



October 6–10, 2020
Tomsk State University
Tomsk, Russia

CATALYSIS:

from Science to Industry

The 6th International Scientific School-Conference for Young Scientists

PROGRAM

6th INTERNATIONAL SCIENTIFIC SCHOOL-CONFERENCE FOR YOUNG SCIENTISTS “CATALYSIS: FROM SCIENCE TO INDUSTRY”

The school-conference became a regular event (held in 2011, 2012, 2014, 2016, 2018) organized by Tomsk State University (TSU) on the basis of the Laboratory of Catalytic Research. It is held in order to bring together young scientists and specialists in the field of catalysis and related sciences to disseminate advanced scientific and practical experience, to strengthen relations between catalytic schools in Russia and abroad as well as to form a scientific culture of young researchers.

The theme of the conference covers modern trends in the field of fundamental and applied catalysis featuring the basics of catalyst preparation and production, mechanisms, kinetics and modeling of chemical reactions, promising catalytic processes and application of catalytic processes in industry. Young scientists will be given a great opportunity to become familiar with research works of leading scientists, present and discuss their research results, define promising trends of scientific research, and establish collaborative relations.

ORGANIZERS

National Research Tomsk State University



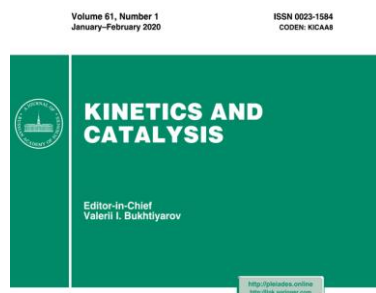
Russian Science Foundation



The Scientific School for Young Scientists “New catalysts and catalytic processes to solve the challenges of environmental responsible and resource-saving energy production” organized within a project supported by the Russian Science Foundation was held during the 6th International School-Conference for Young Scientists “Catalysis: from Science to Industry”

INFORMATION PARTNER

Journal “Kinetics and Catalysis”



PLEIADES PUBLISHING

Distributed by Springer

Kinetics and Catalysis Russian is a periodical that publishes theoretical and experimental works on homogeneous and heterogeneous kinetics and catalysis. Other topics include the mechanism and kinetics of noncatalytic processes in gaseous, liquid, and solid phases, quantum chemical calculations in kinetics and catalysis, methods of studying catalytic processes and catalysts, the chemistry of catalysts and adsorbent surfaces, the structure and physicochemical properties of catalysts, preparation and poisoning of catalysts, macrokinetics, and computer simulations in catalysis. The journal also publishes review articles on contemporary problems in kinetics and catalysis. The journal welcomes manuscripts from all countries in the English or Russian language.

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SCIENTIFIC PROGRAM

Scientific program of the school-conference consists of 10 plenary and 4 keynote lectures of leading scientists as well as oral and poster presentations of young scientists.

THE SCOPE OF THE SCHOOL-CONFERENCE

Section 1. Catalyst preparation

- Scientific fundamentals of catalyst preparation
- Advanced catalytic materials (micro- and mesoporous materials, hybrid materials, MOFs)
- Modern tendencies in development of catalyst preparation methods

Section 2. Promising catalytic processes

- Processing of oil and natural gas
- Fine organic synthesis
- Green chemistry. Photocatalysis
- Energy saving and processing of renewable feedstocks. Fuel cells, electrocatalysis

Section 3. Research methods in catalysis

- Kinetics and mechanism of catalytic reactions. Investigation of catalytic properties
- Modern research methods in catalysis. In situ and operando research
- Theoretical modeling of catalytic processes

Section 4. Industrial implementation of catalytic processes

- Fundamentals of industrial catalyst preparation
- Development of chemical processes and reactors
- Catalyst deactivation and regeneration
- Catalytic process engineering

Timetable (Moscow Time)
of the 6th International Scientific School-Conference for Young Scientists “Catalysis: from Science to Industry”

