chair: P. Stelmachowski**

**9:00 – 9:40 Keynote lecture 5**

**Selectivity of olefin conversion reactions – combined experimental and computational efforts**

A. Genest

*Technical University Wien, Vienna, Austria*

**Chair: M. Trejda**

**9:40 – 10:00**

**O49 Effect of the reductive treatment on the state and electrocatalytic behavior of Pt in catalysts supported on  $\text{Ti}_{(1-x)}\text{Sn}_x\text{O}_2\text{-C}$  composite**

C. Silva, I. Borbáth, K. Salmanzade, A. Tompos, Z. Pászti

*Research Center for Natural Sciences, Budapest, Hungary*

**10:00 – 10:20**

**O51 Base catalyzed synthesis of methyl levulinate from levulinic acid using microwave irradiation**

Y. Szabo, M. Szabados, I. Palinko, P. Sipos

*University of Szeged, Szeged, Hungary*

**10:20 – 10:40**

**O53 Synthesis of pharmaceutical intermediates by continuous-flow hydrogenation using Fe-based catalysts**

B. Zawadzki, M. Krawczyk, W. Patkowski, W. Raróg-Pilecka, K. Matus, A. Śrębowata,

*Institute of Physical Chemistry, PAS, Warsaw, Poland*

**O55 Catalytic oxidation of cellulose over vanadium-based catalysts**

T. Soták, K. Fulajtárová., B. Horváth, D. Gašparovičová,

*Slovak University of Technology in Bratislava, Bratislava, Slovakia*

**11:00 – 11:30 Coffee break**

**Chair: L. Obalová**

**11:30 – 12:10 Keynote lecture 6**

**Tunable catalysts for bio derived chemicals and fuel synthesis**

A. Ruppert

*Lodz University of Technology, Łódź, Poland*

**Chair: R. Tokarz-Sobieraj**

**12:10 – 12:30**

**O57 Hydrogenolysis of sunflower oil to value-added products over CuZn-based catalysts**

A. Smirnov, O. Kikhtyanin, D. Kubička

*University of Chemistry and Technology Prague, Czech Republic*

**12:30 – 12:50**

**O59 Hydrogenation of furanic-derived compounds on Ni catalysts**

V. Korolova, E. Grechman, O. Kikhtyanin, D. Kubička

*University of Chemistry and Technology Prague, Czech Republic*

**12:50 – 13:10 Meeting of the Symposium Board**

**13:10 – 14:40 Lunch**

**14:40 – 19:00 Free time**

**19:00 – 22:00 Grill dinner**

**WEDNESDAY, 7.09.2022, Lecture Hall 2 Manhattan**

**Chair: Ch. Rameshan**

**9:40 – 10:00**

**O50 Post-plasma functionalization and reactivity of graphene materials**

P. Stelmachowski, K. Kadela, M. Lofek, G. Grzybek, M. Gołda-Cępa,  
F. Zasada, K. Kruczała, A. Kotarba,

*Jagiellonian University, Cracow, Poland*

**10:00 – 10:20**

**O52 Hybrid carbon materials containing cobalt and molybdenum compounds as effective electrocatalysts for hydrogen evolution reaction**

A. Ilnicka, P. Romanowski, M. Skorupska, M. Szkoda, J.P. Łukaszewicz

*Nicolaus Copernicus University in Toruń, Poland*

**10:20 – 10:40**

**O54 How to tailor graphenic surface properties via oxygen functional groups**

M. Golda-Cepa, D. Kumar, M. Bialoruski, K. Hilarowicz, G. Smaga,

A. Benko, W. Piskorz, A. Kotarba

*Jagiellonian University, Cracow, Poland*

**10:40 – 11:00**

**O56 Stable Pt nanoclusters on MoS<sub>2</sub> slabs for electrocatalytic water splitting**

T. Ollár, A.A. Koós, P. Vancsó, Z.I. Popov, G. Dobrik, J.S. Pap, P.B. Sorokin,

L. Tapasztó,

*Centre for Energy Research, Budapest, Hungary*

**11:00 – 11:30 Coffee break**

**Chair: A. Micek-Ilnicka**

**12:10 – 12:30**

**O58 Effect of Al source on the synthesis of MIL-53(Al)-based catalysts and their catalytic application in the methanation of CO<sub>2</sub>**

