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The 70th Birthday
of Professor Stanisław Chibowski



Professor dr hab. Stanisław Chibowski was born in Przegaliny on 27 September, 1946. After finishing Primary School he attended the Secondary Chemical School in Lublin. In 1966 he began his studies – the subject Chemistry at the Faculty of Mathematics, Physics and Chemistry, Maria Curie - Skłodowska University in Lublin.

In 1971 after presenting the master thesis “Adhesion forces in the air bubble - mixed apolar collector – sulfur – water system and the emulsion flotation” supervised by Prof. dr hab. Andrzej Waksmundzki he obtained the Chemistry Master degree and was employed in the Agrophysics Institute, Polish Academy of Science in Lublin. After four months of working there, in 1972 he got a job as a scientific-technical assistant in the newly open Department of Radiochemistry and Radioisotopes Application, Faculty of Mathematics, Physics and Chemistry, M. C. S. University headed by Prof. dr hab. Jerzy Szczypa. The first two years of his work were devoted to the organizational problems of the Department, namely connected with apparatus, laboratory equipment and didactic process. In 1974 he was transferred to the position of research-didactic assistant.

At the beginning Prof. dr hab. Stanisław Chibowski’s research focused on adsorption phenomena at the solid – surfactant and solid – polymer solution interfaces. In order to determine physicochemical processes proceeding at these interfaces he carried out studies on structure of formed polymer – surfactant type complexes as well as polymer and surfactant interactions in the aqueous solutions. Due to cognitive and practical aspects, this subject area found its permanent position in the field of interface physicochemistry. The obtained research results were discussed in the doctoral dissertation “Radiochemical investigations of polymer and surfactant molecules interactions on the calcium carbonate surface” presented in 1980. The supervisor of his doctoral dissertation was Prof. dr hab. Jerzy Szczypa.

After obtaining the Sc. D. degree, Prof. Stanisław Chibowski undertook the studies of adsorption mechanism and conformation of high-molecular substances at the highly dispersed solid – polymer solution interface. This subject area is of significant importance because

the phenomena occurring in such systems are essential in many technological processes as well as in those proceeding in the natural environment. The use of the obtained data for quantitative evaluation of the processes on the solid surface and solution surface layer was a complete novelty.

Searching for explanation of the observed physicochemical and electrokinetic changes in the metal oxide suspensions subjected to the action of polymer solutions, Prof. S. Chibowski worked out a method for determination of adsorption free energy of the polymer segment on the solid surface. These studies were facilitated using radioactive isotopes. The analysis of the data obtained experimentally and based on theoretical calculations made it possible to prepare a model allowing for approximate description of structure of adsorption layers formed at the solid – solution interface.

Based on these investigations Prof. S. Chibowski prepared the habilitation dissertation “Studies of mechanism of polymer macromolecules adsorption at the solid/aqueous solution interface – surface conformations”. On 29 October 1990 he presented it and passed the examination during the session of the Faculty of Chemistry Council. Both the habilitation dissertation and examination were highly evaluated by the Faculty Council members who accepted the motion for conferment of the title Hab. Doctor.

Then Professor Stanisław Chibowski carried on the studies of mechanism of adsorption and surface conformation of polymeric substances at the solid – solution interface. He was more and more effective in applying numerical and statistical methods based on the Scheutjens-Fleer model for theoretical description of quantities referring to adsorbed polymer chains and comparison of these data with corresponding experimental data.

A new research subject of Prof. S. Chibowski after the habilitation procedure concerned adsorption and migration of radionuclides in soils systems and natural environment. This research subject was undertaken after the nuclear reactor explosion in Chernobyl. The fascination with this subject was so great that the team formed by Professor in the

Department of Radiochemistry carried out studies of not only the mechanism of sorption and migration of such radionuclides as ^{137}Cs , ^{90}Sr , ^{239}Pu , ^{241}Am but also measurements of radon contents in public use buildings, radiological state of ground air layer or radionuclides transfer coefficients in the soil – plant system. Based on the investigations there was also prepared a map of soil and vegetation contamination of the “Eastern Wall of Poland”.

The investigations of radionuclides adsorption and migration in soils were recognized by the renowned organisation International Atomic Energy Agency (IAEA) in Vienna. IAEA proposed collaboration and awarded to Prof. S. Chibowski the grant “Migration of radionuclides in soils and their accumulation in sediments of superficial waters”.

The investigations and the obtained results in the area of high - molecular compounds at the solid – solution interface as well as adsorption and migration of radionuclides in the soil systems contributed to conferring the Professor title on Dr hab. Stanisław Chibowski on 15 May, 2002.

Professor’s scientific interests still focus on mechanism of adsorption and surface conformations of polymer substances in the solid-solution systems, structure of double electrical layer in the presence of polymer, aqueous suspension stability, effect of kind of soil minerals on adsorption and accumulation of radionuclides and heavy metals in the surface soil layer and studies of radioactive isotopes migration in the natural environment.

Prof. Stanisław Chibowski has been the Head of Department of Radiochemistry and Colloids Chemistry since 1999. The scientists from this Department has been collaborating with several scientific institutions at home and abroad.

Prof. Stanisław Chibowski held a few special training courses, among others, in the Institute of Marine Biology in Murmansk, Josef Stefan Institute in Lubiana, Technical and Agriculture University in Kiev, Research Centre for the Effects of Radioactive Contamination in Chernobyl.

He was a reviewer of the motion for the Professor title, several habilitation dissertation and doctoral theses. He also reviewed scores of papers for scientific journals.

As a university teacher he conducted and still conducts various didactic activities connected with the special subjects dealt with by the Department of Radiochemistry and Colloids Chemistry, among others, nuclear chemistry, radiochemistry, protection against radiation, chemistry of dispersed systems. These activities included lectures, seminars and laboratory classes.

During the 45 - year work he promoted 6 doctors, two doctoral studies are in the process and over 100 master graduates.

His scientific achievements include 285 papers many of which are published in the journals from the so called Philadelphia List of high Impact Factor. His papers were cited over 1000 times. He presented his scientific results 70 times at national and international conferences. He obtained a few KBN and NCN grants as well as IAEA grant. He was and still is a member of Editorial and Scientific Committees as well as the National Science Centre Expert.

In 1996-2002 he was the Vice - Dean of the Faculty of Chemistry for Students and Educational Problems. In 2002-2005 he was a Vice - Rector of M. C. S. University for Students and Teaching Problems and in 2008-2012 for Educational Problems.

For his scientific, didactic and organizational activities he was awarded the National Education Committee Medal in 2002, the Golden Cross of Merits in 2003, the "Heart for Hearts" Medal in 2005 and the Person of Merit for Maria Curie - Skłodowska University Medal in 2008. He obtained the M. C. S. University Rector Award several times.

Małgorzata Wiśniewska

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