October 6, 2020, Tuesday			October 7, 2020, Wednesday			October 8, 2020, Thursday			October 9, 2020, Friday			October 10, 2020, Saturday	
09:00	Opening remarks Zoom link												
09:20	PL1 Neyman	Zoom link	09:20	PL4 Aires	Zoom link	09:20	PL7 Liotta	Zoom link	09:20	PL9 Pantaleo	Zoom link		
10:10	PL2 Karpov		10:10	PL5 Debecker		10:10	PL8 Pidko		10:10	PL10 La Parola			
11:00	Break		11:00	Break		11:00	Break		11:00	Break		10:00	Virtual lab tour Zoom link
11:15	KL1 Boronin	Zoom link	11:15	OP9 Keijzer	Zoom link	11:15	OP21 Fedorova	Zoom link	11:15	KL4 Salanov	Zoom link	10:40	Round table discussion
			11:30	OP10 Vyshegorodtseva		11:30	OP22 Kobzar						
11:45	OP1 Goncharova		11:45	OP11 Burachevskaya		11:45	OP23 Taratayko		11:45	OP26 Svintsitskiy			
12:00	OP2 Shuvarakova		12:00	OP12 Kurmanbayeva		12:00	OP24 Tereshchenko		12:00	OP27 Sheboltasov			
12:15	OP3 Stadnichenko		12:15	OP13 Butova		12:15	OP25 Polyakov		12:15	OP28 Kibis			
12:30	KL2 Yashnik		12:30	OP14 Belik		12:30	KL3 Larichev		12:30	OP29 Borisov			
			12:45	OP15 Sushnikova				12:45	OP30 Usoltsev			11:40	Close-down
13:00	Lunch/Dinner Break		13:00	Lunch/Dinner Break		13:00	Lunch/Dinner Break		13:00	Lunch/Dinner Break		Conference topics 1. Catalyst preparation. 2. Physical-chemical fundamentals of catalysis. 3. Promising catalytic processes. 4. Industrial implementation of catalytic processes.	
13:45	PL3 Cortes Corberan Zoom link		13:45	PL6 Kulinich Zoom link		13:45	Flash reports Zoom link		13:45	OP31 Dokuchits	Zoom link		
								14:00	OP32 Gorshkov				
								14:15	OP33 Chichkan				
								14:30	OP34 Kazakova				
14:35	Break		14:35	Break					14:45	Break			
14:45	OP4 Van Assche	Zoom link	14:45	OP16 Fakhrutdinova	Zoom link	14:45	Break						
15:00	OP5 Okhlopkova		15:00	OP17 Markovskaya		15:00	Poster Session		15:00	Closing remarks Zoom link			
15:15	OP6 Totarella		15:15	OP18 Kurenkova					15:20	Close-down			
15:30	OP7 Miroshnikova		15:30	OP19 Averkiev									
15:45	OP8 Ten		15:45	OP20 Mikheeva									
16:00	Close-down		16:00	Close-down		16:00	Close-down						

PL – Plenary lecture; KL – Keynote lecture; OP – Oral presentation, PP – Poster presentation

October 6, 2020, Tuesday		< Back
09:00	Opening remarks	Zoom link
<u>Plenary session</u> Chairperson – Prof: Olga Vodyankina		
09:20 PL1	Density-functional modelling of catalytic nanomaterials <u>Konstantin M. Neyman</u> ICREA and Universitat de Barcelona, Barcelona, Spain	
10:10 PL2	Catalysts for a Sustainable Future <u>Andrey Karpov</u> BASF SE, Ludwigshafen am Rhein, Germany	
11:00	Break	< Back
<u>Session 1</u> <u>Physical-chemical fundamentals of catalysis</u> Chairperson – Dr. Leonarda F. Liotta		Zoom link
11:15 KL1	Pt/CeO₂ catalysts: active sites and reaction mechanisms in CO oxidation <u>Andrei I. Boronin</u> Boreskov Institute of Catalysis, Novosibirsk, Russia	
11:45 OP1	Alcohol effect on the catalytic properties of CuO_x water-ethanol colloids obtained by laser ablation in 4-nitrophenol hydrogenation <u>Daria A. Goncharova</u> , T.S. Kharlamova, O.A. Reutova, V.A. Svetlichyi Tomsk State University, Tomsk, Russia	
12:00 OP2	Active sites on the surface of mayenite during catalytic ethanol dehydration <u>Ekaterina I. Shuvarakova</u> , A.F. Bedilo, A.S. Chichkan, E.V. Ilyina Boreskov Institute of Catalysis, Novosibirsk, Russia	
12:15 OP3	Structure-activity relationships of Pt/TiO₂ catalysts for ammonia low-temperature oxidation: comparison of pulsed laser ablation and impregnation methods of catalysts synthesis <u>Andrey I. Stadnichenko</u> ^{1,2} , L.S. Kibis ¹ , E.M. Slavinskaya ¹ , D.A. Svinstitskiy ¹ , E.A. Fedorova ¹ , O.A. Stonkus ¹ , A.V. Romanenko ¹ , V.A. Svetlichnyi ² , V. Marchuk ³ , D. Doronkin ³ , J.-D. Grunwaldt ³ , A.I. Boronin ¹ ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Tomsk State University, Tomsk, Russia ³ Karlsruhe Institute of Technology, Karlsruhe, Germany	
12:30 KL2	Diesel oxidation catalyst PtPd/MnO_x-Al₂O₃: prospects for diesel soot emission control <u>Svetlana A. Yashnik</u> Boreskov Institute of Catalysis, Novosibirsk, Russia	< Back

