



XII EUROPEAN CONGRESS ON CATALYSIS “CATALYSIS: BALANCING THE USE OF FOSSIL AND RENEWABLE RESOURCES”

www.EuropaCat2015.com

KAZAN, RUSSIA
30 AUGUST – 4 SEPTEMBER 2015



Second Announcement INVITATION

Dear Colleague,

On behalf of the International Scientific and Local Committees I cordially invite you to take part in the XII European Congress on Catalysis “Catalysis: Balancing the use of fossil and renewable resources”. The EuropaCat Congress will be held in Kazan (Russia) from 30th August to 4th September, 2015.

EuropaCat, the leading European catalytic event, has been a focal point for scientists in the front lines of innovative catalysis. The next meeting, EuropaCat XII, will be held in Kazan, which, together with Moscow and St. Petersburg, is regarded as one of the major historical centers of Russian chemistry. Kazan University has been renowned for organic chemists of XIX century: Nikolay Zinin, Alexander Butlerov, Vladimir Markovnikov, Alexander Zaytsev and others. The region is rich in traditional fossil raw materials, such as oil and oil associated gas; nowadays, Kazan and surroundings have advanced chemical industry, in many respects holding leading positions in Russia.

Catalysis research has entered a new phase, marking the end of the era driven primarily by trial and error. Scientists have found a common molecular basis for the chemical processes for which catalysis is used. The research field of catalysis has now been unified to form a general scientific framework to allow heterogeneous, homogeneous and bio-catalysis to be studied using similar approaches. Other direction of unification is the development of novel catalytic technologies for the conversion of both fossil resources, including heavy oil fractions, methane, ethane and C₃+ components in natural gas, and alternative feedstocks, such as biomass, carbon dioxide, and water. EuropaCat XII held in Kazan will particularly focus on balancing the production of energy and chemicals from fossil and renewable resources.

This meeting will provide a versatile platform for formal and informal discussions with colleagues both from academia and industry, and foster new collaborations and partnerships.

We look forward to welcoming you in Kazan!

Professor Valentin PARMON,
Russian Catalysis Society



CONGRESS PATRON

Rustam MINNIKHANOV, President of the Republic of Tatarstan

ORGANIZERS

- Russian Academy of Sciences
- Federal Agency for Scientific Organizations
- Ministry of Education and Science of Russian Federation
- Russian Catalysis Society
- Tatarstan Regional Government, Kazan
- Tatarstan Academy of Sciences
- Kazan Scientific Center, Kazan
- Borekov Institute of Catalysis SB RAS, Novosibirsk
- Zelinsky Institute of Organic Chemistry RAS, Moscow
- Lomonosov Moscow State University, Moscow
- Arbuzov Institute of Organic and Physical Chemistry KSC RAS, Kazan
- JSF "TatNefteKhim-Invest Holding", Kazan
- Kazan (Volga Region) Federal University, Kazan
- Kazan National Research Technological University, Kazan

INTERNATIONAL SCIENTIFIC COMMITTEE

Chairman: Valentin PARMON, President of the Russian Catalysis Society,
Borekov Institute of Catalysis SB RAS

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as well as

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Alexander STAKHEEV, Zelinsky Institute of Organic Chemistry RAS, Moscow

Mark TSODIKOV, Topchiev Institute of Petrochemical Synthesis RAS, Moscow



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Andrey KARASIK, Arbuzov Institute of Organic and Physical Chemistry KSC RAS

Anzhelika KARASIK, Arbuzov Institute of Organic and Physical Chemistry KSC RAS

Akhmet MAZGAROV, Volga Research Institute of Hydrocarbon Feed

Rafinat YARULLIN, JSC "TatNefteKhimInvest Holding"

Novosibirsk:

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Lyudmila STARTSEVA, Boreskov Institute of Catalysis SB RAS

Tatiana ZAMULINA, Boreskov Institute of Catalysis SB RAS

Moscow:

Ekaterina LOKTEVA, Lomonosov Moscow State University

Olga PAKHMANOVA, Topchiev Institute of Petrochemical Synthesis RAS

Olga TUROVA, Zelinsky Institute of Organic Chemistry RAS

The professional congress service agency: Monomax Ltd., St.-Petersburg

SCIENTIFIC PROGRAM

The scientific program will include 5 plenary lectures (60 min), 2 plenary honorary lectures (60 min), 20 keynote lectures (40 min), oral presentations (20 min), and poster presentations.

In addition to regular oral presentations, discussion symposia will be organized upon specific subjects. To this end, thematic clusters will be organized on the basis of selected hot posters (approximately 10 contributions each cluster), in which participants can exchange and can share this with other participants.

