

## In memoriam. Professor Roger Cohen-Adad: Scientist, teacher, and gentleman

The Solubility Data community deeply mourns the passing on of one of its most prominent members. Professor Roger Elie Cohen-Adad died shortly after the 11<sup>th</sup> ISSP, which he had been unable to attend because of his illness.

Roger Cohen-Adad was born on 22 May 1921 in Algeria. He graduated from the Université d'Alger in 1942, but as war had reached Algeria, he was recruited and spent a year in Senegal. This was followed by a term as an officer cadet, after which he was attached to an American division and ended the war as a captain in Germany after being awarded the Croix de Guerre with a silver palm. In 1946, he returned to Algiers and completed the degree of Docteur ès Sciences Physiques in 1954 under the supervision of Prof. A. P. Rollet, with a two-part thesis, *Contribution à l'Etude Physicochimique de la Solution Aqueuse d'Urée* and *Forces Interatomiques et Intermoléculaires*. In 1957, he was elected Professor of Chemistry, Université d'Alger, and in 1961 left Algeria to become Professor at the Université Claude Bernard (Lyon I) in Lyon-Villeurbanne. In 1964, he became Professor with the chair of Physics, Chemistry, and Biology, and in 1981 and 1983 attained the highest distinctions for a professor in France, those of Professeur Classe Exceptionnelle, 1<sup>re</sup> and 2<sup>me</sup> classe. In 1963, he received the Palmes Académiques as a Chevalier, followed in 1965 by election as an Officier of the university's educational district.

Professor Cohen-Adad's most notable research activities were centered on phase diagrams and kinetics, and led to 160 publications, 3 patents, and supervision of 60 theses. One of his main merits as a member of the chemical community was, during his long career, the successful application of scientific achievements to the solution of practical tasks. In 1964, as a participant in the Ariane IV and V European projects, he was concerned with the industrial synthesis of 1,1-dimethylhydrazine for use as rocket fuel for launching satellites, and developed a method for the synthesis of both methylhydrazine and 1,1-dimethylhydrazine that eliminated carcinogenic intermediate products. This method is still in use in the French chemical industry. Professor Cohen-Adad's investigations on hydrazines as raw materials for medicine led to the development of a method for the preparation of Diamicon, a medicine for treatment of diabetes. In 1990, he was awarded the Poirson Prize, the highest distinction of the Académie des Sciences, for his studies on hydrazine.

Professor Cohen-Adad achieved a worldwide reputation for his investigations of the solubility and crystallization processes in various water–salt systems, the construction of their phase diagrams, and the application of the latter. In recent years, his efforts were devoted to the thermodynamic simulation of water–salt systems and the prediction of their behavior under various conditions. Among the results of his work on an INCO-COPERNICUS program of the European Community was an original device to be used for in situ studies of the different steps of evaporation processes in natural and commercial water–salt systems. He also enjoyed cooperation with many industries and French and EU governmental agencies, as well as with many colleagues in universities in Europe, North Africa, and North America. From 1987 to 1991, he was a member of the French National Committee for Scientific Research (CNRS).

Professor Cohen-Adad's investigations on water–salt phase diagrams also form the basis for a method that has been developed for the preparation of pure sulfamic acid. He also helped develop technologies for production of pure salts from the salt lakes of Tunisia and Morocco as well as for the utilization of the chemical resources of the Black Sea.

His international recognition as a scientist is based on his professional activities within IUPAC as well as his scientific work. In 1978, he was appointed an Associate Member of the Solubility Data

Commission of IUPAC, and from 1985–1990 was a Titular Member. His contributions to the work of the Commission include coeditorship of Vol. 47 of the Solubility Data Series, *Alkali Metal and Ammonium Chlorides in Water and Heavy Water (Binary Systems)* (1991), and coauthorship of two chapters in the monograph, *The Experimental Determination of Solubilities* (2003).

Meetings and conversations with Prof. Cohen-Adad, as well as his sound scientific advice, will remain unforgettable for all with whom he came in contact. Many of his colleagues and their families have also enjoyed the generous hospitality of Roger and his wife, Prof. Marie-Thérèse Saugier Cohen-Adad, in Villeurbanne, at their country home in Ste-Catherine in the Monts du Lyonnais, or at their summer home in Lagnes in Provence. He combined inimitably scientific depth with a refined classical education and deep commitment to colleagues and friends, a gentleman professor. We remember him with great affection and admiration.

**C. Balarew**  
**H. Gamsjäger**  
**N. Kbir-Arigoib**  
**J. W. Lorimer**  
**M. Salomon**