

Preface

The XVII Mendeleev Congress on General and Applied Chemistry was held on 21–26 September 2003 in Kazan, the capital of Tatarstan, Russia. Mendeleev Congresses are the main Russian chemical forums. 1200 local scientists and participants from about 25 countries were treated to an exciting program of plenary lectures by Profs. A. I. Konovalov, J.-M. Lehn, A. L. Buchachenko, P. Atkins, S. Hecker, Yu. Ts. Oganessian, Yu. D. Tretyakov, E. N. Kablov, H. Ringsdorf, V. A. Kabanov, S. D. Varfolomeev, R. Noyori, I. P. Beletskaya, V. E. Fortov, and G. B. Elyakov. The first plenary lecture was given by Prof. A. I. Konovalov who gave an overview of the Kazan school of organic chemistry where a group of renowned researchers worked, including Profs. N. N. Zinin, A. M. Butlerov, A. M. Zaitsev, A. E. Arbuzov, V. V. Markovnikov, K. K. Klaus, S. N. Reformatskii, and others. Nobel Prize winner J.-M. Lehn reviewed recent advances in supramolecular chemistry. Prof. A. L. Buchachenko then presented recent data from the physicochemical investigations of nanoparticles and the design of sub-miniature devices on their basis. Prof. S. Hecker reported the unusual properties of actinides, while Prof. Yu. Ts. Oganessian described the nuclear synthesis of superheavy elements (113–116 and 118) and investigations of so-called stability islands among these elements. Chemical aspects of the development of new functional inorganic materials were reported by Profs. Yu. D. Tretyakov and Prof. E. N. Kablov. Prof. V. E. Fortov presented the dynamic methods for the generation of high local energy concentrations in condensed media. Prof. E. Reichmanis, President of the American Chemical Society, described the new materials for microelectronics. Prof. H. Ringsdorf demonstrated the widest prospects of polymer chemistry for the development of anticancer polymer agents. Prof. V. A. Kabanov gave an overview of original approaches to the design of polymer-subunit vaccines. Prof. S. D. Varfolomeev presented advances in genetic engineering of enzymes. Nobel Prize winner Prof. R. Noyori reported on new chemical methods for the synthesis of complex compounds of practical importance with the use of rhodium, rhenium, and ruthenium complex catalysts. Prof. I. P. Beletskaya reported on palladium-catalyzed arylation of polyamines. Prof. G. B. Elyakov reviewed achievements in marine chemistry and biotechnology.

The rest of the oral program included the Russian–French symposium on supramolecular systems, the symposium on chromatography dedicated to the centenary of the discovery of chromatography by M. S. Tswett, the Russian–American workshop on chemical education and specialized sessions on advances in chemical science, nanotechnology, biotechnology, petrochemistry, and catalysis. Keynote lectures were given by leading Russian and foreign experts, whose selected papers are included in this issue of journal. About 200 other oral and 1400 poster reports were presented within the six-day scientific program. The Congress program also included a meeting of the presidents of chemical societies from CIS, European, Asian, and American countries. Two roundtable discussions were also held on the problems of environmental safety in chemical industry and the stimulation of innovation activities in Russia.

The XVII Mendeleev Congress was chaired by Prof. Oleg M. Nefedov of the N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, and the national organizing committee comprised Profs. N. A. Platé, P. D. Sarkisov (President of Mendeleev Russian Chemical Society), O. G. Sinyashin, A. Y. Tsivadse, M. V. Alfimov, A. I. Vladimirov, S. G. Diakonov, V. P. Ivanov, V. A. Kabanov, M. P. Kirpichnikov, A. I. Konovalov, N. N. Kulov, N. P. Liakishev, V. V. Lunin, B. F. Myasoedov, V. N. Parmon, A. V. Putilov, V. I. Sergienko, M. K. Khasanov, and V. N. Charushin. The next XVIII Mendeleev Congress will be held in Moscow in 2007 and will be devoted to a centenary of Mendeleev Congresses in Russia.

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Conference Editors