13:00	Lunch/Dinner Break	< Back
<u>Plenary session</u> Chairperson – Prof. Vladislav A. Sadykov		Zoom link
13:45 PL3	Selective liquid phase oxidation of alcohols: effect of supports and active metals <u>Vicente Cortés Corberán</u> Institute of Catalysis and Petroleumchemistry (ICP), CSIC, Madrid, Spain	
14:35	Break	< Back
<u>Session 2</u> <u>Promising catalytic processes</u> Chairperson – Dr. Francisco J. Cadete Santos Aires		Zoom link
14:45 OP4	Effect of platinum size of Pt/γ-Al₂O₃ catalysts on propane dehydrogenation <u>Alexandre Van Assche</u> , A. Le Valant, C. Especel, F. Epron Institut de Chimie des Milieux & Matériaux de Poitiers (IC2MP), Université de Poitiers, Poitiers, France	
15:00 OP5	Selective hydrogenation of 2-methyl-3-butyn 2-ol in microcapillary reactor. Effect of support on stability and kinetic parameters <u>Lyudmila B. Okhlopko</u> ¹ , Kerzhentsev M.A ¹ , Ismagilov Z.R. ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Institute of Coal Chemistry and Material Science, Kemerovo, Russia	
15:15 OP6	Selective Hydrogenation of 1,3-butadiene over SiO₂-supported Cu nanoparticles <u>Giorgio Totarella</u> , B. Donoeva, P.E. de Jongh Debye Institute for Nanomaterials Science, Utrecht University, Utrecht, the Netherlands	
15:30 OP7	Aspen wood ethanol lignin depolymerization in supercritical ethanol in the presence of Ni-containing catalysts <u>Angelina V. Miroshnikova</u> ¹ , V.I. Sharypov ¹ , S.V. Baryshnikov ¹ , Yu.N. Malyar ¹ , V.A. Yakovlev ² , O.P.Taran ^{1,2} , B.N. Kuznetsov ¹ ¹ Institute of Chemistry and Chemical Technology SB RAS FRC "Krasnoyarsk Scientific Center SB RAS", Russia ² FRC Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia	
15:45 OP8	Glycerol oxidative conversion over Au NPs obtained by PLAL technique <u>Sergei Ten</u> , K. Kurmanbaeva, E.A. Gavrilenko, V.A. Svetlichnyi, O.V. Vodyankina Tomsk State University, Tomsk, Russian Federation	
16:00	Close-down	< Back

