

Professor Witold Danikiewicz

Education and career

In 1978 he completed his studies and in 1984 obtained a doctorate at the Faculty of Chemistry, Warsaw University of Technology. Since 1982 he has been working at the Institute of Organic Chemistry of the Polish Academy of Sciences in Warsaw. At the beginning of his scientific career, he was involved in research in the field of organic synthesis, working in the team of prof. Mieczysław Mąkosza. After returning from a postdoctoral fellowship in the USA, in 1989 he started working in the Mass Spectrometry Group at the IOCh PAS, and since 1992 he has been its head. In 1999 he obtained the title of doctor od science (habilitation), and in 2005 - the title of full professor of chemical sciences.

Scientific interests

Current scientific interests of prof. Danikiewicz include:

- studies of mechanisms of the reactions of ions with neutral molecules in the gas phase and in solution with the use of mass spectrometry and computational methods;
- studies on the mechanisms of fragmentation of biomolecules;
- application of the ion mobility technique coupled with mass spectrometry (IM-MS) to study the structure of ions and the non-covalent interactions of ions with neutral molecules in the gas phase;
- developing applications of mass spectrometry in the analysis of contamination of drugs and other products available on the market and in the study of organic compounds present in the atmosphere.

Scientific achievements

- author or co-author of over 160 scientific papers published in renowned international journals and 2 patents;
- author of one chapter in the book monograph "Cyclodextrins and Their Complexes: Chemistry, Analytical Methods, Applications" edited by H. Dodziuk, Wiley-VCH Verlag GmbH, 2006.
- author of the monograph "Mass spectrometry - basics and applications" PWN 2020 (in Polish).

He presented the results of his research at numerous international scientific conferences, and he organized and chaired several such conferences.

Educational and popularizing activities

Prof. Danikiewicz was the supervisor of 9 PhD dissertations in the field of mass spectrometry. As part of his didactic activity, since 1995 he has lectured on mass spectrometry for PhD students at the IOCh PAS, which since 2008 have been extended to the use of other spectral methods in organic chemistry. In parallel, he has lectured or still lectures on mass spectrometry at various universities and research institutes. He is the author or co-author of 7 school textbooks for general secondary school, 4 sets of tasks in chemistry and one methodological study on teaching organic chemistry.