



Preface

International Conference on Chemical Reactors is being held every two years since its foundation in the 1960s. The XVIII International Conference on Chemical Reactors (CHEMREACTOR-18) took place on September 29–October 3, 2008 at Malta. This event was organized by Boreskov Institute of Catalysis SB RAS and European Federation of Chemical Engineering with participation of Russian Scientific and Cultural Center in Valletta, Malta, Russian Center of International Scientific and Cultural Cooperation under RF Government, Ministry of Education and Science of the Russian Federation, Ministry of Industry and Trade of the Russian Federation, RAS Scientific Council on Theoretical Fundamentals of Chemical Technology, RAS Scientific Council on Catalysis and Zebra Group Ltd.

The conference brought together about 240 researchers and engineers from 35 countries all over the world. The conference was traditionally devoted to the fundamental aspects and practical application of the catalytic processes and chemical reactors, as well as to the development of the novel technologies.

Scientific program of the conference included five plenary lectures and six keynote presentations.

Plenary lectures:

1. **Guy B. Marin, Joris Wieme, Marie-Françoise Reyniers**, SUSPENSION POLYMERIZATION REACTIONS AND REACTORS, *Ghent University, Laboratory for Chemical Technology, Belgium*.
2. **R.H. Venderbosch, S.R.A. Kersten, Wolter Prins**, THE ROLE OF CATALYSIS IN FAST PYROLYSIS, *University of Twente, The Netherlands*.
3. **Jesus Santamaria**, DEVELOPMENT OF ZEOLITE-COATED MICROREACTORS, *University of Zaragoza, Spain*.
4. **Olaf Deutschmann**, CATALYTIC CONVERSION OF HYDROCARBON FUELS: FROM MOLECULAR MODELING TO REACTOR OPTIMIZATION, *University of Karlsruhe, Institute for Chemical Technology and Polymer Chemistry, Germany*.
5. **Pio Forzatti**, CATALYTIC PARTIAL OXIDATION OF METHANE TO SYNGAS, *Technical University of Milan, Italy*.

Key-note presentations:

1. **Dmitry Yu. Murzin**, 100 ANNIVERSARY OF PROFESSOR M.I. TEMKIN, *Process Chemistry Centre, Åbo Akademi University (Turku), Finland*.
2. **Yablonsky, G.S., Gleaves, J.T., Zheng, X., Feres, R., Al-Dahhan, M.H.**, GETTING TO THE POINT: FROM MOLECULAR TO PROCESS SCALES, *Saint Louis University, USA, Washington University in St. Louis, USA*.
3. **Kapustin, V.M.**, PROBLEMS AND PROSPECTS FOR IMPROVEMENT OF THE OIL-REFINING REACTOR DESIGN, *OAo VNIPINeft, Gubkin Russian State Oil & Gas University (Moscow), Russia*.
4. **Kulov, N.N.**, CATALYTIC DISTILLATION: PROSPECTS AND PROBLEMS, *Kurnakov Institute of General and Inorganic Chemistry RAS (Moscow), Russia*.

5. **Bal'zhinimaev, B.S., Sadovskaya, E.M., Suknev, A.P.**, ISOTOPIC TRANSIENT KINETICS STUDY TO IDENTIFY REACTION MECHANISMS, *Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*.
6. **Andrey N. Zagoruiko**, CATALYTIC TECHNOLOGIES APPLYING ARTIFICIALLY CREATED CATALYST NONSTATIONARITY AND SORPTION-CATALYTIC PROCESSES, *Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*.

Eighty oral contributions and 100 posters presented at the conference covered the following subjects:

- Kinetics of catalytic reactions (*this section was dedicated to the 100th anniversary of Professor M.I. Temkin, the outstanding specialist in the field of physical chemistry and chemical kinetics*).
- Physico-chemical and mathematical fundamentals of the processes in chemical reactors.
- Catalytic processes development and reactors design: modeling, optimization, new catalyst application.
- Catalytic technologies in fuel and energy production (*production of hydrogen, production of environmental friendly fuels, environmentally friendly engineering*).
- Catalytic processing of renewable sources: fuel, energy, chemicals.

The principle objective of the CHEMREACTOR conference is to provide a venue for the fruitful communication and exchange of ideas related to novel fundamental and applied approaches, recent achievements, latest trends and promising breakthroughs in the field of the chemical reaction engineering.

The conference participants noticed the high level of the presentations, especially plenary lectures. About 90 papers, presented at the conference, were submitted for the publication in the Chemical Engineering Journal. After the strong reviewing the most interesting papers are presented in this Special Issue.

The next CHEMREACTOR conference is planned to be held in 2010 in Vienna, Austria, the organizers are looking forward to new fruitful interaction and exchange of ideas.

Guest Editor

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