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Special Issue in Honor of Dr. Shuji Saito

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Dan F. Anghel



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Dr. Shuji Saito

This issue is dedicated to Doctor Shuji Saito on the occasion of the 50th anniversary of his first paper published in the Journal of German Colloid Society. The paper entitled “Die Solubilisation von Polyvinylazetat” by N. Sata and S. Saito appeared in the *Kolloid Zeitschrift* (1952) 128: 154. According to the title, the paper dealt with the solubilization of poly(vinyl acetate) (PVAc) in aqueous sodium dodecyl sulfate (SDS) solutions. The authors observed that PVAc, a water-insoluble polymer, is completely dissolved by micellar SDS solutions, a result that mostly intrigued them. One has to recall that at that time, the micellar solubilization was the only available theory to explain the dissolution of hydrophobic compounds in micellar systems. The theory worked well in the case of low molecular weight compounds like hydrocarbons, oleophilic dyes, etc., which are solubilized in the inner core of the micelle, but how can a small micelle accommodate a giant polymer molecule? To solve this problem Sata and Saito originally proposed a model consisting of surfactant aggregates formed along the polymer backbone. The model based on simple viscometric measurements was later in the eighties confirmed by the advent of the more sophisticated neutron scattering technique and is nowadays called the “necklace model”.

During his career, Dr. Saito published about 70 original and review papers, which is a very good score for a person who mainly worked in a cosmetic company and not in the academic field. The majority of his papers belong to the interaction between ionic or nonionic polymers and charged and uncharged surfactants. Dr. Saito also paid attention to the interactions of ions with polymers, of nonionic polymers with polymeric acids, as well as to the surfactant micelles and to aqueous solutions of tetraalkyl-

ammonium salts. His review chapter on “Interactions of Polymers and Surfactants” published in *Nonionic Surfactants*, *Physical Chemistry*, M. J. Schick (Ed.), Dekker, New York, 1987, became a classic for all those who act in this field. I would like to mention in this short introduction about the work of Dr. Saito the lines written by Dr. E. D. Goddard: “As regards the subject matter of this chapter, it is appropriate first to mention the name of S. Saito, who can properly be termed the father of this field of research” (E. D. Goddard and K. P. Ananthapadmanabhan, *Interactions of Surfactants with Polymers and Proteins*, CRC Press, Boca Raton, 1993).

My first encounter with Dr. Saito’s work was more than 30 years ago, when I started a research project on polymer-surfactant interaction. The search of literature revealed as the most frequent author the name of S. Saito. His papers were a source of inspiration for our research group, and after we published the first paper in *Kolloid Zeitschrift und Zeitschrift für Polymere* in 1972, we were deeply impressed to receive a congratulation letter from Dr. Saito. In 1989 we had the privilege to have Dr. Saito as invited lecturer at the 3rd Romanian Symposium on Colloid and Surface Chemistry held in Timișoara. During the visit, he truly enjoyed the people and the country, and decided to come back in the future. This happened after his retirement and in 1992 he spent almost two months in our institute. On this occasion we had the opportunity not only to learn useful things from a master, but also to get a friend.

The most distinctive feature of Dr. Saito that stroked me from the very beginning was his eagerness. I remember the visits paid together to the Village Museum, the National History Museum, and the National Gallery or in the outskirts of Bucharest. His vivid eyes scrutinize everything and he asked a lot of questions about our history and customs, culture, art and traditional architecture aiming to know as much as possible about us. A proof in this respect is that he started to learn Romanian, to be able of reading in original the poems of Eminescu, the Romanian National poet. Dr. Saito is also a talented painter. His gift was revealed to us in many landscapes and portraits he did during the stay in Bucharest, and everyone who opens this volume will have the proof of his skill.

I can not conclude these lines without mentioning the unanimous enthusiasm with which both the Editor-in-Chief of Colloid and Polymer Science, Professor Gerhard Lagaly, the Springer Publishing House and the authors invited to contribute a paper responded to the initiative to publish this volume. I wish to express my gratitude to all persons who helped me in this endeavor of bringing an idea to life.

Dan Florin Anghel

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