



Andrzej Jerzy Sadlej 1941-2010

Andrzej Sadlej, member of Croatian Communication Association, was born on November 9, 1941 in Lublin, Poland. He spent his early youth and completed high-school education in Gdynia, a Baltic Sea port in Northern Poland. In 1959 he began undergraduate studies of chemistry at the University of Warsaw, but in 1963 he moved to the Jagiellonian University in Cracow, the leading theory center in Poland at that time, where he received his M.Sc. degree under the supervision of Late Professor Alojzy Gołębiewski. His Ph.D. work, carried out under the supervision of Professor Andrzej Witkowski and defended in 1968 was on the vibronic coupling and temperature effects in EPR spectra. After obtaining the Ph.D. he returned to Warsaw and accepted a permanent position at the Institute of Organic Chemistry of the Polish Academy of Sciences. He got his D.Sc. (Habilitation) in 1972 having presented a dissertation on the Hartree-Fock perturbation theory of molecular properties. In 1981, when the martial law was introduced in Poland, he was working at the University in Lund. He stayed there for over 15 years becoming a Swedish citizen. In 1997 he returned to Poland and accepted the chair of Theoretical Chemistry at the Nicolaus Copernicus University in Toruń.

Sadlej's scientific interests are very broad and encompass diverse fields of quantum chemistry and molecular physics. He has made numerous important, often seminal contributions to theoretical chemistry. His best known and most influential work has been in areas such as:

- Molecular spectroscopy, in particular calculation and interpretations of electronic spectra of organic molecules including conjugated and aromatic compounds.
- Theory of vibronic coupling in simple species and molecular crystals.
- Theory of molecular magnetic properties.
- Theory of molecular electric properties including pioneering studies of the influence of the orbital relaxation, correlation and basis set effects.
- Accurate calculations of atomic and molecular parameters including multipole moments and polarizabilities, electric field gradients and NMR parameters.
- Theory of the electron correlation via perturbation expansion, also in the multireference context.
- Theory of explicitly correlated functions, in particular the first application of the Gaussian geminals in many-body perturbation theory calculations for molecules.
- Theory of intermolecular interactions, including studies of the induction and basis set superposition effects.
- Theory of relativistic effects on molecular properties and interactions.
- Development of two-component relativistic methods in the electronic structure theory.
- Theory of non-linear electric properties of atoms and molecules.

The results of Sadlej's work have been presented in almost 300 original research publications. Many of

them received very high number (often higher than 100) of literature citations. In fact, he appears to be the most frequently cited Polish chemist.

Sadlej has trained (very well) a generations of quantum chemists. His didactical passion is well known and his lectures are always enthusiastic and animated. The difficult subjects covered by him seem to be so simple when he is lecturing, only later students realize their complexity. Already in the early 1960's, as a college student, he published a book - the first Polish book on applied quantum chemistry. Due to the clarity and pedagogical value of his presentation the book become very popular and significantly helped to popularize quantum chemistry among chemists in Poland. The direct influence of Sadlej's work stretches over many laboratories. Though in the last years he decided to settle in a relatively small Polish town of Toruń (where he established an active center of quantum chemistry), he still frequently travels across the world. He collaborates with research groups in USA, Germany, Great Britain, The Netherlands, Slovakia, Sweden, France, Greece, Spain and other

countries. Many of his publications are the results of the international collaboration. He has been always involved in many scientific and editorial boards. He is known as an excellent manuscript reviewer for the first rated journals, who likes to assist younger colleagues in bringing their contributions up to the journal's level. Among many official duties, he had been for many years a member of the Advisory Editorial Board for the Molecular Physics. Many of his best papers have been published in this journal. We believe, therefore, that it is very appropriate to devote a special issue of Molecular Physics to celebrate his accomplishments. The number and quality of the contributions we received for this special issue is an excellent testimony of the support this idea gained among his friends.

Andrzej Sadlej has a rare ability to stay mentally young and extraordinarily active and to play a significant role in so many diverse areas. We wish him to keep that way for many, many more years to come.

Bogumil Jeziorski
Jerzy Leszczynski
Szczepan Roszak