O. Grad, A.M. Kasza, A. Turza, M.D. Lazar, M. Mihet

*National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania*

**12:30 – 12:50**

**O60 Aldol condensation of furfurals with acetone: challenges and opportunities**

A. Tampieri, K. Föttinger, N. Barrabes, F. Medina

*Technical University Wien, Vienna, Austria*

**12:50 – 13:10 Meeting of the Symposium Board**

**13:10 – 14:40 Lunch**

**14:40 – 19:00 Free time**

**19:00 – 22:00 Grill dinner**

**Chair: J. Ryczkowski**

**9:00 – 9:20**

**O61 Impact of ceria on the state of ruthenium species incorporated on mesocellular foam silica and its activity in hydrogenation of levulinic acid**

M. Trejda, K. Grzelak, J. Gurgul

*Adam Mickiewicz University, Poznań, Poland*

**9:20 – 9:40**

**O62 The effect of calcium dopant in Au/SBA-15 and Au/NbSBA-15 on the catalytic properties in oxidation of glucose and methanol**

J. Wiśniewska, I. Sobczak, M. Ziótek

*Adam Mickiewicz University, Poznań, Poland*

**9:40 – 10:00 Presentation of next Pannonia**

**10:00 – 10:20 Closing of the Symposium  
(A. Kotarba, J. Ryczkowski)**

**10:20 – 11:50 Break - leaving rooms up to 11:30**

**11:50 Lunch and departure**



## POSTERS (Monday session)

No	Author(s) and the title
1	<b>E. Svobodová</b> , Z. Gholami, Z. Tišler, Study of the deactivation mechanism of Co/Al <sub>2</sub> O <sub>3</sub> catalysts during the Fischer- Tropsch reaction
2	G. Grzybek, M. Rudzińska, K. Góra-Marek, <b>P. Stelmachowski</b> , A. Kotarba, Potassium-doped cobalt-ferrierite catalyst for the soot combustion reaction
3	<b>M. Rotko</b> , K. Karpińska-Wlizło, P. Moustris, Studies of MnO <sub>x</sub> -CeO <sub>2</sub> catalysts in the process of soot oxidation from diesel exhaust gases
4	<b>M. Rotko</b> , Investigation of the influence of oxygen mobility on the catalytic properties of Co <sub>3</sub> O <sub>4</sub> -CeO <sub>2</sub> in the process of soot oxidation from diesel exhaust gases
5	<b>Y. Gherib</b> , J. Padevět, P. Kukula, Hydrogenation of acetone to isopropanol over fixed-bed Raney-type nickel catalyst
6	B. Shumeiko, <b>D. Kubička</b> , Investigation of demethoxylation of anisole over Raney-Ni catalyst
7	<b>S. Dutta</b> , J. Aubrecht, D. Kubička, Dimethyl adipate hydrogenolysis over Cu-supported mesoporous SiAl catalysts
8	<b>B. Amin</b> , J. Aubrecht, D. Kubička, Ru-based TiO <sub>2</sub> catalysts for HMF valorization
9	<b>M. Hornáček</b> , M. Mališová, P. Hudec, The utilization of hierarchical structured ZSM-5 zeolite in chemical processes
10	D. Gašparovičová, B. Horváth, K. Fulajtárová, <b>T. Soták</b> , Liquid phase oxidation of cyclopentanone and cyclohexanone to corresponding acids over carbon-based catalysts
11	<b>S. Keszei</b> , A. Koós, G. Dobrik, L. Tapasztó, Application of first-row transition metal complexes in the electrocatalytic hydrogen evolution reaction
12	<b>W. Gac</b> , W. Zawadzki, G. Słowik, M. Greluk, M. Rotko, Ceria and alumina supported nickel catalysts for CO <sub>2</sub> methanation reaction
13	<b>T. Stryšovský</b> , L. Kvítek, Influence of temperature and particle size on hydrogenation of CO <sub>2</sub> to methanol over In <sub>2</sub> O <sub>3</sub> -based catalysts
14	U. Skałbania, <b>P. Legutko</b> , M. Marzec, M. Michalik, A. Adamski, Optimization of alkali promoter concentration in Ni-K/CeO <sub>2</sub> model catalyst suitable for dry methane reforming
15	<b>R. Buchinger</b> , H. Drexler, S. Spyroglou, T. Cotter, N. Barrabés, C. Rameshan, Zeolites as backbone for reverse water-gas shift catalysts
16	<b>T. Babii</b> , K. Jiráťová, J. Balabánová, F. Kovanda, Preparation of nickel-containing mixed oxide catalysts and their performance in the total oxidation of volatile organic compounds
17	<b>M. Hornáček</b> , M. Sater, M. Mališová, A. Peller, The treatment of spent coffee ground into biodiesel using solid catalysts
18	A. W. Morawski, E. Kusiak-Nejman, A. Wanag, U. Narkiewicz, M. Edelmannová, M. Reli, <b>K. Kočí</b> , Influence of the calcination of TiO <sub>2</sub> -reduced graphite hybrid for the photocatalytic reduction of carbon dioxide
19	<b>M. Edelmannová</b> , M. Reli, K. Kočí, I. Papailias, N. Todorova, T. Giannakopoulou, P. Dallas, E. Devlin, N. Ioannidis, Ch. Trapalis, Photocatalytic reduction of CO <sub>2</sub> over iron-modified g-C <sub>3</sub> N <sub>4</sub> photocatalysts

