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60th birthday of Mikhail A. Vorotyntsev

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Prof. M.A. Vorotyntsev, known by his friends and colleagues as 'Misha', reached his 60th birthday in excellent scientific and physical shape. Misha, with his energetic outlook, is currently involved in the founding and development of an advanced electrochemistry group in Dijon, France. However, his skills go beyond his well-known ability as a scientist, evidenced by his important contribution to the relationship between electrochemists from Europe and Japan. Perhaps the two most important characteristics with which Misha is blessed are his restless and dynamic character and his uncompromising passion for perfection. Indeed, after 3 years as a graduate student at the Moscow State University, he was selected in 1965 by Prof. V.G. Levich, from among other talented students, to continue his studies in chemical mechanics at the Department of Mechanics & Mathematics at the same university. His Ph.D. thesis, "The kinetics of charge transfer in polar media" (1971) related to the fundamental problem of the role of the reorganization energy of solvent in the dynamics of interfacial charge-transfer

processes. The generalization of this approach, and a careful refinement of the double-layer models for various electrochemical systems, was completed in his doctoral dissertation: "Theory of equilibrium and kinetic phenomena at metal/electrolyte interface", 1987. In 1979 he was appointed as a senior research fellow, then as a leading research fellow, and finally, as a research professor, at the Theoretical Department of the Frumkin Institute of Electrochemistry in Moscow.

In the mid-1980s, a new branch of modern materials science, namely, electronically conducting polymers, evolved. Since then, many studies have been published by materials scientists. Nevertheless, the theoretical perceptions, especially those related to the electrochemistry of these materials, remains insufficient. Together with his colleagues at the Frumkin Institute, Prof. Vorotyntsev initiated a series of works that presented a comprehensive thermodynamic and kinetics approach to the study of ion-insertion reactions occurring in conducting polymers. These studies took into account that these unique materials are both electronic and ionic conductors. They also introduced fruitful ideas, such as the analysis of the shape of the intercalation (doping) isotherms and their dependence on the stoichiometry of the insertion processes, the ratio of the concentration of fixed and mobile charged species in the material bulk, and short-range interactions, etc. One should specifically mention the very thorough theoretical investigation of the impedance characteristics of doped conducting

Dedicated to Prof. Mikhail A. Vorotyntsev in the occasion of his 60th birthday

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polymers (1994), which had a strong impact on subsequent studies, both in the field of conducting polymers and Li-insertion cathodes and anodes for rechargeable Li-ion batteries.

It is difficult to find another theoretician who is expert in interfacial, solution and solid state aspects of electrochemistry, and equally experienced in dynamic and equilibrium phenomena. He is also a rare electrochemist, specializing in high-level theoretical and experimental problems.

The collapse of the Soviet Union in 1991 removed all barriers to the exchange of scientists and ideas between the countries of the East European block and the West. It was at this time that Prof. Vorotyntsev started to work abroad as a visiting professor, sharing his vast knowledge and experience with his colleagues at the Pierre et Marie Curie University in Paris, the Grenoble Nuclear Center (France), the Fritz-Haber Institute in Berlin, The Institute of Physical Chemistry

in Freiburg (Germany), and finally, at the Fukui University (Japan). He was nominated as Director of Research at the CNRS (Dijon, France) in 1998. As a foreign visitor, he enriched the knowledge and skill of many scientists.

Prof. Vorotyntsev's restlessness is probably the result of his long standing hobby of mountain river boating, a challenging sport. His persistence and strong will were also attained in long distance skiing (100 km). These skills attest to a supreme achiever, both in sport and in science.

Prof. Vorotyntsev organized numerous international conferences, workshops, and seminars, where he often answered the questions that he posed to the lecturers! Whoever participated in such meetings, or collaborated with him, identify this charming behavior as the "real Misha". He also served as a guest editor for a number of special issues of *Electrochimica Acta*. We wish him many years of active and fruitful work.