October 7, 2020, Wednesday		< Back
<u>Plenary session</u> Chairperson – Prof. Andrei I. Boronin		Zoom link
09.20 PL4	Environmental (scanning & transmission) electron microscopy contribution to the study of silver-based catalysts during ethylene epoxidation <u>Francisco J. Cadete Santos Aires</u> Institute of Researches on Catalysis and Environment in Lyon, Villeurbanne, France	
10.10 PL5	Tweaking the sol-gel process to prepare tailored heterogeneous catalysts <u>Damien Debecker</u> University of Louvain, Louvain-la-Neuve, Belgium	
11.00	Break	< Back
<u>Session 3</u> <u>Catalyst preparation</u> Chairperson – Prof. Damien Debecker		Zoom link
11:15 OP9	Ordered macroporous α-alumina as catalyst support for enhanced thermal stability of silver nanoparticles <u>Petra H. Keijzer</u> , J.E. van den Reijen, C.J. Keijzer, K.P. de Jong, P.E. de Jongh Inorganic Chemistry and Catalysis, Debye Institute for Nanomaterials Science, Utrecht University, Utrecht, The Netherlands	
11:30 OP10	Design of MIL-100(Fe)/diatomite composites with hierarchical porous structure <u>Elena V. Vyshegorodtseva</u> , P.A. Matskan, G.V. Mamontov Tomsk State University, Tomsk, Russia	
11:45 OP11	The effect of linker composition on the Pd NPs distribution in UiO-66-type matrix <u>Olga A. Burachevskaya</u> ¹ , V.V. Butova ¹ , Y. Surzhikova ^{1,2} , Soldatov A.V. ¹ ¹ The Smart Materials Research Institute, Southern Federal University, Rostov-on-Don, Russia ² Institute of Physical and Organic Chemistry, Rostov-on-Don, Russia	
12:00 OP12	Immobilization of gold-silver nanoparticles in porous space UiO-66 <u>Karina Kurmanbayeva</u> , K.L. Timofeev, S. Ten, O.V. Vodyankina Tomsk State University, Tomsk, Russia	
12:15 OP13	Metalorganic frameworks for catalytic applications <u>Vera V. Butova</u> , A.L. Bugaev, E.A. Erofeeva, V.A. Polyakov, O.A. Burachevskaya, A.V. Soldatov The Smart Materials Research Institute, Southern Federal University, Rostov-on-Don, Russia	
12:30 OP14	Effect of preparation conditions on photocatalytic performance of Bi-based composites <u>Yulia A. Belik</u> , E.D. Fakhrutdinova, V.A. Svetlichyi, O.V. Vodyankina Tomsk State University, Tomsk, Russia	
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12.45 OP15	Synthesis of nanotubular titanium dioxide with high specific surface area <u>Anna A. Sushnikova</u> ^{1,2} , A.A. Valeeva ^{1,3} , I.B. Dorosheva ^{1,2,3} , A.A. Rempel ^{1,2,3} ¹ Ural Federal University, Yekaterinburg, Russia ² Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Yekaterinburg, Russia ³ Institute of Solid State Chemistry of the Ural Branch of the Russian Academy of Sciences, Yekaterinburg, Russia	Zoom link
13.00	Lunch/Dinner Break	< Back
<u>Plenary session</u> Chairperson – Dr. Ekaterina A. Kozlova		Zoom link
13.45 PL6	Homogeneous CuZn catalyst produced by laser ablation in liquid phase and its use for selective electroreduction of CO₂ to ethylene <u>Sergei Kulinich</u> Tokai University Research Institute of Science & Technology, Kanagawa, Japan	
14.35	Break	< Back
<u>Session 4</u> <u>Promising catalytic processes</u> Chairperson – Dr. Vicente Cortés Corberán		Zoom link
14:45 OP16	Bismuth silicates nanoparticles synthesized by pulsed laser ablation for photocatalytic applications <u>Elena D. Fakhrutdinova</u> , A.G. Golubovskaya, V.A. Svetlichnyi Tomsk State University, Tomsk, Russia	
15:00 OP17	Solid solutions of CdS and ZnS: comparing photocatalytic activity and photoelectrochemical properties <u>Diana V. Markovskaya</u> ^{1,2} , A.V. Zhuremok ¹ , E.A. Kozlova ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	
15:15 OP18	Investigation of photocatalyst for hydrogen evolution from glucose solution <u>Anna Y. Kurenkova</u> ¹ , E.A. Kozlova ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	
15:30 OP19	Localized temperature in plasmonic-induced photocatalysis at the single-nanoparticle level <u>Andrey A. Averkiev</u> ¹ , R.D. Rodriguez ¹ , B.N. Khlebtsov ² , R. Kato ³ , L. Kim ¹ , T. Umakoshi ³ , V. Kolchuzhin ⁴ , D.R.T. Zahn ⁵ , P. Verma ³ , E. Sheremet ¹ ¹ Tomsk Polytechnic University, Tomsk, Russia ² Institute of Biochemistry and Physiology of Plants and Microorganisms, Russian Academy of Sciences, Saratov, Russia ³ NaSpec, Department of Applied Physics, Osaka University, Yamadaoka, Suita, Osaka, Japan ⁴ Qorvo Munich GmbH, Munich, Germany ⁵ Semiconductor Physics, Chemnitz University of Technology, Chemnitz, Germany	
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15:45 OP20	Combined Sorption and Catalytic Remove of Volatile Organic Compounds over Ag-CeO₂/SBA-15 composites <u>Natalia N. Mikheeva</u> ¹ , V.I. Zaikovskii ² , G.V. Mamontov ¹ ¹ Tomsk State University, Tomsk, Russia ² Boreskov Institute of Catalysis, Novosibirsk, Russia	Zoom link
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October 8, 2020, Thursday		< Back
<u>Plenary session</u> Chairperson – Prof. Ekaterina S. Lokteva		Zoom link
09.20 PL7	Ni/CeO₂-based catalysts for CO₂ methanation reaction: Insights into promotion effects <u>Leonarda F. Liotta</u> Istituto per Lo Studio dei Materiali Nanostrutturati, CNR, Palermo, Italia	
10.10 PL8	Operando computational modelling of catalytic systems <u>Evgeny Pidko</u> Delft University of Technology, Delft, The Netherlands	
11.00	Break	< Back
<u>Session 5</u> <u>Catalyst preparation</u> Chairperson – Dr. Valeria La Parola		Zoom link
11.15 OP21	Synthesis and catalytic properties of Ni supported on ceria-zirconia with Ti, Nb and Nb+Ti for methane dry reforming <u>Valeria E. Fedorova</u> ¹ , M.N. Simonov ^{1,2} , Yu.N. Bepalko ¹ , K.R. Valeev ¹ , E.A. Smal ¹ , V.A.Sadykov ^{1,2} ¹ Boriskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	
11.30 OP22	Mechanochemical synthesis and investigation of catalysts based on MAI-layered double hydroxides (M - Mg, Ni, Co) for the selective hydrogenation of furfural <u>Elena O. Kobzar</u> ¹ , L.N. Stepanova ^{1,2} , O.B. Belskaya ^{1,3} , N.N. Leont'eva ¹ , T.I. Gulyaeva ¹ ¹ Center of New Chemical Technologies BIC, Omsk, Russia ² Dostoevsky Omsk State University, Omsk, Russia ³ Omsk State Technical University, Omsk, Russia	
11.45 OP23	Design of Ag-CeO₂/SBA-15 catalysts for room-temperature 4-nitrophenol reduction <u>Aleksey V. Taratayko</u> , G.V. Mamontov Tomsk State University, Tomsk, Russia	
12.00 OP24	In situ monitoring of Pd/CeO₂ nanoparticles growth by means of FTIR spectroscopy <u>Andrei A. Tereshchenko</u> , A.A. Guda, V.A. Polyakov, A.V. Soldatov The Smart Materials Research Institute, Rostov-on-Don, Russia	
12.15 OP25	Ultra-small Pd nanoparticles on CeO₂ for catalytic oxidation of carbon monoxide <u>Vladimir A. Polyakov</u> , A.A. Tereshchenko, A.A. Guda The Smart Materials Research Institute, Southern Federal University, Rostov-on-Don, Russia	
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12.30 KL3	Particles size determination in supported catalysts: new technique of light scattering <u>Yurii V. Larichev</u> ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	Zoom link
13.00	Lunch/Dinner Break	< Back
<u>Flash reports</u> Chairpersons – Dr. Yurii V. Larichev		Zoom link
13:45 FR1	Hierarchical SiO₂ materials and Pt-Ga catalysts on basis thereof for propane dehydrogenation <u>Alexander V. Zubkov</u> , E.V. Vyshegorodtseva, T.A. Bugrova, G.V. Mamontov Tomsk State University, Tomsk, Russia	
13:50 FR2	Investigation of Pt/CeO₂-MnO_x catalysts in CO and methane oxidation reactions <u>Alexander A. Simanenko</u> ^{1,2} , A.I. Stadnichenko ^{1,2} , E.M. Slavinskaya ^{1,2} , A.A. Evtushkova ^{1,2} , E.A. Fedorova ² , O.A. Stonkus ^{1,2} , A.V. Romanenko ² , A.I. Boronin ^{1,2} ¹ Novosibirsk State University, Novosibirsk, Russia ² Boreskov Institute of Catalysis, Novosibirsk, Russia	
13:55 FR3	XPS study of Rh-CeO₂ catalysts under CO+NO treatments <u>Alena I. Krotova</u> ^{1,2} , L.S. Kibis ^{1,2} , D.A. Svintsitskiy ^{1,2} , E.A. Fedorova ¹ , E.M. Slavinskaya ^{1,2} , O.A. Stonkus ^{1,2} , A.I. Boronin ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	
14:00 FR4	Ag–CeO₂ catalysts for toluene oxidation and 4-nitrophenol reduction <u>Maria V. Chernykh</u> , N.N. Mikheeva, G.V. Mamontov Tomsk State University, Tomsk, Russia	
14:05 FR5	Effect of mechanical activation on the integrated extraction-catalytic processing of pine bark <u>Vladislav A. Ionin</u> ¹ , M.Yu. Belash ¹ , A.M. Skripnikov ¹ , V.V. Sychev ¹ , A.S. Kazachenko ¹ , O.P. Taran ^{1,2} ¹ Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk, Russia ² Siberian Federal University, Krasnoyarsk, Russia	
14:10 FR6	Transfer hydrogenation of levulinic acid and its esters to γ-valerolactone over Zr-SBA-15 catalyst <u>Valentin V. Sychev</u> , A.O. Eremina, O.P. Taran Institute of Chemistry and Chemical Technology SB RAS, FRC KSC SB RAS, Krasnoyarsk, Russia	
14:15 FR7	Paramagnetic complexes of 9,10-anthraquinone on a zirconium dioxide surface <u>Yurii A. Fionov</u> ¹ , A.V. Fionov ² , A.I. Pylinina ¹ , A.N. Kharlanov ² ¹ PFUR, Faculty of Physical, Mathematical and Natural Sciences, Moscow, Russia ² Department of chemistry, Lomonosov Moscow State University, Moscow, Russia	< Back