20	I. Majewska, W. Van Hoey, <b>A. Rokicińska</b> , M. Drozdek, M. Dębosz, P. Cool, P. Kuśtrowski, Combustion of toluene over CuO supported on $Ce_xZr_{1-x}O_2$ catalysts
21	W. Dubiel, <b>M. Rutkowska</b> , Z. Piwowarska, A. Kowalczyk, K. Maćkosz, L. Chmielarz, Synthesis of spherical ZSM-5 using reactive hard template method and verification of its activity in environmental catalysis
22	<b>K. Stankovianska</b> , T. Peňaška, M. Mečiarová, R. Šebesta, Organocatalytic synthesis of potentially biologically active dihydropyrans
23	<b>V. Meinhardová</b> , L. Dubnová, H. Drobná, L. Matějová, K. Kočí, L. Čapek, The contribution of photoreactor configuration on the hydrogen formation in photocatalytic water splitting reaction
24	M. Reli, P. Nadrah, M.F. Edelmannová, N. Rozman, <b>R. Ricka</b> , A.S. Škapin, U.L. Štangar, K. Kočí, A comparative study of $TiO_2$ preparation method on their photocatalytic activity for $CO_2$ reduction and water splitting
25	<b>L. Dubnová</b> , V. Meinhardová, D. Kouba, P. Huo, K. Kočí, L. Čapek, Preparation of GaP- $TiO_2$ photocatalysts for the photocatalytic hydrogen production from methanol/water solution
26	G. Piszter, K. Kertész, <b>G. Nagy</b> , Z. Bajia, Zs.E. Horváth, Z. Bálint, J.S. Pap, L.P. Biró, Biotemplated ZnO photonic nanoarchitectures for photocatalytic applications
27	<b>K. Tyszczyk-Rotko</b> , J. Kozak, D. Gorylewski, M. Rotko, The determination of Cr(VI) using catalytic adsorptive stripping voltammetric technique
28	<b>K. Tyszczyk-Rotko</b> , B. Czech, D. Gorylewski, J. Kozak, M. Rotko, Voltammetric procedure for U(VI) determination with the use of $TiO_2/Al_2O_3$ photocatalyst
29	<b>K. Frey</b> , J.S. Pap, D. Lukács, Z. Lábadi, D. Mukherjee, P. Petrik, Tracking surface processes on water oxidizing anodes using high-sensitivity operando ellipsometry
30	C. Hudy, J. Gryboś, F. Zasada, <b>Z. Sojka</b> , Establishment of the electronic structure based descriptors for redox pProperties of the mixed spinel catalysts
31	<b>M. Cichy</b> , M. Pańczyk, G. Słowik, W. Zawadzki, T. Borowiecki, Ni-Re alloy catalysts for methane with $CO_2$ reforming reaction
32	K. Kappis, J. Papavasiliou, G. Avgouropoulos, G. Słowik, M. Kuśmierz, <b>W. Gac</b> , Effect of noble metal promoters on the performance of $CuZnGaAlO_x$ -based catalysts for methanol steam reforming reaction
33	<b>G. Słowik</b> , M. Greluk, The influence of active phase composition and reaction temperature on the Cu-Fe catalysts activity, selectivity and stability in the steam reforming of methanol
34	<b>G. Słowik</b> , M. Greluk, The influence of active phase composition and reaction temperature on the catalytic properties of K-promoted Co-Ni/ $CeO_2$ catalysts in the steam reforming of ethanol
35	<b>L. Matějová</b> , B. Ptáčková, S. Pitkäaho, I. Troppová, D. Fridrichová, R.L. Keiski, $TiO_2$ - $CeO_2$ -CuO catalyst in oxidation of methanol and dichloromethane; On the effect of preparation method on its catalytic performance
36	G. Grzybek, P. Patulski, K. Góra-Marek, P. Stelmachowski, G. Słowik, M. Greluk, <b>A. Kotarba</b> , Removal of carbon deposit from cobalt-based catalysts of the ethanol steam reforming process

