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EDITORIAL

Géza Schay was born in 1900 in Vienna. His family moved to Budapest in 1902, where he grew up. In 1918 Géza Schay matriculated with first-class honors, and in the same year he joined the Faculty of Jurisprudence and Political Science of the Péter Pázmány University of Sciences, Budapest. The next semester he continued his studies at the Faculty of Philosophy, where he started to study natural sciences. In 1923 he graduated as a high school teacher but also obtained his PhD degree in electrochemistry.

After his graduation he accepted a position at the Royal National Institute of Chemistry and Central Research Station, where he worked on analytical problems. In 1927-1928 and in 1930, he was a postdoctoral associate with Michael Polanyi in Berlin. During this time he focused on the development of new methods to study flames, examined the kinetics of reactions of halogens and alkaline metals, and also studied chemiluminescent phenomena. After his return to Hungary, he continued research in these fields. In 1929 he was appointed lecturer in physical chemistry at the University of Science and he nominated as distinguished professor in 1939. In 1943 he left the public service and joined the research laboratory of a rubber factory. As a leader of the laboratory he laid down the theoretical foundations of rubber manufacturing.

In 1949 Géza Schay was appointed full professor of the Department of Chemical Physics at the Faculty of Chemical Engineering, Technical University of Budapest. He refrained from accepting the position since the former head, István Náray-Szabó was removed for political reasons. A new department, the Department of Industrial Theoretical Chemistry was founded, but later the two departments were merged under the name of Department of Physical Chemistry with the leadership of Schay. He acted as department head until 1965.

Géza Schay very actively participated in the organization of the chemical research institutions in Hungary. He established the precursor of the Rubber Research Institute, and the Central Chemical Research Institute of the Hungarian Academy of Sciences (HAS) was also founded in 1954 under his directorship. He retained this position until 1967, when he retired as director, while remaining the research professor of the institute until the end of his life. Under his leadership, the Central Chemical Research Institute became the center of the chemical basic research in Hungary.

The research interest of Professor Schay covered several fields of chemistry and physics. His first important scientific paper was published in 1923, in which he proposed the revision of Van't Hoff's theory of osmosis. In the papers published when he was working in the rubber laboratory he considered theoretical problems relevant to rubber manufacturing, such as the stress-strain relations or the viscoelastic behavior of rubber-like polymers. During the years spent at the Department of Physical Chemistry he focused on adsorption phenomena. First, he studied the physical adsorption of gases and vapors and developed the theory of gas chromatography. He also initiated the application of the non-equilibrium thermodynamics in chemistry and proposed a general thermodynamic model for the adsorption. Later his interest turned to the adsorption of liquid mixtures onto solid surfaces. Together with his colleagues he classified the liquid adsorption isotherms and developed a new scheme for the determination of the specific surface area of the solid surface. Their procedure is known as the Schay-Nagy extrapolation method in the literature. Connected to these studies, he also investigated the thermodynamics of the interfaces during physical adsorption.

The contribution of Géza Schay as a teacher and science popularizer is also notable. His comprehensive knowledge made him an outstanding personality of the Hungarian and international physical chemistry education. Already in the 30's he gave lectures and wrote popular papers concerning prevailing scientific problems. As a university professor, he intended to bring closer the theory and practice of physical chemistry. He recognized that good textbooks can seriously improve the

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efficiency of the university education. He contributed to several physical chemistry texts as editor, and the book he authored with Tibor Erdey-Grúz and István Náray-Szabó on theoretical physical chemistry had been the bible for generations of chemists and chemical engineers.

Professor Schay was also active in scientific public life. In 1946 he was elected as a corresponding member of the HAS, while in 1954 he became an ordinary member. He was one of the leading personalities at the Department of Chemical Science of the HAS. He acted as chairman of the Commission of Physical and Inorganic Chemistry and later also the Commission of Radiochemistry. He headed the Hungarian Chemical Society from 1957 to 1972, when he became the honorary

president of the society for life. He had also been the president of the National Committee of IUPAC for 25 years. His scientific achievements were acknowledged by several national and international organizations. He twice received the highest national scientific award, the Kossuth-prize, and he was awarded the French Ordre du Merite pour la Recherche et l'Invention. He was also elected as honorary member of several foreign academies and societies.

With this special issue *Periodica Polytechnica Chemical Engineering* and the Department of Physical Chemistry and Materials Science, Budapest University of Technology and Economics, would like to pay tribute to the memory of Professor Géza Schay on the 25th anniversary of his death.