14:20 FR8	Enhancing the photocatalytic activity of two-dimensional materials with plasmonic nanoparticles and laser processing <u>Dmitry Cheshev¹</u> , R.D. Rodriguez ¹ , A. Matkovic ² , E. Sheremet ¹ ¹ Tomsk Polytechnic University, Tomsk, Russia ² Institute of Physics, Montanuniversität Leoben, Austria	Zoom link
14:25 FR9	Synthesis and characterization of the TiO₂ photonic crystals in the form of inverse opals <u>Mikhail V. Kirichkov¹</u> , V. Likodimos ² ¹ The Smart Materials Research Institute, Southern Federal University, Rostov-on-Don, Russia ² National and Kapodistrian University of Athens, Athens, Greece	
14:30 FR10	Photocatalytic hydrogen production from aqueous solutions of methylene blue under UV light over Cu modified TiO₂ <u>Angelina V. Zhurenok¹</u> , A.Y. Kurenkova ¹ , D.V. Markovskaya ^{1,2} , S.V. Cherepanova ^{1,2} , V.V. Kaichev ^{1,2} , E.A. Kozlova ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	
14:35 FR11	Enhancement of visible light activity of N-doped TiO₂ photocatalyst under polychromatic radiation due to a tandem effect <u>Nikita S. Kovalevskiy^{1,2}</u> , D.A. Svintsitskiy ^{1,2} , S.A. Selishcheva ^{1,2} , D.V. Kozlov ^{1,2} , D.S. Selishchev ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	
14:40 FR12	Investigation of catalysts of various compositions of Pd-Bi/Al₂O₃ in the reaction of glucose oxidation into gluconic acid <u>Mariya P. Sandu</u> , I.A. Kurzina National Research Tomsk State University, Tomsk, Russia	
14:45	Break	< Back
15:00	<u>Poster Session</u>	
PP1 Zoom link	Hierarchical SiO₂ materials and Pt-Ga catalysts on basis thereof for propane dehydrogenation <u>Alexander V. Zubkov</u> , E.V. Vyshegorodtseva, T.A. Bugrova, G.V. Mamontov Tomsk State University, Tomsk, Russia	
PP2 Zoom link	Investigation of Pt/CeO₂-MnO_x catalysts in CO and methane oxidation reactions <u>Alexander A. Simanenko^{1,2}</u> , A.I. Stadnichenko ^{1,2} , E.M. Slavinskaya ^{1,2} , A.A. Evtushkova ^{1,2} , E.A. Fedorova ² , O.A. Stonkus ^{1,2} , A.V. Romanenko ² , A.I. Boronin ^{1,2} ¹ Novosibirsk State University, Novosibirsk, Russia ² Boreskov Institute of Catalysis, Novosibirsk, Russia	
PP3 Zoom link	<u>XPS study of Rh-CeO₂ catalysts under CO+NO treatments</u> <u>Alena I. Krotova^{1,2}</u> , L.S. Kibis ^{1,2} , D.A. Svintsitskiy ^{1,2} , E.A. Fedorova ¹ , E.M. Slavinskaya ^{1,2} , O.A. Stonkus ^{1,2} , A.I. Boronin ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia	

