

IN MEMORY

Dr. Wojciech Roszak
27th of March, 1939 – 28th of May, 1999



On the 28th of May, 1999, the great scientist and our colleague, Dr. Wojciech Roszak, was taken from us after a long illness. Dr. Roszak was born on the 28th of May, 1939, in Pleszewo. After graduating from secondary school, he went on to study in the Department of Chemistry in the Technical University of Łódź. He completed his Master's Thesis there, titled "A study of radioactive isotope exhalation in natural potassium" and received his MSc degree in 1961. In 1962, he started his academic career as an assistant in the Department of Water and Sewage Technology in the Technical University of Poznań. He began his doctorate studies on radiation chemistry in 1967 under Professor Jerzy Kroh. His PhD thesis was titled "Radioluminescence of frozen methanol matrixes" and he completed it in 1972. In it, he developed a method of thermal stimulated and selective bleaching radioluminescence, and showed the correlation between the thermal stimulated radioluminescence spectrum and methanol matrix structures.

In 1971 Dr. Roszak started his work in the Industrial Institute of Leather in Łódź, where he concentrated on the problems of the purification of tanner's sewage, the removal of volatile phenols from sewage and methods of electrocoagulation. Between 1973 and 1979 he worked as the main water technology specialist in Łódź's Water Supply Company.

It was in 1975 that he returned to his true calling, his academic career, in the position of senior assistant in the Institute of Construction in the Engineering College of Zielona Góra. There, he concentrated his research on, among other things, the resistance of concrete to corrosion in aggressive environments. As a result of this research, he received a patent on the strengthening and increase of concrete's resistance to corrosion in conditions of saturation with solutions of resins and monomers with catalysts.

From 1977 to the end of his life, Dr. Roszak worked in the Institute of Geological Sciences in the University of Wrocław, focusing his studies on the chemical make-up of shallow ground water, based on Wrocław City's infiltration water take. This work showed that the environment

and ground water were contaminated with heavy metals, and this led to measures being taken to protect the water intakes. Active monitoring and protection as well as identifying sources of pollution and their concentration in the water were all enabled thanks to the geochemical processes modelled on mass balance, done during the study. The other trend of his research covered problems of surface and ground water chemical composition in the region of the Turawa reservoir.

Dr. Roszak presented the results of his work at many scientific conferences at home and abroad, such as in Karlovy Vary (1986), Amsterdam (1987), Łądek Zdrój (1982), Kraków (1984), Gdańsk (1988), Karpacz (1986), Lublin and Bierutowice (1987) and Szklarska Poręba (1989).

Dr. Roszak reserved a special place in his research for problems connected to sorption capacity during heavy metal migration processes. Working on this from 1986 to 1990 under the Central Research Programme, he produced excellent results, with his main success being the qualification of the migration ability of such metals as cadmium, chromium, mercury, lead and zinc in soil and ground water. He showed the tremendous impact of aeolian transport of industrial dust and of gaseous emissions on the chemical composition of ground water, based on the Odra river valley. Using mass balance, statistical and hydrochemical methods, he precisely defined the areas of ground water compositional change. He paid a lot of attention in his work to sorption and ionic exchange in soil and water, and his work included calculation distribution coefficients for metals such as cadmium, chromium, zinc, lead and mercury, and the time for migration for these metals from the pollution source to the well, and retardation in the Odra river valley aquifer. These were all valuable scientific results, and his book "Chemical composition trends in the shallow ground water of the ice-marginal valley of the Odra river near Wrocław" is well-known and widely quoted at home and abroad.

Dr. Roszak was an enquiring, conscientious, exact and honest researcher. Parallel to the important research mentioned above, he had a successful and productive university career. October 1991 saw him receive his habilitation at the Environmental Engineering and Water Technology Department in the Technical University of Wrocław. His scientific achievements include 31 original papers, one monographic book, 12 reports published in conference materials, and 34 unpublished reports. An excellent lecturer in geochemistry, water chemistry and sedimentology, he also started a modern research on hydrochemistry, organising a water and soil chemistry laboratory in the Institute of Geological Sciences in Wrocław University. He lectured students of geology and environmental science, and his lectures and lab sessions were interesting and well liked by students. 12 MSc theses and one PhD

thesis were written under his direction. Finally, he was a member of many scientific associations, actively taking part in their activities. They were the Polish Chemical Society, the Polish Society of Radiation Research, the International Association of Hydrogeologists and the Polish Geological Society.

From 1993 on, Wojciech Roszak bravely fought with his health difficulties, continuing his work until the end. We lost a colleague, great chemist researcher, scientist and educator, and he will be sorely missed.

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