

## Foreword

The II International Symposium “Carbon for Catalysis” was held on July 11–13, 2006 in St. Petersburg. The Symposium was organized by Boreskov Institute of Catalysis (kmsk, Russia) together with the Institute of Hydrocarbons Processing, SB RAS (Novosibirsk, Russia), with the support from the St. Petersburg Scientific Center of RAS (St. Petersburg, Russia), Ecole Polytechnique Federal de Lausanne (Switzerland) and Russian Foundation for Basic Research (Moscow, Russia).

The Symposium was participated by 105 specialists, including 56 scientists from abroad (Belgium, China, Finland, France, Great Britain, Hungary, Italy, Germany, Poland, the Netherlands, Norway, Portugal, Spain, Switzerland, Turkey, USA), 45 from Russia and 4 from Ukraine.

The scientific programme of the Symposium included 3 plenary lectures, 7 key reports, 32 oral and 62 poster presentations.

The results of many interesting investigations were presented at the Symposium; the problems connected with the development of new carbon materials, methods of their synthesis and application were discussed. Scientists from different countries spoke of urgent problems: the possibilities to use composite carbon-ceramic membranes in multiphase membrane reactors; the role of graphite-like crystallites in the formation of physicochemical properties of the porous structure of carbon supports; investigation of the structure and properties of natural carbon supports and catalysts; the concept based on semiconductor properties of graphite-like systems, *etc.*

A number of reports discussed synthesis methods and tests of the catalysts based on

platinum metals and deposited on carbon; the outlooks of the use of carbon materials as independent catalytic systems in petrochemical processes, and a new method of the synthesis of carbon nanotubes for water purification.

The scientific programme of the Symposium outlined modern trends in the development of fundamental and applied research in the area of the application of carbon in catalysis. First, it is a clearly exhibited interest to the development of new methods of obtaining nanocarbon, especially its ordered structures (nanotubes, nanofibres, nanofilaments, bulbous carbon, carbon aerogel, *etc.*) for the purpose of investigating their physicochemical characteristics and properties. Second, a vector of research into carbon materials and catalysts based on them is directed to solving a number of urgent problems of hydrogen power engineering (especially purification and accumulation of hydrogen).

In the practical aspect, increased attention is attracted to the application of carbon materials to the intensification of the processes in small- and large-capacity chemical production and in biological processes.

In general, the II International Symposium “Carbon for Catalysis” was successful and useful to get acquainted with the recent advances and promising directions in the development of new carbon materials for catalysis, methods of their synthesis and application. The invitation from the Chinese part to hold the III Symposium in China in 2008 was accepted.

In this issue we publish the reports presented at the Symposium the subject of which corresponds to the area covered by *Chemistry for Sustainable Development*.

*Professor Vladimir A. Likholobov,  
Chairman of the organizing Committee*