Bulgarian Chemical Communications, Volume 53, Issue 4, 2021

IN MEMORIAM
To the memory of Prof. DSc Boryan Radoev
(1941-2021)

This year we lost our eminent colleague and good friend Prof. Boryan P. Raodev. He was born in 1941 in Sofia. He was graduated in chemistry in the Faculty of Chemistry of the Sofia Unversity "St. Kliment Ohridski" in 1967 and he was immediately appointed as assistant professor in the Chair of Physico-chemistry in the same faculty. He defended a PhD thesis in 1974 on the subject of kinetics of thinning and deformation thin films stabilized by surfactants under the supervision of Prof. Ivan B. Ivanov. He was promoted as associate professor in the same Chair in 1981. He defended a DSc thesis in 1994 on:"Fluctuations and hydrodynamic interactions in dispersion systems" . In 1996 he was elected as Full Professor. Prof. DSc B. Radoev was a Head of the Chair of Physico-chemistry at the same Faculty of Chemistry in the period 2000/2004 and he has lead the Laboratory of Physico-chemistry of Surfaces and Dispersion Systems (2006-2011). He has been researcher in other European laboratories in Denmark, Germany and the Netherlands.He was a member of the German Kolloidgesellschaft and of the International Association of Colloids and Interface Science. He was also member of different scientific councils and governmental bodies in Bulgaria like the Higher Scientific Testimonial Commission to the Government of Bulgaria (1992-1997 and 2002-2005).

Dr. B. Radoev was introduced in scientific activity by Prof. Ivan B. Ivanov but his further scientific interests, approach and development were shaped under the influence of Academician A. Scheludko. Dr. Radoev started with the theoretical study of the dynamics and stability of foam films being his stable area of interest. Its further development focused on the effect of surfactants and the Marangoni effect on the films stability (in cooperation with Prof. Ivanov and Prof. E. Manev) has got broad recognition and initiated intensive research in different laboratories throughout the world.

The so-called theory of critical thicknesses was another lasting subject of research creativity for Prof. Radoev. He applied the stochastic approach to develop the fluctuation model of Scheludko-Vrij and to describe the evolution of non-stable modes (with Scheludko and Manev). Later this approach was applied to describe the stability of wetting liquid films on solid support. This theory enabled to confirm the existence of nano-sized bubbles on the interface between water and hydrophobic support (a work in cooperation with H. Schulze, Germany).

The problem with the dynamic wetting (or precisely the nature of hysteresis of the three-phase contact) was extension of these previous works. This subject found its practical development in flotation process (with Scheludko and Schulze).

The stochastic approach was applied independently for description of fluctuation waves on liquid surfaces, especially for solving the paradox of divergence of Fourier spectrum of capillary waves (with R. Tsekov).

In the last years the interests of Prof. Radoev were directed to the electrical properties of liquid surfaces. He formulated and developed the model of specific surface polarity (in the sense of Gibbs excess), solving the problem of the double electric layer generated by heterogeneous charged surface (with R. Slavchov).

He was an author and co-author of more than 120 papers, published in many prestigious international journals, like Advances in Colloid and Interface Science, Colloid and Polymer Science, Colloids and Surfaces A, International Journal of Multiphase Flow, International Journal of Quantum Chemistry, Journal of Colloid and Interface Science, Journal of the Chemical Society Faraday Transactions, Journal of Dispersion Science and Technology, Journal of Materials Science, Journal of Physical Chemistry A, Journal of Physics Condensed Matter, Kolloid Zeitschrift, Langmuir, Transactions of the Faraday Society, Zeitschrift für Physikalische Chemie, etc. He was an author of different chapter in specialized issues and collections published by Academic Press and Elsevier.

Prof. B. Radoev had very intensive teaching activity. He delivered lectures on colloidal chemistry in the Faculty of Chemistry in the University of Sofia for many years. He initiated and introduced many courses for MSc and PhD students on non-equilibrium thermodynamics, stochastic methods in natural sciences (with R. Tsekov), methods for production of dispersion systems, etc. He delivered lectures in other universities in Bulgaria.

He was very keen to work with students. He supervised the PhD theses of many students, later promoted as associate and full professors.

His original kind of thinking, high skills, broad scientific creativity and pedagogic talent will be remembered by his students and appreciated by his colleagues, co-workers and friends.

We shall remember Prof. Boryan Radoev as one of the most eminent Bulgarian scientist in the field of physical chemistry and as a best colleague and friend.

Venko Beschkov