IX Conference “Fundamental Problems of Solid State Ionics”

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This and the next issues of this journal are based on the lectures delivered at the IX Conference “Fundamental Problems of Solid State Ionics”. The idea of these conferences belongs to Evgenii Aleksandrovich Ukshe who is truly considered as their founder and the popularizer of solid state ionics in Russia. The present conference like the previous ones was dedicated to his memory.

IX International Conference took place on June 24–27, 2008 on the basis of the Institute of Problems of Chemical Physics of the Russian Academy of Sciences (RAS) (Chernogolovka, Moscow district) with the assistance of the RAS Scientific Council on Electrochemistry and the financial support by the Russian Foundation of Basic Research.

This conference united scientists specialized in different fields, namely, electrochemistry, synthetic chemistry, crystallochemistry, physics, materials science.

The main problems discussed in the conferences are as follows:

- mechanisms of fast ionic transport in solids;
- relationship between the superionic transport effect and the crystal structure;
- proton-conducting membranes;
- composite and nanostructured materials with ionic conduction;
- methods of studying ion-conducting systems;
- electrochemical processes at solid interfaces of the ionic conductor/electronic conductor type including those involving active gases;
- prospects of practical application of fundamental studies in the field of solid electrolytes (fuel cells, gas sensors, ionistors, batteries).

The current importance of these fields follows from the number of publications in specialized international journals (*Solid State Ionics*, *Solid State Communications*, *Solid State Electrochemistry*, etc.).

In the work of this conference, nearly 250 scientists took part, of which 13 foreign participants came from the countries of the former Soviet Union (Azerbaijan, Belarus, Latvia, Lithuania, Kazakhstan, Ukraine) and also from Greece, Serbia, Slovakia, and France. Russia was represented by scientists from dif-

ferent state universities (Voronezh, Vyatka, Ekaterinburg, Kazan, Krasnodar, Moscow, Rostov-na-Donu, Samara, St. Petersburg, Saratov, Tomsk, Ufa), institutes of RAS, namely, Institute of Chemistry (Vladivostok, Far-East Division), Institute of High-Temperature Electrochemistry, Institute of Solid State Chemistry, Institute of Physics of Metals (Ekaterinburg, Ural Division), Institute of Chemistry of Solutions (Ivanovo), Frumkin Institute of Physical Chemistry and Electrochemistry, Shubnikov Institute of Crystallography, Semenov Institute of Chemical Physics, Kurnakov Institute of General and Inorganic Chemistry, Baikov Institute of Metallurgy and Material Science, Prokhorov Institute of General Physics, Nesmeyanov Institute of Organoelement Compounds, Vernadskii Institute of Geochemistry and Analytical Chemistry (Moscow), Institute of Solid State Chemistry and Mechanochemistry, Institute of Thermal Physics (Novosibirsk, Siberian Division), Ioffe Physicotechnical Institute, Grebenshchikov Institute of Silicate Chemistry (St. Petersburg), Institute of Problems of Chemical Physics, Institute of Solid State Physics, Institute of Problems of Microelectronics and Special Grade Materials (Chernogolovka), and also from Karpov Research Institute of Physical Chemistry (Moscow), OOO National Innovation Company “Novye Energeticheskie Proekty” (Moscow), OAO “Plastpolimer” (St. Petersburg), OAO Research Institute Girikond (St. Petersburg), Research Laboratory of Chemical Power Sources (NILkhIt).

In the conference, 90 oral lectures were delivered (of which 20 were read by the members of the “UMNIK” program) and 110 posters were presented.

The Organizing Committee of the IX Conference “Fundamental Problems of Solid State Ionics” would like to thank all participants of the conference and the authors of special issues of journal *Elektrokhimiya*.

S. M. Aldoshin,
Academician of RAS,
Chairman of the Organizing Committee
of the Conference

N. G. Bukun,
Guest-Editor

B. M. Grafov,
Chairman of the Scientific Council on
Electrochemistry, RAS