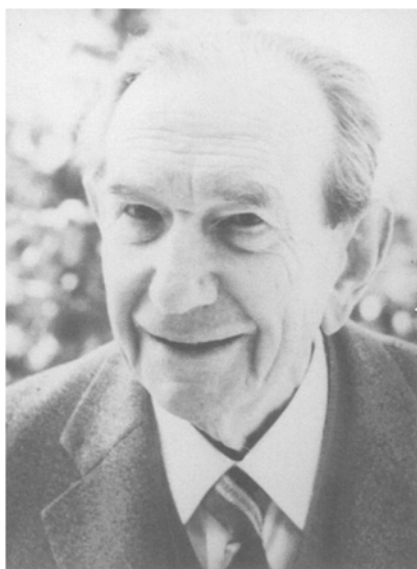


J. Schurz

Otto Kratky (March 1902–February 1995)



Otto Kratky

On February 11, 1995, the renowned scientist and teacher Prof. Otto Kratky died in Graz at age 93. He was regarded as one of the fathers of small-angle x-ray scattering (SAXS), and his institute became a mecca for this method for scholars from all over the world. Born March 9, 1902 in Vienna, he studied chemistry at the Technical University of Vienna. After graduation as a "Diploma Engineer", he went to Berlin to work with R.O. Herzog on the structure of cellulose. He graduated to "Dr. Technical" in Vienna in 1929, became an assistant to H.F. Mark at the University of Vienna in 1933, and Docent for Physical Chemistry (**Habilitation**) in 1937. In 1940, he returned to Berlin to lead the X-ray group at Kaiser-Wilhelm-Institute for Physical Chemistry and Electrochemistry. In 1943, he was appointed Professor for Physical Chemistry at the German Technical University at Prague. After the confusion following World War II, in 1946 he was appointed full professor and director of the Institute for Physical Chemistry at the University of Graz, a position he held up until 1972. In 1947/48 he was dean of the faculty of philosophy, and in 1956/57 rector of the university. In September 1972 he retired from this position and became director of the Institute for X-ray fine structure research of the Austrian Academy of Sciences and the

Research Center Graz; he held this position until 1982. Otto Kratky was a full member of the Austrian Academy of Sciences, a honorary member of the German Academy of Naturalists Leopoldina, as well as a member of numerous academies and scientific societies. He also filled with distinction many public functions. He lectured often and internationally, and he frequently served as guest professor.

His main field of research was small-angle x-ray scattering. He developed this method to high precision in Graz, so that it became universal for structure research, particularly in the field of natural and synthetic polymers. His contributions included theoretical papers as well as important studies on methodical and apparatus development. He also applied the method for the solution of many structure chemical problems. In this regard, his investigations on the conformation of enzymes and other biopolymers in solution are especially remarkable. Thereby, this method attained a key position for research in molecular biology. He also published many reports on solid polymers, particularly on cellulose. Here, he applied both wide-angle and small-angle scattering, so that he can be regarded as a pioneer in the field of cellulose research. Of highest significance for small angle research was the invention of a new collimation system,

today widely known as the “Kratky-camera”. It is commercially produced in Graz and shipped to all parts of the world. A further development, at first regarded as a side product, was a precision instrument for density determination by means of vibration damping. Originally intended only for the determination of the partial specific volume of dissolved molecules, it soon proved so widely applicable that it is today used for various purposes worldwide. Thus, his inventions were also of remarkable economic success. Otto Kratky, by concentrating on small-angle X-ray scattering and its promotion in all aspects, became the dominating personality in the field.

In addition to these research activities, Kratky was also a gifted teacher. His lectures opened an understanding of even the more difficult parts of physical chemistry to many students. This was made possible by his clear speech and significant didactic skill. In his institute he created a team spirit, which led to the formation of a special “Kratky School”, comprising an extensive family of his students and collaborators. Many members of this widespread group, many of them professors at various universities – remember with gratitude and pride the time when they learned from Otto Kratky, and not only in things scientific.

Kratky’s achievements were honored with official distinction. Their total number surpasses two dozen. Here we mention only the Great Gold Medal with Star of Austria, the Great Gold Medal with Star of Styria, Honorary Citizenship of Graz, membership of the order “Pour le mérite” for science and arts, many honorary memberships, and four honorary doctorates.

With the passing of Otto Kratky we have lost an eminent and noble scientific personality, an unforgettable teacher, and an amiable, helpful mentor and friend.