

Professor Marian Kryszewski, 1925–2005

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Professor Marian Kryszewski, one of the most outstanding scientists in the field of physics and physical chemistry of polymers in Poland, the founder of the scientific school of polymers at the Chemical Department, Technical University of Łódź, and in the Centre of Molecular and Macromolecular Studies, Polish Academy of Sciences in Łódź, died on 5 October 2005.

He received his M.Sc. in chemistry at Copernicus University in Toruń under the supervision of Prof. Antoni Basiński for the analysis of the catalytic decomposition of chlorinated olefins. Later on, Dr. Kryszewski worked with the team of Aleksander Jabłoński, a well-known specialist in the field of luminescence and molecular optics at the Copernicus University. Determination of absolute rate constant in vinyl bromide photopolymerisation was the basis for his doctoral dissertation in 1955.

Dr. Kryszewski studied as a postdoc at Centre de Recherches sur les Molecules et Macromolecules in Strasbourg with Prof. Henri Benoit in 1956–1957. In 1960–1961, Dr. Kryszewski worked with Prof. Herman Mark at Brooklyn Polytechnic Institute. Since then, he maintained close scientific and personal contact with Prof. Mark and Prof. Benoit.

Dr. Kryszewski commenced his sovereign activity in 1958, when he was appointed as head of the Physics Chair of Chemistry Department, the Technical University of Łódź (TUL).

His scientific achievements paved the way to his professorship and positions as a correspondent and later a full member of the Polish Academy of Sciences.

The Centre of Molecular and Macromolecular Studies of Polish Academy of Sciences (CMMS PAS) was established on the initiative of Prof. Marian Kryszewski and Prof. Jan Michalski in 1972. Prof. Kryszewski held the positions of scientific director and head of the Polymers Physics Department at the centre for many years. CMMS PAS became soon a well-known and outstanding polymer research centre. Prof. Kryszewski continued to be the head of the Polymers Physics Division at TUL until he retired in 1995.



Research interests of Prof. Kryszewski and his several research groups at CMMS PAS and TUL were focussed on an exceptionally broad spectrum of problems in the field of structure and properties of polymers in their condensed phase and other organic solids. A significant accomplishment of Prof. Kryszewski and his coworkers from the Polymers Physics Division, TUL, was development of a new class of conductive materials composed of polymers and organic molecular crystals arranged in a “reticulate-doped” conductive network. Further research carried out also in collaboration with others led to materials characterised by high anisotropy of electric conductivity, high metallic conductivity and even superconductivity.

Prof. Kryszewski’s coworkers continued intensively to study dielectrics and high molecular weight photoconductors such as thin layers of plasma polymers of various heteroorganic monomers. These materials are very important due to their superior dielectric properties, high thermal and chemical resistance and a capability of modification of their electro-optical properties. Prof. Kryszewski was one of the pioneers in developing this research frontier in the 1960s.

From the late 1960s Prof. Kryszewski, together with the group that later on continued research at CMMS PAS, was involved in studies of the correlation of the morphology with mechanical, thermal and optical properties of crystal-

line polymers and polymer systems. The activity of this group was steadily developing, starting from construction of one of the first lasers in Poland as light sources for scattering study of the supermolecular structure of polymers, through polymer blends, mechanical properties, modelling, thermal shrinkage, relaxation, phenomena associated with crystallisation in polymers and blends, and finally with systems obtained by "in situ" polymerisation of a monomer diffused into a solidified polymer.

Prof. Kryszewski participated actively in various scientific societies. He was a full member of the Polish Academy of Sciences, a member of the Physics and Chemistry Committees at PAS, a nominated member of the Royal Society of Chemistry in the United Kingdom, a member of the Society of Science Dissemination and Promotion and the European Physical Society. He was a member of editorial boards of several journals including the *Journal of Applied Polymer Science*, *Composite Interfaces*, *Polymers for Advanced Technologies*, *Polymeric Materials*, *Polish Journal of Chemistry*, *Polimery*, and *International Journal of Polymeric Materials*. He cooperated with many research centres such as the Brooklyn Polytechnic Institute, Claude Bernard University in Lyon, Kyoto University and Max Planck Institute for Polymers Research in Mainz. He was frequently invited to present lectures at international scientific conferences and symposia.

Prof. Kryszewski was an author and coauthor of more than 360 original articles, 50 reviews in renowned international journals, and 2 monographs, a coeditor of 3 books and coauthor of 22 inventions patented in Poland and abroad. He was the author of a major monograph on electrical properties of polymer systems entitled "Semi-conductive Polymers" published in 1980.

In recognition of his achievements, Prof. Kryszewski received numerous awards and distinctions including the Maria Curie-Skłodowska Award, the University of Kyoto Medal and the Convallaria Copernicana Distinction. He was also awarded Doctor Honoris Causa by TUL, and in 2005 he received the title of honorary professor of the Technical University in Wrocław.

The Professor's teaching activity needs to be underlined especially. He was a supervisor of 45 Ph.D.s, and 12 habilitations were prepared in his scientific school. Many of his students are now professors at universities or leaders in academic and industrial research centres in Poland and abroad.

The polymer community, for which Professor Kryszewski was always a great authority and a colleague, has suffered an irretrievable loss.