## POSTERS (Tuesday session)

No	Author(s) and the title
37	<b>A. Micek-Ilnicka</b> , M. Zimowska, K. Samson, M. Ruggiero-Mikołajczyk, M. Śliwa, D. Rutkowska-Żbik, Catalytic activity and physicochemical properties and of heteropolyacid@Cu@TiO <sub>2</sub> systems in n-butanol conversion
38	<b>A. Kowalczyk</b> , N. Szczepanik, Z. Piwowarska, L. Chmielarz, LDHs as precursors of catalysts for ammonia decomposition
39	<b>K. Simkovicova</b> , S.A. Kadam, J. Olszowka, S. Vajda, L. Kvítek, Oxidative dehydrogenation of cyclohexane on graphene oxide supported CoFe <sub>2</sub> O <sub>4</sub> nanoparticles
40	<b>I. Troppová</b> , L. Matějová, B. Ptáčková, S. Pitkääho, D. Fridrichová, R.L. Keiski, Ceramic foams with TiO <sub>2</sub> -CeO <sub>2</sub> , TiO <sub>2</sub> -CuO and TiO <sub>2</sub> -CeO <sub>2</sub> -CuO catalysts in oxidation of model volatile organic compounds
41	<b>P. Hudec</b> , J. Mikulec, M. Hornáček, A. Peller, J. Blaško, Catalytic transformation of Lignin into valuable fractions and individual hydrocarbons
42	<b>M. Mališová</b> , M. Hornáček, P. Hudec, A. Peller, E. Hájeková, Biodiesel preparation by heterogeneous transesterification of Camelina sativa oil over mixed oxides
43	<b>S. Pasieczna-Patkowska</b> , A. Kiecana, J. Ryczkowski, Comparison of photocatalytic activity and the structure of titanium-zinc catalysts doped with carbon and carbon nanotubes
44	<b>J. Gryboś</b> , P. Pełka, A. Kozak, Z. Sojka, Synthesis and characterization of the endogenous mixed oxide heterojunctions in Fe <sub>3</sub> O <sub>4</sub> and Mn <sub>3</sub> O <sub>4</sub> catalysts
45	K. Pyra, K. Tarach, M. Akouche, V. Valtchev, <b>K. Góra-Marek</b> , J.-P. Gilson, Polymer cracking on hierarchical zeolites: acidic properties vs the diffusivity of reagent molecules
46	<b>K. Karásková</b> , T. Bílková, D. Fridrichová, K. Pacultová, K. Jirátová, B. Abu-Zied, L. Obalová, Ba-Ce-Ni catalysts for NO direct decomposition
47	<b>T. Bílková</b> , K. Pacultová, D. Fridrichova, K. Karásková, M. Koštejn, K. Jirátová, L. Obalová, Effect of Mn substitution for Co in cobalt based mixed oxides on physical, chemical and catalytic properties in direct NO decomposition
48	<b>P. Adamski</b> , M. Zgrzebnicki, A. Wojciechowska, A. Jurkowski, A. Albrecht, E. Ekiert, D. Moszyński, Ammonia synthesis catalysts based on cobalt molybdenum nitrides deposited on $\gamma$ -alumina
49	<b>F. Zasada</b> , C. Hudy, K. Steenbakkens, J. Janas, Z. Sojka, CO-PROX reaction over mixed and bare cobalt spinel catalysts – molecular level insight by isotopic experiments and DFT modelling
50	B. Zawadzki, M. Krawczyk, W. Patkowski, W. Raróg-Pilecka, K. Matus, <b>A. Śrębowata</b> , Continuous-flow hydrogenation processes using transition metals as catalysts for the formation of pharmaceutical intermediates
51	<b>J. Ryczkowski</b> , S. Pasieczna-Patkowska, Applications of IR photoacoustic spectroscopy for solids
52	<b>J. Ryczkowski</b> , „Conversation” with the examined objects
53	<b>E. Soszyńska-Sumorek</b> , C. Możeński, A. Dobrzyńska-Inger, The new catalyst for the optimization of the CO <sub>2</sub> removal unit: better performance with less energy consumption