PP4 Zoom link	Ag–CeO₂ catalysts for toluene oxidation and 4-nitrophenol reduction Maria V. Chernykh, N.N. Mikheeva, G.V. Mamontov Tomsk State University, Tomsk, Russia
PP5 Zoom link	Effect of mechanical activation on the integrated extraction-catalytic processing of pine bark Vladislav A. Ionin ¹ , M.Yu. Belash ¹ , A.M. Skripnikov ¹ , V.V. Sychev ¹ , A.S. Kazachenko ¹ , O.P. Taran ^{1,2} ¹ Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk, Russia ² Siberian Federal University, Krasnoyarsk, Russia
PP6 Zoom link	Transfer hydrogenation of levulinic acid and its esters to γ-valerolactone over Zr-SBA-15 catalyst Valentin V. Sychev, A.O. Eremina, O.P. Taran Institute of Chemistry and Chemical Technology SB RAS, FRC KSC SB RAS, Krasnoyarsk, Russia
PP7 Zoom link	Paramagnetic complexes of 9,10-anthraquinone on a zirconium dioxide surface Yurii A. Fionov ¹ , A.V. Fionov ² , A.I. Pylinina ¹ , A.N. Kharlanov ² ¹ PFUR, Faculty of Physical, Mathematical and Natural Sciences, Moscow, Russia ² Department of chemistry, Lomonosov Moscow State University, Moscow, Russia
PP8 Zoom link	Enhancing the photocatalytic activity of two-dimensional materials with plasmonic nanoparticles and laser processing Dmitry Cheshev ¹ , R.D. Rodriguez ¹ , A. Matkovic ² , E. Sheremet ¹ ¹ Tomsk Polytechnic University, Tomsk, Russia ² Institute of Physics, Montanuniversität Leoben, Austria
PP9 Zoom link	Synthesis and characterization of the TiO₂ photonic crystals in the form of inverse opals Mikhail V. Kirichkov ¹ , V. Likodimos ² ¹ The Smart Materials Research Institute, Southern Federal University, Rostov-on-Don, Russia ² National and Kapodistrian University of Athens, Athens, Greece
PP10 Zoom link	Photocatalytic hydrogen production from aqueous solutions of methylene blue under UV light over Cu modified TiO₂ Angelina V. Zhurenok ¹ , A.Y. Kurenkova ¹ , D.V. Markovskaya ^{1,2} , S.V. Cherepanova ^{1,2} , V.V. Kaichev ^{1,2} , E.A. Kozlova ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia
PP11 Zoom link	Enhancement of visible light activity of N-doped TiO₂ photocatalyst under polychromatic radiation due to a tandem effect Nikita S. Kovalevskiy ^{1,2} , D.A. Svintsitskiy ^{1,2} , S.A. Selishcheva ^{1,2} , D.V. Kozlov ^{1,2} , D.S. Selishchev ^{1,2} ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia
PP12 Zoom link	Investigation of catalysts of various compositions of Pd-Bi/Al₂O₃ in the reaction of glucose oxidation into gluconic acid Mariya P. Sandu, I.A. Kurzina National Research Tomsk State University, Tomsk, Russia