Four parallel sessions are planned to address 5 topics covering the following aspects of catalysis:

CONGRESS TOPICS

I. Novel catalytic materials and processes for securing supplies of raw materials

- Processing of crude oil including heavy oil fractions
- Natural gas conversion including ethane and C₃+ hydrocarbons
- Catalytic processes for coal utilization
- Renewables and alternative fossils for fuels
- Reactors design for efficiency improvement

II. Catalyst preparation and characterization

- Bridging the gap between model and real catalysts
- Methods for characterization of catalysts, including *in-situ* and *operando* techniques
- Design and synthesis of heterogeneous, homogeneous, heterogenized and immobilized, and hybrid catalysts
- Theoretical calculation and molecular simulation
- High-throughput and combinatorial experimentation

III. Energy-related catalysis

- Clean fuel production
- Hydrogen production and storage
- Fuel cell technologies and electrocatalysis
- Energy storage and conversion
- Electrocatalysis

IV. Catalysis and chemicals

- Petrochemicals, including production of monomers, and polymerization processes
- Conversion of synthesis gas to chemicals
- Development of new platforms for chemicals from renewables
- Catalysis for fine chemistry and pharmaceuticals
- Catalysis in new reaction media
- Selective catalytic oxidation (including stereoselective oxidation)

V. Catalysis and environmental protection

- Catalysis and green chemistry
- Biomimetic/bioinspired catalysts and approaches
- CO₂ capture and utilization
- New catalysts and approaches for pollution control
- Automotive exhaust cleanup
- Treatment, valorization and utilization of industrial gases and waste water

In parallel with the mainframe EuropaCat XII work program, the selective oxidation Workshop (ISO'15) will take place in the Korston Hotel & Mall Kazan on September 1-2, 2015.

XI European Workshop in Innovation on Selective Oxidation (ISO'15)

September 1-2, Kazan

CONGRESS SATELLITES

IV International School-Conference on Catalysis for Young Scientists

"CATALYST DESIGN. From Molecular to Industrial Level"

September 5-6, 2015

Kazan, Russia

<http://conf.nsc.ru/catdesign2015/en/>

XI International Symposium of Heterogeneous Catalysis

September 5-9, 2015

Varna, Bulgaria

III International Conference CATALYSIS FOR RENEWABLE SOURCES: FUEL, ENERGY, CHEMICALS (CRS-3)

September 6-11, 2015

Catania, Italy

<http://conf.nsc.ru/CRS3/>

IV Symposium on Modeling of Exhaust-Gas After-Treatment (MODEGAT IV)

September 13-15, 2015

Bad Herrenalb/Karlsruhe, Germany

www.modegat.org



PLENARY LECTURES

Butlerov honorary Lecture

Prof., Dr. Valentine Ananikov

Catalysis in organic chemistry: from Butlerov to these days

Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

<http://AnanikovLab.ru/>

François Gault Lectureship Award (2013)

Prof., Dr. Johannes A. Lercher

**The interactions and transformations of molecules on solid catalysts:
an insight through physicochemical and kinetic analysis**

Technical University of Munich, Munich, Germany

<http://www.tc2.ch.tum.de/index.php?id=77>

Dr. Giuseppe Bellussi

Fossil and renewable energy: the turning point of the liquid fuels production

Eni SpA, Refining & Marketing Division, San Donato Milanese, Italy

http://www.eni.com/en_IT/home.html

Prof. Joseph T. Hupp

Mesoporous metal-organic frameworks as platforms for single-site heterogeneous catalysts

Northwestern University, Evanston, USA

<http://chemgroups.northwestern.edu/hupp/>

Prof. Graham Hutchings

Redox reactions catalysed by gold-containing catalysts

Cardiff Catalysis Institute, Cardiff, UK

http://www.cardiff.ac.uk/chemy/contactsandpeople/academicstaff/hutchings-graham-overview_new.html

Prof., Dr. Robert Schlögl

Generation of solar hydrogen and its use in CO₂ reduction

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

Max Planck Institute for Chemical Energy Conversion, Mülheim a.d. Ruhr, Germany

<http://www.fhi-berlin.mpg.de/acnew/departement/pages/director.html>

Prof. Magnus Skoglundh

**Fundamental studies of metal exchanged zeolites for selective catalytic reduction
of nitrogen oxides in oxygen excess**

