



Dear colleagues,

It is a pleasure to announce the 5th International School-Conference on Catalysis for Young Scientists "Catalyst Design: From Molecular to Industrial Level" to be held at N.D. Zelinsky Institute of Organic Chemistry RAS (Moscow, Russia) on May 20-23, 2018. This event continues the tradition established in Novosibirsk, Russia (2002), Altay, Russia (2005), Yekaterinburg, Russia (2009), and Kazan, Russia (2015).

The School-Conference is directed to young researchers, Ph.D. students and undergraduates involved in different fields of catalysis research. Catalysis is a fast developing multidisciplinary area facing the challenges of novel chemical technologies. This event will provide the students with approaches for acquiring a deep know-how and a strong background on the fundamentals of catalysis. The lectures of leading scientists will be focused on recent advances in the basics of preparation, characterization and modeling of new catalysts, catalytic systems and catalytic processes. Particular attention will be paid to the role of catalysis in fine organic synthesis, electrochemistry, and environmental protection - the research areas attracting much attention of modern scientific society. Participants will have a unique opportunity to discuss their own research with leading experts in various fields.

We are looking forward to seeing you at the School-Conference!

Organizing Committee

School-Conference Organizers



Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia



N.D. Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia



A.V. Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia



Lomonosov Moscow State University, Moscow, Russia



Novosibirsk State University, Novosibirsk, Russia

Scientific Committee

Prof. Valentine P. ANANIKOV	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Prof. Mikhail P. EGOROV	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Prof. Graham HUTCHINGS	Cardiff Catalysis Institute, Cardiff University, Cardiff, United Kingdom
Prof. Salambek N. KHADZHIEV	Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia
Prof. Ivan V. KOZHEVNIKOV	University of Liverpool, Liverpool, United Kingdom
Dr. Axel KNOP-GERICKE	Fritz Haber Institute of the Max Planck Society, Berlin, Germany
Prof. Ekaterina S. LOKTEVA	Lomonosov Moscow State University, Moscow, Russia
Prof. Valerii V. LUNIN	Lomonosov Moscow State University, Moscow, Russia
Prof. Oleg N. MARTYANOV	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Prof. Anton L. MAXIMOV	Topchiev Institute of Petrochemical Synthesis RAS, Moscow
Dr. Claude MIRODATOS	Institute of Researchers on Catalysis and Environment in Lyon, France
Prof. Konstantin M. NEYMAN	ICREA & University of Barcelona, Barcelona, Spain
Prof. Valentin N. PARMON	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Prof. Alexander Yu. STAKHEEV	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

Organizing Committee

Prof. Oleg N. Martyanov	Co-chair, Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Prof. Alexander Yu. Stakheev	Co-chair, Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Dr. Mariya V. Alekseeva	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Marina V. Bukhtiyarova	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Olesya O. Zaikina	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Andrey A. Smirnov	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Ivan A. Yaremenko	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Dr. Olga V. Turova	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Secretariat: Marina S. Suvorova	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

Scientific program

The scientific program of the School-Conference will include invited plenary lectures (30 min), oral presentations (15 min) and poster presentations.

The main topics are:

- ◆ Catalysts preparation
- ◆ Characterization and *in situ* studies of catalysts
- ◆ Mechanism and kinetics of catalytic reactions
- ◆ Catalysis for environmental protection
- ◆ Catalysis for fine organic synthesis, natural gas and oil processing, petroleum chemistry
- ◆ Catalysis for energy efficient processes, photocatalysis and electrocatalysis

English will be the official language of the School-Conference.

Plenary speakers

Dr. Detre Teschner

Fritz-Haber Institute of the Max-Planck Society, Berlin, Germany

Mechanism and kinetics on the example of the heterogeneous catalytic Deacon reaction

Dr. Mikhail Yu. Sinev

Semenov Institute of Chemical Physics RAS, Moscow, Russia

Oxygen activation and pathways in high temperature catalytic oxidation

Prof. Claude Mirodatos

Institute of Researchers on Catalysis and Environment in Lyon, Lyon, France

From catalytic reaction mechanism to catalyst design: a valuable but complex pathway

Prof. Dr. Beatriz Roldan Cuenya

Fritz-Haber Institute of the Max Planck Society, Berlin, Germany

Operando Nanocatalysis

Prof. Dr. Eric Gaigneaux

Catholic University of Leuven, Louvain-la-Neuve, Belgium

Prof. Dr. Evgeny A. Pidko

Delft University of Technology, Delft, The Netherlands

ITMO University, St. Petersburg, Russia

Balancing reductionist and systems approaches in computational catalysis: questions of accuracy and adequacy

Prof. Dr. Marc Koper

Leiden University, Leiden, The Netherlands

Multiple proton-coupled electron transfer for electrocatalysis

Prof. Dr. Unni Olsbey

Oslo University, Oslo, Norway

Understanding the selectivity of the Methanol to Hydrocarbons process at the molecular level

Prof. Erik Heeres

University of Groningen, Groningen, the Netherlands

Catalytic conversion of biomass to biobased chemicals

Prof. Vladimir Gevorgyan

University of Illinois at Chicago, Chicago, USA

Development of novel C–H functionalization methodologies

Abstract submission

Authors of all contributions are invited to submit one or two page abstracts (A4) in English. Tables, artworks and references will be accepted within this limit. The text should be typed 1.25 line spaced with 2.5 cm all around margins. Please use Calibri 12 pt. References should be cited in the order of occurrence in the text as a numbers in square brackets [1]. Please use the example of abstract on the conference site <http://conf.nsc.ru/catdesign2018/en>.