PP13	Catalytic properties of nickel-aluminium-titanium NASICON-type phosphates in ethanol conversion
Zoom link	<u>Diana A. Osaulenko</u>¹, A.I. Pylinina¹, E.A. Asabina², I.O. Glukhova² ¹RUDN University, Moscow, Russia ²Lobachevsky State University of Nizhni Novgorod (UNN), Nizhni Novgorod, Russia
PP14	Effect of pulsed laser irradiation on optical and photocatalytic properties of dark TiO₂
Zoom link	<u>Zhanna P. Fedorovich</u>, E.D. Fakhrutdinova, V.A. Svetlichnyi Tomsk State University, Tomsk, Russia
PP15	Quantum-chemical analysis of the effect of water molecules on the kinetics of 2-methylimidazole formation
Zoom link	<u>Andrei V. Kotov</u>¹, A.V. Fateev^{1,2}, V.P. Tuguldurova¹ ¹Tomsk State University, Tomsk, Russia ²Tomsk State Pedagogical University, Tomsk, Russia
PP16	Investigation of the semiconducting properties of bismuth silicate-based photocatalysts by electrochemical methods
Zoom link	<u>Oksana V. Dubinina</u>, A.V. Shabalina, E. Yu. Gotovtseva, O.V. Vodyankina Tomsk State University, Tomsk, Russia
PP17	Catalytic oxidation of CO over Fe-, Sn-, and Ce-modified MnO₂ catalysts
Zoom link	<u>Ekaterina V. Kulchakovskaya</u>¹, T.S. Kharlamova¹, V.V. Verkhov¹, V.O. Trufanov¹, F.J. Cadete Santos Aires^{1,2}, V.I. Sobolev^{1,3}, O.V. Vodyankina¹ ¹Tomsk State University, Tomsk, Russia ²Univ. Lyon, Université Claude Bernard Lyon 1, CNRS, IRCELYON, Villeurbanne, France ³Institute of Catalysis SB RAS, Novosibirsk, Russia
PP18	Catalytic properties of CuO_x NPs obtained by pulsed laser ablation
Zoom link	<u>Olesya A. Reutova</u>, D.A. Goncharova, T.S. Kharlamova, O.V. Vodyankina, V.A. Svetlichyi Tomsk State University, Tomsk, Russia
PP19	Thermodynamic analysis of the steam/CO₂ reforming of methane
Zoom link	<u>Alina Yu. Korenyuk</u>¹, E.V. Matus², I.Z. Ismagilov², M.A. Kerzhentsev², Z.R. Ismagilov^{2,3} ¹Novosibirsk State Technical University, Novosibirsk, Russia ²Boreskov Institute of Catalysis, Novosibirsk, Russia ³Institute of Coal Chemistry and Material Science, Kemerovo, Russia
PP20	Combined synthesis and hydroprocessing of hydrocarbons via Co-SiO₂/Ni-ZSM-5/Al₂O₃ catalyst
Zoom link	<u>Roman E. Yakovenko</u>, I.N. Zubkov, V.N. Soromotin, G.B. Narochniy, A.P. Savost'yanov M.I. Platov South-Russian State Polytechnic University (NPI), Novocherkassk, Russia
16:00	Close-down < Back

