The 7th International
Scientific School-Conference
for Young Scientists

CATALYSIS:
FROM SCIENCE TO INDUSTRY

October 11–15, 2022
Tomsk State University
Tomsk, Russia

PROGRAM

7th 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, 2020) organized by Tomsk State University 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.

In 2022, the school-conference is held as a part of the events dedicated to the 90th anniversary of the Department of Chemistry of Tomsk State University.

ORGANIZERS

National Research Tomsk State University
Laboratory of Catalytic Research

PARTNERS AND SPONSORS

Engineering Chemical Technology Center
Scientific and Commercial Center "LABTEST"

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 19-73-30026 supported by the Russian Science Foundation is held during the 7th International School-Conference for Young Scientists "Catalysis: from Science to Industry".

INFORMATION PARTNER

Journal "Kinetics and Catalysis

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SCIENTIFIC PROGRAM

Scientific program of the school-conference consists of 7 plenary and 12 keynote lectures of leading scientists as well as oral and poster presentations of young scientists.

THE SCOPE OF THE SCHOOL-CONFERENCE

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

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

Physical-chemical fundamentals of 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

Industrial implementation of catalytic processes

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

WORKING LANGUAGE

The working language of the school-conference is English.

PUBLICATIONS

All abstracts are published in the school-conference proceedings e-book. An International Standard Book Number (ISBN) is assigned to the e-book.

Authors of selected contributions will be invited to submit full papers to *Kinetics and Catalysis*.

Kinetics and Catalysis is an international peer-reviewed journal 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.

All reports are clickable

Timetable (Tomsk Time)

of the 7th International Scientific School-Conference for Young Scientists "Catalysis: from Science to Industry"

Catalyst preparation

Physical-chemical fundamentals of catalysis

Promising catalytic processes

Industrial implementation of catalytic processes

PL – Plenary lecture;

KL – Keynote lecture;

SP – Sponsor/Partner presentation;

OP – Oral presentation

10:00–13:40 **Registration**

Old building of TSU Scientific Library
Lenin Ave. 34a, Tomsk

October 11, 2022 Tuesday

13:40	**Opening remarks**	
14:00	**PL1 Neyman**	
14:50	**PL2 Gordeeva**	
15:40	**SP LABTEST**	
15:55	**Coffee break**	
16:15	**KL1 Gabrienko**	**OP5** Bogdanov
16:30		**OP6** Ardakova
16:45	**OP4** Larionov	**OP7** Kaplin
17:00	**OP2** Lashichinskaya	**OP8** Gorlova
17:15	**OP3** Yurpalov	**OP9** Borisov
17:30	**Close-down**	

October 12, 2022 Wednesday

09:00	**PL3 Kozlova**	
09:50	**PL4 Deng**	
10:40	**Location change/Coffee break**	
11:15	**OP10** Ananina	**OP17** Belik
11:30	**OP11** Glyzdova	**OP18** Golubovskaya
11:45	**OP12** Bulavchenko	**OP19** Zhurenok
12:00	**OP13** Metalnikova	**OP20** Markovskay
12:15	**OP14** Veretelnikov	**OP21** Reutova
12:30	**OP15** Markova	**OP22** Kurenkova
12:45	**OP16** Gorshkov	**KL2 Krylov**
13:00	**Lunch break**	
13:15		
14:15	**PL5 Lokteva**	
15:05	**Location change**	
15:20	**Flash reports**	**KL3 Liotta**
15:40		**OP23** Dmitrachkov
16:05		**OP24** Stadnichenko
16:20		**KL4 Yashnik**
16:50	**Coffee break**	
17:10	**Poster session (online)**	
18:00	**Close-down**	