Chalmers University of Technology, Göteborg, Sweden

https://www.researchgate.net/profile/Magnus_Skoglundh

KEYNOTE LECTURES

Prof. Martin Albrecht

UCD School of Chemistry and Chemical Biology, University College Dublin,

Dublin, Ireland

<http://www.ucd.ie/research/people/chemistrychemicalbiology/professormartinalbrecht/>

Prof. Gabriele Centi

University of Messina, Messina, Italy

<http://ww2.unime.it/catalysis/peoples.htm>

Prof. Claude Descorme

IRCELYON, Lyon, France

<http://www.ircelyon.univ-lyon1.fr>

Dr. Stig Helveg

Haldor Topsoe Research Labs., Lyngby, Denmark

www.topsoe.com



Prof. Xile Hu

Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of Chemical Sciences and Engineering,
Lausanne, Switzerland
<http://lsci.epfl.ch/hu>

Prof. Christopher W. Jones

Georgia Institute of Technology, Atlanta, USA
<http://jones.chbe.gatech.edu>

Prof. Andrei Y. Khodakov

UCCS, USTL-ENSCL-EC Lille, Villeneuve d'Ascq, France
<http://uccs.univ-lille1.fr/index.php/catalyse-heterogene/energie>

Prof. Burkhard Koenig

University of Regensburg, Regensburg, Germany
<http://www-oc.chemie.uni-regensburg.de/koenig/>

Prof. Walter Leitner

Institute of Technical and Macromolecule Chemistry, RWTH Aachen, Aachen, Germany
<http://www.tc.rwth-aachen.de/aw/cms/TC/Zielgruppen/~vft/prof-leitner/?lang=de>

Prof. Can Li

Dalian Institute of Chemical Physics, Dalian, Liaoning, China
<http://www.canli.dicp.ac.cn>

Prof. Scott McIndoe

University of Victoria, Victoria, Canada
<http://web.uvic.ca/~mcindoe/index.html>

Prof. In-Sik Nam

Department of Chemical Engineering/School of Environmental Science & Engineering,
University of Science and Technology (POSTECH), Pohang, Republic of Korea
<http://pecl.postech.ac.kr>

Prof. Konstantin M. Neyman

Catalan Institution for Research and Advanced Studies, Barcelona, Spain
<http://www.icrea.cat/Web/ScientificForm.aspx?key=292>

Prof. Unni Olsbye

University of Oslo, Oslo, Norway
<http://www.mn.uio.no/kjemi/personer/vit/unniol/index.html>

Prof. Vasile Parvulescu

University of Bucharest, Bucharest, Romania
http://www.unibuc.ro/prof/parvulescu_v/

Prof. Yuriy Roman

Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, USA
<http://www.romangroup.mit.edu/>

Prof., Dr. Günther Rupprechter

Institute of Materials Chemistry, Vienna University of Technology, Vienna, Austria
http://www.imc.tuwien.ac.at/pers_pid_d.php?pid=3174381

Prof. Kazuhiro Takanabe

King Abdullah University of Science & Technology, KAUST Catalysis Ctr KCC, Physical Sciences and Engineering Division, Thuwal,
Saudi Arabia
<http://catec.kaust.edu.sa/Pages/Home.aspx>

Prof. Takashi Tatsumi

Tokyo Institute of Technology, Tokyo, Japan
<http://www.titech.ac.jp/english/about/overview/board/tatsumi.html>

Dr. Aleksey Yezerets

Cummins Inc., Columbus, USA
<http://www.cummins.com>



SPONSORSHIP

Sponsors are kindly invited to support the Congress; a variety sponsor packages will be offered.

Company presentations

The Organizing Committee invites companies dealing with catalysts, catalytic processes and scientific equipments to advertise their products during EuropaCat-XII. Company representatives will be offered exhibition with mini-offices for the arrangement of their banners, distribution of advertising materials and demonstration of small apparatuses.

Publishers' presentations

The Organizing Committee invites leading scientific publishers to organize exhibitions of magazines and books related to catalysis and chemical technology.

CONGRESS PUBLICATIONS

The final Scientific Program brochure and Book of Abstracts of all lectures, oral and poster presentations on a USB key will be available at the registration desk.

CALL FOR PAPERS

Authors of all contributions are invited to submit two-page abstracts (A4) in English. The text should be typed 1 line spaced with 2.3 cm margins. Please use Times New Roman 12 pt. Abstracts should be submitted online. You can submit as many contributions as you wish under the same personal account. During the abstract submission you can choose the topic which your paper fits in with, as well as your preferred format of presentation: poster, oral (20 min). Instruction for ISO'15 abstracts are the same as for ordinary submission. Additionally, 150-word short abstracts should be submitted via the site.