October 9, 2020, Friday		< Back
<u>Plenary session</u> Chairperson – Dr. Svetlana A. Yashnik		Zoom link
09.20 PL9	NO_x SCR by ammonia in naval sector. An Italian industrial research project <u>Giuseppe Pantaleo</u> Istituto per lo studio dei materiali nanostrutturati (ISMN-CNR), Palermo, Italy	
10.10 PL10	Methane conversion to syngas <u>Valeria La Parola</u> Istituto per Lo Studio dei Materiali Nanostrutturati, CNR, Palermo, Italia	
11.00	Break	< Back
<u>Session 6</u> <u>Physical-chemical fundamentals of catalysis /</u> <u>Industrial implementation of catalytic processes</u> Chairperson – Prof. Konstantin M. Neyman		Zoom link
11.15 KL4	Microscopy study of the catalytic etching of platinum alloy catalyst gauzes during ammonia oxidation <u>Aleksei N. Salanov</u> , N.M. Chesnokova Borekov Institute of Catalysis, Novosibirsk, Russia	
11.45 OP26	Selective oxidation of ammonia over Pt-based catalysts <u>Dmitry A. Svintsitskiy</u> ¹ , E.M. Slavinskaya ¹ , E.A. Fedorova ¹ , L.S. Kibis ¹ , A.I. Stadnichenko ¹ , A.V. Romanenko ¹ , A.S. Zaguzin ¹ , O.A. Stonkus ¹ , D.E. Doronkin ^{2,3} , V. Marchuk ² , M. Casapu ² , J.-D. Grunwaldt ^{2,3} , A.I. Boronin ¹ ¹ Borekov Institute of Catalysis, Novosibirsk, Russia ² Institute for Chemical Technology and Polymer Chemistry, Karlsruhe, Germany ³ Institute of Catalysis Research and Technology, Karlsruhe Institute of Technology, Karlsruhe, Germany	
12.00 OP27	Integrated catalytic purification of waste gases in nitric acid plants from nitrogen oxides (NO_x and N₂O) <u>Artem G. Sheboltasov</u> ^{1,2} , N.V. Vernikovskaya ^{1,2} , V.A. Chumachenko ¹ ¹ Borekov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State Technical University, Novosibirsk, Russia	
12.15 OP28	Rh-doped CeO₂ catalytic systems for low-temperature NO reduction <u>Lidiya S. Kibis</u> ^{1,2} , A.I. Krotova ^{1,2} , D.A. Svintsitskiy ^{1,2} , E.A. Fedorova ¹ , E.M. Slavinskaya ^{1,2} , O.A. Stonkus ^{1,2} , V.A. Svetlichnyi ³ , A.I. Boronin ^{1,2} ¹ Borekov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State University, Novosibirsk, Russia ³ Tomsk State University, Tomsk, Russia	
12.30 OP29	Effect of high-temperature treatment of Sibunit and content of Ru on the activity of Ru-Cs/Sibunit catalysts in ammonia synthesis <u>Vadim A. Borisov</u> ^{1,2} , K.N. Iost ¹ , V.L. Temerev ¹ , P.A. Fedotova ² , Yu.V. Surovikin ^{1,2} , D.A. Shlyapin ¹ ¹ Center of New Chemical Technologies BIC, Omsk, Russia ² Omsk State Technical University, Omsk, Russia	
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12:45 OP30	Machine learning application for XANES spectroscopy of Pd nanocatalyst <u>Oleg A. Usoltsev</u> ¹ , A.L. Bugaev ^{1, 2} , A.A. Guda ¹ , S.A. Guda ¹ , A.V. Soldatov ¹ ¹ Southern Federal University, Rostov-on-Don, Russia ² Federal State Budgetary Institution of Science "Federal Research Centre The Southern Scientific Centre of The Russian Academy of Sciences", Rostov-on-Don, Russia	Zoom link
13:00	Lunch/Dinner Break	< Back
<u>Session 7</u> <u>Promising catalytic processes</u> Chairperson – Dr. Giuseppe Pantaleo		Zoom link
13:45 OP31	Syngas conversion over perovskite-like LaCu_xTi_{1-x}O₃/KIT 6 catalysts <u>Eugene V. Dokuchits</u> , T.V. Larina, E.Yu. Gerasimov, A.A. Pochtar, T.P. Minyukova Boreskov Institute of Catalysis, Novosibirsk, Russia	
14:00 OP32	Experimental research of Fisher-Tropsh synthesis with nitrogen-rich syngas under different pressures of synthesis <u>Andrei S. Gorshkov</u> ¹ , I.S. Ermolaev ² , K.O. Gryaznov ² , L.V. Sineva ² , I.G. Solomonik ² , V.Z. Mordkovich ^{1,2} ¹ INFRA LLC ² Technological Institute for Superhard and Novel Carbon Materials	
14:15 OP33	Preparation of low-sulfur coke from tar <u>Aleksandra S. Chichkan</u> ^{1,2} , V.V. Chesnokov ¹ ¹ Boreskov Institute of Catalysis, Novosibirsk, Russia ² Novosibirsk State Technical University, Novosibirsk, Russia	
14:30 OP34	Non-oxidative catalytic conversion of methane and C5-hydrocarbons <u>Olga A. Kazakova</u> , N.V. Vinichenko, A.E. Fedorov, T.I. Gulyaeva, V.A. Drozdov, A.S. Belyi Center of New Chemical Technologies BIC, Boreskov Institute of Catalysis, Omsk, Russia	
14:45	Break	< Back
15:00	Closing remarks	Zoom link
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October 10, 2020, Saturday		
10:00	Virtual lab tour	Zoom link
10:40	Round table discussion	
11:40	Close-down	< Back