October 13, 2022 Thursday

09:00	**PL6 Boronin**	
09:50	**PL7 Xiong**	
10:40	**Location change/Coffee break**	
11:15	**OP25** Taratayko	**KL6 Svintsitskiy**
11:30	**OP26** Bushmin	
11:45	**KL5 Yakhvarov**	**OP31** Kibis
12:00		**OP32** Bukhtiyarov
12:15	**OP27** Shkerina	**OP33** Panafidin
12:30	**OP28** Timofeev	**OP34** Pnevskaya
12:45	**OP29** Redina	**OP35** Tereshchenko
13:00	**OP30** Stepanova	**OP36** Usoltsev
13:15	**Lunch break**	
14:15	**OP37** Vinogradov	**OP42** Marikovskaya
14:30	**OP38** Sychev	**OP43** Larina
14:45	**OP39** Gromov	**OP44** Pankin
15:00	**OP40** Miroshnikova	**OP45** Kharchenko
15:15	**KL12 Belskaya**	**OP46** Mikhnenko
15:30		**OP47** Timoshkina
15:45	**Break**	**OP48** Nartova
16:00	**Poster session (with coffee break)**	
18:00	**Close-down**	

October 14, 2022 Friday

09:30	**Excursion Laboratories**	
10:30		
11:00	**OP49** Agliulin	**KL8 García Serpas**
11:15	**OP50** Matskan	
11:30	**KL7 Larichev**	**KL9 Pimerzin**
11:45		
12:00	**OP51** Mashkin	**KL10 Mamontov**
12:15	**OP52** Miskevich	
12:30	**OP53** Chernykh	**KL11 Egorova**
12:45	**OP54** Kuriganova	
13:00	**Lunch break**	
14:00	**Excursion Pilot/Industrial site**	
17:20	**Coffee break**	
17:40	**Closing remarks**	
18:00	**Close-down**	

Oct. 15, 2022 Saturday

Tour of Van Classen

< Back - back to timetable; **zoom** - link to zoom meeting; - file link

Session 2

zoom

Promising catalytic processes

Chairperson – Prof. Dmitry G. Yakhvarov

Scientific Library of Tomsk State University, Small Conference Room

16:15 OP5 **The effect of indium oxide additives into Pd/WO_3-ZrO_2 catalysts for the isomerization of heptane**

V.A. Shkurenok[1], M.D. Smolikov[1], Danil A. Bogdanov[2], T.I. Gulyaeva[1], I.V. Muromtsev[1], S.S. Yablokova[1], A.V. Lavrenov[1]

[1]Center of New Chemical Technologies, Boreskov Institute of Catalysis, Omsk, Russia

[2]Omsk State Technical University, Omsk, Russia

16:30 OP6 **Influence of the Si/Al ratio on the ratio of isomerization/cracking reactions in the hydroisomerization of fatty acids triglycerides**

Elizaveta A. Ardakova[1], N.A. Vinogradov[1], A.P. Glotov[2], A.V. Vutolkina[2], A.A. Pimerzin[1,2,3]

[1]Samara State Technical University, Samara, Russia

[2]Moscow State University, Moscow, Russia

[3]Gazpromneft – Industrial Innovations LLC, Saint Petersburg, Russia

16:45 OP7 **Preferential CO oxidation in H_2: effect of modification by copper and manganese on catalytic performance of ceria-silica templated systems**

Igor Yu. Kaplin, E.D. Boltkov, K.I. Maslakov, E.S. Lokteva

Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

17:00 OP8 **Ceria-zirconia supported platinum catalysts for water gas shift reaction: The role of reaction conditions and catalyst composition**

Anna M. Gorlova[1,2], D.I. Potemkin[1,2], O.A. Stonkus[1,2], V.N. Rogozhnikov[1], V.P. Pakharukova[1,2]

[1]Boreskov Institute of Catalysis, Novosibirsk, Russia

[2]Novosibirsk State University, Novosibirsk, Russia

17:15 OP9 **Ammonia decomposition Ru-Ba/ANF catalysts for hydrogen energy**

Vadim A. Borisov[1], V.L. Temerev[1], M.M. Simunin[2], N.N. Leont'eva[1], D.A. Shlyapin[1], P.V. Snytnikov[3]

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17:30 **Close-down**

< Back