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## CHRONICLE

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### In Commemoration of Juozas Matulis' Centenary\*

In 1999, the 100th anniversary of the birth of the eminent Lithuanian chemist and organizer of scientific research, Juozas Matulis (1899–1993) was celebrated. He was the most influential chemist for more than 50 years in Lithuania. He founded and formed a large scientific school in metal electrochemistry and played a leading role in forming scientific policy when President of the Lithuanian Academy of Sciences for an unprecedented long term of 38 years.

J. Matulis was really a self-made man. Born into a poor peasant family (in Tatkoniai in the northeastern part of Lithuania), he began his self-sustaining life early. In 1912, he became an apprentice to a jeweler in a small shop in Libau (Liepaja) in neighboring Latvia. After the beginning of World War I, he returned home and worked at the railway station. Upon the formation of the independent state of Lithuania (1918), he went to Kaunas and worked at a telephone station, attending at the same time an evening school and later studying chemistry at the Kaunas University. His scientific career began in 1929, after graduating from the university, and lasted for more than 60 years.

In 1929–1936, he was an assistant at the Kaunas University (from 1930, Vytautas Magnus University) and spent 2 years in Leipzig University continuing his studies. There he wrote a doctoral thesis in photochemistry under the guidance of Prof. F. Weigert. Later, in Kaunas, he defended habilitation work on photodichroism in colloid systems.

In 1936–1943, he was engaged in intensive pedagogical, educational, and science popularizing activities. Matulis was Head of the Chair of Physical Chemistry at Vytautas Magnus and, from 1940, at Vilnius University. He was among the first members of the Lithuanian Academy of Sciences appointed at its foundation in 1941.

1944–1984 was a period of most active and fruitful research and the organization of activities while serving as President of Lithuanian Academy of Sciences, and, in 1956–1976, Director of the Institute of Chemistry and Chemical Technology (Institute of Chemistry from 1992).

Prof. Matulis' research fields were photochemistry, chemical kinetics (investigation of Menshutkin reaction kinetics), and electrochemistry. The electrochemical studies were most important and were carried out most intensively. They were initiated in the late 1940s at Vilnius University and later expanded at the Institute



of Chemistry and Chemical Technology. The majority of almost 500 scientific papers published by Matulis are devoted to electrochemistry.

Prof. Matulis founded a large scientific school and he supervised 85 Ph.D. dissertations. His postgraduate students R. Visomirskis, V. Kaikaris, R. Slizys, and others, together with their students, further developed investigations initiated by Matulis. At present, the total number of scientists of his school amounts to two hundred.

The largest part of J. Matulis' scientific papers were published in Russian in the journal *Lietuvos TSR MA Darbai* (Proceedings of the Lithuanian Academy of Sciences), which had been initiated by him. Only ca. 9% of his papers were published in Moscow and ca. 5%, in Western journals. Therefore, not all of Matulis' works are well known in the world. Nevertheless, Matulis is one of the most widely cited Lithuanian chemists, and the paper "On Some Characteristics of Cathodic Processes of Nickel Electrodeposition" by J. Matulis and R. Slizys, published in *Electrochimica*

\* This article was submitted by the author in English.

*Acta* in 1964, is the most frequently cited paper of the Institute of Chemistry. Matulis was an editor and author of several chapters of the widely known and frequently cited book, *Bright Electrodeposited Coatings* (Vilnius, 1969).

Most of the electrochemical investigations by Matulis were devoted to metal electrodeposition. He studied the electrochemical and chemical processes in copper, nickel, chromium, cobalt, zinc, silver, iron, and other metal salt solutions, as well as characteristics of deposited metal and alloy coatings. His works cover a wide range of problems, from fundamental questions of metal electrocrystallization to the development of new technological processes in electroplating and other fields of surface finishing. The typical feature of Matulis' research is attention to real complicated systems and the study of not only the main processes, e.g., charge transfer or diffusion, but also of the accompanying secondary reactions at the metal surface.

Among his most important and extensive investigations are the behavior of various additives, especially brighteners, in the electroplating processes and the mechanism of chromic acid reduction and chromium electrodeposition.

Matulis initiated a wide applied research work at the Institute of Chemistry, and it became the leading institution in the former Soviet Union in the field of electroplating. Many technological processes developed at the Institute were introduced into the industry at many enterprises throughout the former USSR.

Prof. J. Matulis was an excellent lecturer, he published several textbooks on physical and colloid chemistry.

Matulis was not only an outstanding scientist and research manager, but also a man of high moral and ethical standards. Being a high-ranking official, he protected scientists from communist functionaries as much as possible. Many victims of the Soviet regime that had been found unwelcome in other scientific institutions were employed in the Academy of Sciences.

To commemorate J. Matulis' centenary, the conference "Chemistry 99" of the Lithuanian chemists was organized in Vilnius and several books were published, among them a full bibliography of Matulis' publications (over 1000 items).

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