



IN MEMORIAM Dr. DUMITRU I. MARCHIDAN
(1930–2013)



Doctor docent Dumitru I. Marchidan died on October 3, 2013.

Dumitru I. Marchidan was born on October 7, 1930 in Braşov. He attended there the elementary school (1937-1941) and the “Andrei Şaguna” High School (1941-1949). In 1953 he graduated from the Faculty of Chemistry (Physical-chemistry section) of the “C. I. Parhon” University – Bucharest with a diploma thesis concerning the electrochemical preparation of ammonium peroxodisulfate.

The scientific activity of Dr. Marchidan started immediately, in 1953. From the beginning, he proved his talent, creativity and skills for research. Working under the supervision of Professor Ilie Murgulescu, he defended in 1962 his Ph.D. thesis on “Concentration (electrochemical) cells with molten salts,” which was the first Ph.D. thesis presented in Roumania in the research field of the high-temperature molten salts, Dr. Marchidan being considered the promoter of scientific researches in this field in our country. Beginning with 1963, Dr. Marchidan was selected by Professor Murgulescu to be part of the team in charge of establishing future research directions in the just founded Centre of Physical Chemistry of the Roumanian Academy. There, the original research in the field of thermodynamics and kinetics of high-temperature molten salts was continued and developed together with the studies on thermal dissociation of methane, kinetics of high-temperature metal oxidation, electrochemical corrosion and spectroscopy. After 1965, when he had the chance to work with professors Eduard Calvet and Marc Laffitte at the Institute of Microcalorimetry and Thermochemistry, Marseille-France, Dr. Dumitru Marchidan initiated and pursued important research in the field of high-temperature calorimetry of molten salts. For his scientific contributions in the field of high-temperature molten salts thermodynamics, in 1971 he was granted the title of “doctor docent” (Dr.Sc.).

Dr. Marchidan’s research career represented about half a century of activity in the research field of physical chemistry. Apart from the mentioned research directions, Dr. Marchidan initiated and developed investigations on a large variety of subjects, in accord to the new challenges and trends in the thermodynamics field. At the same time, he was constantly preoccupied by the professional development of his coworkers and the formation of young researcher groups capable to contribute to the development of fundamental and applied research in the field of Chemical Thermodynamics. Some of these new themes regarding high temperature thermodynamic functions of non-stoichiometric uranium oxides (high temperature heat content and related functions by drop-calorimetry and EMF measurements on solid

electrolyte galvanic cells), relative enthalpy and related thermodynamic functions of some organic compounds (heat capacity, enthalpies of combustion and formation, vapor-liquid equilibria) were included in seven PhD Thesis supervised by Dr. Marchidan and in the research directions of the Laboratory of Chemical Thermodynamics. The name of Dr. Marchidan is also connected to the design of new experimental devices in the field: a new high temperature drop calorimeter and a differential calorimeter for the study of thermal oscillations in catalytic oxidation of methanol.

The scientific data obtained by Dr. Marchidan and his co-workers were included in four books, over 100 papers, five patents, four new technologies and were communicated at different national and international scientific conferences or as visiting professor or invited lecturer. The original data were included in "Gmelin Handbuch der Anorganischen Chemie", in "Bibliography on Thermodynamic Properties of Materials at High Temperatures", as well as in other respected bibliographic Databases and were cited in scientific papers and PhD Theses.

In recognition of the scientific accomplishments, Dr. Marchidan was distinguished with the prizes: the "N. Teclu" Academy Award in 1961, the State's Award for the year 1963, the Medal for Scientific Merit in 1966 and the Order for Scientific Merit in 1972.

His important scientific contributions were also recognized and highly appreciated worldwide. He was elected as national representative (1981-1989) in the IUPAC's Commission on Thermodynamics (I.2). He translated and published in 1996 at the Roumanian Academy Publishing House "the IUPAC Green book", "Quantities, Units and Symbols in Physical Chemistry", and in 1979 "The International System of Units (SI)" published by BIPM. In September 2009, dr. Marchidan was a member in the IUPAC Project 2008-007-3-100 concerning the "Preparation of translation of the Green Book (third edition – 2008)".

Dr. Marchidan was member of the editorial/advisory boards of several well known journals: *Revue Roumaine de Chimie* (1965-2013), *Studii și Cercetări de Chimie* (1964-1975), *Revista de Chimie (Bucharest)* (1984) and *Roumanian Chemical Quarterly Reviews* (1993-2004). He has been organizer/co-organizer of different national/international scientific meetings, including the biannual National Conferences on Physical Chemistry held in Bucharest (1968-1976) and the National Congress on Chemistry (1978, 1981). He initiated in 1986 and organized yearly until his retirement, in 1998, the colloquium "Vapor-Liquid Equilibria".

The strong personality of Dr. Marchidan manifested in the research activity joined with managerial work. In the Roumanian Academy's Institute of Physical Chemistry he was in turn: head of laboratory (1963-1970; 1975-1993), head of section (1970-1971) and scientific deputy director (1971-1975). He was also a member of the scientific board of the institute (1963-1993).

Doctor docent Dumitru I. Marchidan left behind not only important achievements due to his hard work, perseverance, creativity, dedication and leadership qualities, but respectful co-workers who try to continue his complex work.

Dr. Speranta Tanasescu