



Professor IOAN SILAGHI-DUMITRESCU,  
corresponding member of the Roumanian Academy  
(1950–2009)

Born in 1950, June 1<sup>st</sup>, Ioan Silaghi-Dumitrescu attended primary school in his home village (Botiz, Satu Mare county) and high school at “Mihai Eminescu” Lyceum in Satu-Mare. He graduated in 1974 from the Inorganic Chemistry of the Faculty of Chemistry, Babes-Bolyai University at Cluj-Napoca, Roumania and he obtained his PhD from the same university in 1981. After three years spent in the industry at the Sanex Enterprise for Fine Ceramics for Construction (1974-1977), he joined the Faculty of Chemistry and Chemical Engineering of the Babes-Bolyai University, where he eventually became a full professor in 1994; here, he served as head of the Inorganic Chemistry Chair (1994-2007) and as Dean of the Faculty (2008-2009).

The passion for science in general and for chemistry in particular, the joy of sharing knowledge, the dedication to teaching was appreciated by generations of students. He was an outstanding professor and mentor recognized by the academic community.

Professor Ioan Silaghi-Dumitrescu's research contributions were in the fields of inorganic and organometallic chemistry, with synthesis and structural characterization of transition metal compounds as well as of compounds involving elements from Main Groups 13, 14 and 15 (e.g., cumulene and heterocumulene systems with heavy elements, biologically-active compounds). He was among the first researchers in Roumania to approach chemistry with computational techniques, starting very early on from force constant calculations and infrared spectrum simulations to offer general principles for assigning coordination modes for thiophosphoric ligands at a time when structural analysis with X-ray diffraction was not available in Romania. He then evolved towards quantum chemistry, where he provided notable contributions with molecular modeling studies. His results on the structure of clusters involving main group (post-transition) elements, organometallic clusters, cumulenic and heterocumulenic systems, nanotubes and calixarenes, were reported in journals among the most prestigious in the field of chemistry. Much of his research was aimed not solely for obtaining structural information, but also for understanding and guiding experiments performed in his own research group as well as by collaborators from various countries, thereby allowing elaboration of strategies in synthesis and explanation and prediction of properties for a wide range of inorganic, organometallic and organic compounds. His results have been reported in 183 scientific articles in relevant journals across the world.

The Center for Molecular Modeling and Quantum Chemistry founded by him in 2007 (developed from the Laboratory for Structure and Molecular Modeling established in 1996), featuring an internationally-competitive computational infrastructure, has consolidated the school of theoretical chemistry in Cluj and has provided a sound basis for high-level collaborations with prominent researchers from the United States of America and from China.

He was a visiting professor at the National Autonomous University in Mexico (UNAM) in the Theoretical Chemistry Group at the Institute of Chemistry (1995-1996) and at the University of Georgia, Athens, Georgia (USA) (2000-2008, for 1-2 months each year). He also had research-related stays at the University of Nottingham (1992) and Heidelberg University (1993-1994), and was engaged in active collaborations with groups from the Universities in Toulouse, Rouen, Lille, Leipzig, Braunschweig, Köln, Budapest, Pecs, Beijing, Guanjou, Moscow (Idaho).

He received the "Gheorghe Spacu" prize from the Rumanian Academy for his "Research in structure and molecular topology" in 1989 and the "Gheorghe Spacu" Medal and “Diploma de Onoare” from the Roumanian Society of Chemistry (2009).

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