Location

Moscow is the capital of Russia. The first known reference to Moscow dates from 1147. It is situated in the centre of European Russia, 8 hours by car or train from St. Petersburg, 4 hours by plane from London, 2.5 hours by plane from Berlin (or 36 hours by train), 6 hours by plane from India, 6 days by Trans-Siberian train from Beijing. Moscow is one of the largest cultural and tourist centres of Europe and the world. There are a lot of different places of interest in the city - various historical, cultural, and architectural sites. The Kremlin, the Red Square, the Bolshoi Theater, A.S.Pushkin Fine Arts Museum, and Tretyakov Gallery are among the most famous Moscow sights. Such sights as the Novodevichy monastery and Kolomenskoye estate are included in the UNESCO World Heritage List.

Venue

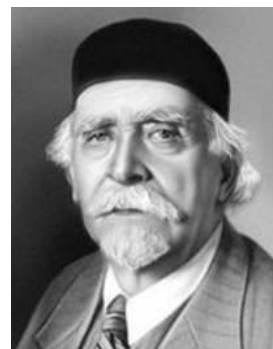


The School-Conference will be held at N.D. Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia.

Since its very start the Institute has been gathering the elite of Russian chemical community, including Professors A.E. Favorsky, N.D. Zelinsky, A.A. Balandin, I.N. Nazarov, I.L. Knunyants, V.V. Korshak, L.F. Vereshchagin,

M.I. Kabanchik and many other outstanding scholars. Various globally acknowledged scientific schools and areas have been developing within the Institute, Profs. V.N. Ipatiev and A.E. Chichibabin's among them.

Nikolay D. Zelinsky headed one of the Institute's departments in 1936-53 and made a great contribution to the Institute advancement. He worked in various areas of organic chemistry, including theory and practice of the organic catalysis, hydrocarbon chemistry and oil refining. His studies in adsorption led to the creation of a carbon gas-mask that saved thousands of people in the World War I. His inventions and scientific heritage brought fame to this country and Institute of Organic Chemistry. In 1953, the Institute received its present name – N.D. Zelinsky Institute of Organic Chemistry.



N.D. Zelinsky Institute of Organic Chemistry RAS (ZIOC RAS) is one of the largest centers for basic and applied research in the field of organic synthesis, physical-organic, bioorganic and specialty chemistry, and catalysis. The Institute implements prospective R&D projects in accordance with the technological priorities of the Russian Federation.

At present, the Institute's overall goal in basic research is attaining new data on transformations and structure of organic compounds, mechanisms of chemical reactions, discovery of new reactions, synthesis of new classes of organic compounds, design of new catalysts and investigation of their structure/catalytic activity relationship, and development of novel scalable synthetic methods for preparing practically important organic compounds and new catalysts with valuable technical properties. ZIOC RAS is actively involved in bioorganic and medicinal chemistry research.

It has developed and tested methodologies for the synthesis of new biologically active substances essential for designing new vaccines, antimycotic and anticancer drugs, and medical diagnosticums.

Entry visa to Russia

All foreign participants of the School-Conference need a valid passport and an entry visa to Russia (passport should be valid 6 months after School-Conference – at least until 25th of November, 2018).

Detailed information will be given at the site.

Registration and fee

Persons who plan to attend the School-Conference are kindly requested to register at the website of the School-Conference before November 10, 2017. Authors are also could send their abstracts as attached Word-file by e-mail: suvorova@catalysis.ru.

	<i>before March 1, 2018</i>	<i>March 1, 2018 - April 16, 2018</i>
For Russian participants:	7000 Rubles for regular participants 5500 Rubles for PhD-students, students, accompanying persons	9000 Rubles for regular participants 6500 Rubles for PhD-students, students and accompanying persons
For foreign participants:	150 Euro for regular participants 120 Euro for PhD-students, students, accompanying persons	200 Euro for regular participants 150 Euro for PhD-students, students, accompanying persons

***Registration fee (including 18% VAT)**

Key Dates

December 1, 2017	– Submission of registration forms and Abstracts
January 20, 2018	– Notification of acceptance, distribution of the Second Circular
March 1, 2018	– Confirmation of participation, fee payment
April 20, 2018	– Distribution of final Scientific Program
May 20-23, 2018	– Working days

Contacts

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