54	Z. Tišler, <b><u>K. Peroutková</u></b> , O. Gorlová, K. Strejcová, Effect of the different type Sn-precursor on the properties of Sn-doped FeMgAl-LDH
55	K. Kadela, M. Lofek, D. Maj, A. Jurczyk, A. Kasprzak, A. Ejsmont, <b><u>G. Grzybek</u></b> , T. Darvishzad, J. Gościańska, A. Kotarba, P. Stelmachowski, Plasma oxidation as pretreatment of mesoporous carbons with ultralow metal loading for oxygen evolution electrocatalysis
56	<b><u>M. Králik</u></b> , B. Horváth, V. Danielik, J. Jurišová, K. Vizárová, E. Guzikiewiczova, Catalysis and mass transport phenomena in degradation of historical cellulosic objects
57	<b><u>L. Izsák</u></b> , A. Kaszonyi, M. Králik, Pyrolytic evaluation of aging of lignocellulosic materials
58	D. Stadlbauer, T. Ruh, F. Schrenk, L. Lindenthal, M. Holly, J. Pirker, <b><u>C. Rameshan</u></b> , Catalysis: utilizing virtual reality in lab course teaching
59	<b><u>W. Zawadzki</u></b> , LabVIEW: a programming environment for scientists and students
60	<b><u>W. Zawadzki</u></b> , Catalysts preparation and investigation: laboratory exercise for students
61	M. Latschka, B. Wellscheid, R. Rameshan, G. Pacholik, <b><u>F. Valentini</u></b> , L. Balta, C. Rameshan, H. Kählig, K. Föttinger, Influence of hot liquid flowing water on Zeolite Y stability
62	S. Valtera, J. Jašík, M. Vaidulych, J.E. Olszówka, M. Bunian, Y. Lei, A. Halder, H. Tarabková, M. Jindra, M. Zlámalová, L. Kavan, O. Frank, S. Bartling, <b><u>Š. Vajda</u></b> , Oxidative dehydrogenation of cyclohexene on atomically precise subnanometer Cu, Pd and CuPd clusters: The effect of cluster size, composition and support on performance
63	<b><u>J.E. Olszówka</u></b> , Ž. Lavrič, M.I. Qadir, A. Fernández Rodríguez, A. Kroflič, N. Žilková, M. Huš, Š. Vajda, Computational design and experimental verification of new catalyst formulations for biomass conversion
64	<b><u>T. Wicht</u></b> , O. Phichairatanaphong, N. Yigit, W. Donphai, M. Chareonpanich, G. Rupprechter, Nickel loaded mixed porous metal oxide catalyst for syngas production via CO <sub>2</sub> reforming of CH <sub>4</sub> : XPS, DRIFTS and reactor studies
65	<b><u>N. Yigit</u></b> , A. Genest, S. Terloev, J. Möller, G. Rupprechter, Active sites and deactivation of room temperature CO oxidation on Co <sub>3</sub> O <sub>4</sub> catalysts: combined experimental and computational investigations
66	<b><u>A. Grzegórska</u></b> , I. Wysocka, A. Zielińska-Jurek, Coupling of Zn/Ti-layered double hydroxide with novel MXene compound for efficient photocatalytic removal of pharmaceuticals
67	<b><u>M. Kowalkińska</u></b> , S. Dudziak, A. Zielińska-Jurek, Titanium oxyfluoride as a valuable precursor for the synthesis of anatase nanostructures with exposed crystal facets
68	<b><u>S. Dudziak</u></b> , A. Fiszka-Borzyszkowska, A. Zielińska-Jurek, Identification of the main features affecting degradation of organic compounds over faceted TiO <sub>2</sub> photocatalysts
69	<b><u>M. Veselá</u></b> , M. Veselý, P. Dzik, Antibacterial activity of printed photoactive layers
70	<b><u>M. Veselý</u></b> , M. Veselá, P. Dzik, Printing of photocatalysts – upscaling to R2R
71	<b><u>A. Mizera</u></b> , P. Gwóźdź, A. Łącz, S. Górecka, K. Pacultová, E. Drożdż, Co-doped SrTiO <sub>3</sub> as a catalyst for environmental catalysis
72	<b><u>P. Gwóźdź</u></b> , A. Mizera, S. Górecka, A. Łącz, K. Górecki, K. Pacultová, E. Drożdż, Cu-modified SrTiO <sub>3</sub> as a perspective material for environmental catalysis