

### **Professor Mirosław Szafran**

Mirosław Szafran was born on the 24 June, 1933, in Poznań. In the years 1952–1956 he studied chemistry at the Adam Mickiewicz University, Poznań, graduating with Master of Science degree. While still a student he accepted the position of a junior assistant at the Organic Chemistry Chair. After graduation he started a very successful scientific career. His PhD thesis was completed in 1960 under promotion of Prof. Jerzy Suszko. In 1964 he presented the habilitation thesis on strong hydrogen bonds in the complexes of pyridine N-oxide derivatives studied by IR spectroscopy. In 1972 he was awarded the title of extraordinary professor and in 1979 – the title of ordinary professor.

In the period of 48 years of working at the University Prof. M. Szafran has been recognised as an excellent lecturer and research worker. He was very much engaged in all kinds of teaching activities: laboratory classes, seminars, course lectures, monographic lectures, *etc.*

Prof. M. Szafran paid three long-term scientific visits to abroad universities, he won a British Council scholarship (1967–1968) and spent one year in England, he was two times invited to USA universities as a visiting professor (1987–1989, 1991–1992), developing particularly fruitful cooperation with Professor A.R. Katritzky. Prof. M. Szafran delivered lectures at many universities over the world.

The main area of his research concerns different aspects of physical organic chemistry, in particular hydrogen bonds, electrostatic interactions, clusters, proton transfer reactions, tautomeric equilibria, conformation of zwitter-ionic compounds and physical chemistry of ylides. The problems related to the above have been studied by synthesis of model compounds, FT-IR, UV-VIS, NMR and NQR spectroscopies, osmometric method, the quantum chemical calculations, and QSAR (Quantitative Structure Activity Relationships).

His most important achievements in the area of research include the following: (a) He established a number of correlations in OHO and NHO hydrogen-bonded complexes between  $\Delta K_a$  and NMR  $^1\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  chemical shifts, stretching vibrations of OH groups, isotopic ratio [ $\nu(\text{OH})/\nu(\text{OD})$ ] and the centre of gravity of absorption bands. (b) He proved the effect of trace amounts of water in solvents on the  $^1\text{H}$  NMR chemical shifts of protons in intermolecular hydrogen bonds, and developed the NMR technique providing results undisturbed by the trace amounts of water. (c) Prof. M. Szafran described prototype equilibria in a series of OHO and NHO hydrogen-bonded complexes and discovered two OHO type complexes occurring in equilibrium in molecular and proton transfer forms. (d) Prof. M. Szafran is an author of a

critical assessment of isotopic effects. (e) He also worked out methods of syntheses of different betaines and their complexes with acids in search for substances of interesting physical and chemical properties (ferroelectric or nonlinear optical). (f) In cooperation with Prof. A.R. Katritzky, Prof. M. Szafran proposed a new scale of aromaticity of heteroaromatic compounds (classical and magnetic), which has been included in a commonly used textbook on organic chemistry: "Advanced Organic Chemistry" by J. March.

Prof. M. Szafran is the author or co-author of over 230 scientific reports and papers. He wrote 3 books on molecular spectroscopy and 12 review articles. Moreover, the results of his research have been presented at many conferences and schools, both national and international.

It should also be emphasised that Prof. M. Szafran has promoted many M.Sc. and Ph.D. theses. Several of his students have been appointed to professorship positions at different universities.

Apart from his scientific activities, Prof. M. Szafran has been trusted with many administration or organisation functions. He was a vice-Dean of the Faculty of Mathematics, Physics and Chemistry, A. Mickiewicz University (1972–1975), vice-Director of the Institute of Chemistry (1978–1981), Head of the Organic Chemistry Laboratory at the Institute of Chemistry (1976–1977), the chief supervisor of PhD studies (1970–1972) and the Head of the Physical Organic Chemistry Laboratory (ever since 1977). For many years he was a member of the University Senate, chairman of the Section of Organic Physical Chemistry of the Polish Chemical Society, chairman of the Poznań Branch of the Chemical Sciences Committee at the Polish Academy of Sciences, *etc.*

Prof. M. Szafran has been awarded by the Polish Chemical Society (1964), the Ministry of Higher Education and Science (1966, 1972, 1979, 1989), Polish Academy of Sciences (1982, 1986) and honoured by the Medal of National Education Commission (1987) and Knight's Cross of Polonia Restituta (1977).

He is married and has two daughters.

*Bogumił Brzeziński*