The abstract template is available to download on the Congress website:

<http://www.europacat2015.com/index.php/call-for-abstracts>

Preliminary registration and abstracts submission are available at the Congress website

<http://www.europacat2015.com/index.php/online-registration> till January 15, 2015.

CONGRESS FEE

| Congress fees (including 18% VAT) | Standard (before 1 st July 2015) | Late (after 1 st July 2015) |
|-----------------------------------|---|--|
| Academic participant | 420 € | 520 € |
| Industrial participant | 500 € | 600 € |
| Student | 200 € | 250 € |
| Accompanying person | 250 € | 250 € |

The Congress fee covers editorial expenditures, delegate bag, auditorium rent, 5 lunches, coffee break beverages, Welcome reception, and excursion "Millennial Kazan".

VENUE

The Congress will take place at the new International Congress Centre in the **Korston Hotel & Mall Kazan** (Ershov street, 1; <http://www.korston.ru/kazan/>). Situated just 1.4 kilometers from the city center, the Korston Hotel & Mall Kazan is 4 kilometers from the **Kazan Passazhirskaya** train station and 30 kilometers from the airport.

The complex is located in the Kazan business centre, at the junction of the city's three traffic arteries – Millennium Bridge, Ershov Street and Vishnevsky Street – in the vicinity of the Historical centre and many hotels. The Kazan Kremlin, Fine Arts Museum, Philharmonic Hall, Sukonnaya Sloboda Metro Station and other major attractions are readily accessible on foot or by public transportation.

The opening ceremony and plenary lectures will be arranged in the Korston Great Hall, Ball Hall, on the first floor seating up to 1200 persons. The Congress Centre also provides some multifunctional halls where Parallel Scientific sections and Symposia will be organized: Pushkin, Tolstoy, Dostoevsky, Lermontov, Chekhov.



ACCOMMODATION

The total hotel capacity in Kazan exceeds 5,500 rooms in 35 hotels. The Korston Hotel & Mall Kazan offers 400 rooms meeting European standards.

The special rates for Congress participants will be advertised at the end of 2014.

Some examples of other available hotels:

- Grand Hotel Kazan****
<http://www.grandhotelkazan.ru/en/>
- Park Inn by Radisson Kazan****
<http://www.parkinn.com/hotel-kazan>
- Club hotel Corona****
<http://www.booking.com/hotel/ru/club-corona.html>
- Ibis Kazan ***
<http://www.ibis.com.ru>
- Tatarstan Hotel***
<http://www.hotel-tatarstan.ru/en/>
- Bulgar Hotel***
<http://www.bulgar-meta.ru/en/>



Shuttle bus transportation from the hotels to the Congress Center will be provided for delegates.

For student participants (who contribute as presenting authors), the Organizing Committee will arrange a limited number of discounted accommodations in selected 3 star hotels (~10 €/night).

MEALS

Tickets for 5 lunches will be included in the participant package. Morning and afternoon coffee breaks will be provided.

ENTRY VISA

In order to obtain entry visa to Russia, foreign participants should have official "Invitation to Russia". The Monomax Service Agency provides participants with tourist visa support papers (invitation and hotel voucher). The details and all necessary visa forms are available at the site <http://www.europacat2015.com/index.php/visa-support>.

SOCIAL PROGRAM



Kazan is the city which combines traits of the Russian and Tatar cultures, the city which matches both Western and Eastern styles and looks unique!

The participants will be invited to the Welcome reception on August 30. The Congress banquet will be held on September 3.

The sightseeing excursion "Millennial Kazan" will be organized for the participants on August 31.

A special sightseeing program for accompanying persons will be available.

Post-Tour "Sviyazhsk Island" Settlement Sviyazhsk was established in 1551 on an island by the young Tzar Ivan the Terrible. It was the first Orthodox town in the middle Volga region, from which the Orthodox religion expanded. It is a unique historical and cultural complex which was constructed in XVI-XX centuries. Duration: 5-6 hours. The price, date and time will be announced at the site.



KEY DATES

| | |
|------------------|--|
| 15.11.2014 | Distribution of the Second Circular |
| 15.01.2015 | Submission of Abstracts |
| 15.03.2015 | Notification of acceptance |
| 30.04.2015 | Distribution of preliminary Scientific Program |
| 30.08.2015 | Arrival and the Congress opening |
| 30.08-04.09.2015 | Working days |
| 05.09.2015 | Departure |
| 05.09.2015 | Post-tour |

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For further details please visit the Congress Website: www.EuropaCat2015.com