Evgenii Mikhailovich Savitsky (1912-1984)

E.M. Savitsky was a famous soviet scientist notable for his contributions in the fields of metal physics and physical chemistry. He was a member-correspondent of the Academy of Sciences of the USSR. The main goals of his scientific efforts were the understanding of the laws governing the behavior of physio-chemical systems and the creating of new materials for modern technology.

He kept in mind the most important world problems: conserving natural resources, maintaining human health, and overcoming the energy crisis. He was sure of the future and transmitted his hopes and beliefs to his colleagues. He successfully consolidated people into teams to solve a variety of problems in the area of physico-chemistry of rare and refractory metals and alloys.

E.M. Savitsky was born 30 January 1912 in the village of Solovjanka near the town of Twer. When he was 18 he was employed at the Kolchugin plant doing mechanical work with nonferrous metals. Later he became a student and then post-graduate student at the Moscow Institute of Nonferrous Metals and Gold. In 1937 Savitsky became a research worker at the Institute of Inorganic Chemistry investigating the influence of temperature and composition on the physico-chemical properties of metallic systems. His books, *Mechanical Properties of Magnesium and Its Alloys*, 1941, and *Influence of Temperature on the Mechanical Properties of Metals and Alloys*, 1957, appeared as a result of his scientific efforts at that Institute. The books were translated into English both in the USA and in Great Britain. At the A.A. Baikov Institute of Metallurgy of the Academy of Sciences of the USSR, he founded the Laboratory of Rare and Refractory Metals and Alloys and was head of that laboratory for 30 years.

His physico-chemical investigations of metals and alloys involved elements comprising over half the Periodic Table and made fundamental contributions to the physical metallurgy necessary for the development of superconducting materials, space technology, and computer progress. The main ideas developed by Savitsky and his colleagues were summarized in the monograph, *Perspectives in the Development of Physical Metallurgy*, 1972. Savitsky's efforts developed the main thrusts of N.S. Kurnakov's theory about physico-chemical analysis.

Savitsky's work on single crystals of alloys as well as of elemental metals revealed new properties: extremely high ductility, anisotropy of physical and chemical properties, dependences of properties on purity, role of crystal structure, and temperature effects. He paid great attention to the investigation of phase diagrams of rare earth, precious, and refactory metals. This included investigation of some 300 phase diagrams of binary, ternary, and multicomponent alloy systems. These diagrams have provided a base for choosing alloys with prespecified properties.

In cooperation with his colleagues, E.M. Savitsky published 27 monographs, 16 of which were translated and issued abroad. The scientific activity of Savitsky and his colleagues is extensive and widely known and has been a meaningful contribution to scientific progress.

E.M. Savitsky was a laureate of the N.G. Kurnakov Prize in 1973. In 1985 he was selected by the Board of Directors of the International Precious Metals Institute (IPMI, USA) to receive its Distinguished Achievement Award in recognition of a prefessional lifetime devoted to research in and development of the platinum group metals. He was a member of the Electrochemical Society, the American Institute of Welding Engineers and Electrochemical Engineers, and the International Committee on Phase Diagrams of the National Bureau of Standards, USA.

He was an enthusiast for improving and widening international scientific cooperation, mutual exchange of scientific information, and mutual cooperation in scientific investigations. For many years he was involved in fruitful scientific interactions with scientists of different countries: USA, Great Britain, Italy, East and West Germany, Czechoslovakia, France, Poland, and Yugoslavia.

Editor's Comment: From time to time we propose to bring you synopses of the contributions and accomplishments of persons who have made significant contributions to the areas of interest of this *Journal*. The foregoing synopsis on the contributions of E.M. Savitsky was submitted by our Russian colleagues, Prof. O.A. Bannykh and Dr. E.N. Sheftel, Institute of Metals, Academy of Sciences of the USSR, as an outcome of a discussion with them at an APDIC meeting in the Netherlands in 1990.