

## IN MEMORIAM

**Šebojka Komorsky-Lovrić**

(October 15, 1951 – April 12, 2020)



Esteemed Croatian scientist Šebojka Komorsky-Lovrić has died after a long illness. She was known for her work in square wave voltammetry and the electroanalytical chemistry of organic compounds important in pharmacy and nutrition.

Šebojka was born in Zagreb, Croatia, where she received a diploma of engineer of pharmacy in 1974. Then, she achieved a master degree in analytical chemistry in 1977 and became a doctor of science in the field of chemistry in 1984, all at the Faculty of Pharmacy and Biochemistry, University of Zagreb. Between 1974 and 1984, she worked as a pharmacist in "The Pharmacies" in Zagreb, except for the period between 1977 and 1979 when she was the chief of pharmacy in the Central Hospital in Misurata, Libya. Her first teaching position was an assistant professor of analytical chemistry in the Military School for Technical Science in Zagreb from 1988 until 1991. At the Ruđer Bošković Institute, she was working from 1991 until her retirement

in 2016. Her scientific career started with the post-doctoral specialisations in the laboratory of Prof. L. L. Spremulli, Department of Chemistry, University of North Carolina at Chapel Hill, USA (1985–1986), then in the Institute of Applied Physical Chemistry, Atomic Institute in Jülich, Germany (1986–1987) and in the laboratory of Prof. A. Bond, Department of Chemistry, Deakin University, Geelong, Victoria, Australia (1989–1990). In the framework of the scientific cooperation with Prof. Fritz Scholz that lasted from 1993 until 2006, she spent two years all together as a visiting scientist at the Humboldt University in Berlin and the University E. M. Arndt in Greifswald, Germany. In 2003, she was a visiting scientist at the Oxford University, Oxford, England.

Dr. Komorsky-Lovrić was author of 163 scientific papers, which were cited circa 4000 times, and participated in 53 scientific meetings with 70 presentations. She wrote one book, three chapters in two books, and twenty entries in the dictionary. She was mentor of two dissertations and one postdoc specialization. She was leading the scientific project "Development of voltammetric methods for the characterization of natural antioxidants" that was financed by the Croatian Science Foundation (2013–2017) as well as two international scientific projects: "Development and application of chromatographic and voltammetric methods for the determination of drugs from the cocaine and amphetamine groups" with Prof. Simka Petrovska-Jovanović, University of Skopje, Macedonia (2005–2007) and "Environmental sono-electroanalysis: Manganese speciation and determination" with Prof. Richard Compton, University of Oxford, England (2003–2005). In 2002, she received the annual award of the bank "Zagrebačka banka" for the environmental project. For the publication F. Scholz, Š. Komorsky-Lovrić, and M. Lovrić "A new access to Gibbs energies of transfer of ions across liquid/liquid interfaces and new method to study electrochemical processes at well-defined three-phase junctions" *Electrochem. Commun.* **2** (2000) 112–118, she received "Best Cited Paper Award 2003" from the Elsevier and the Electrochemistry Communications. For the book "Square-Wave Voltammetry. Theory and Application", Springer, Berlin, 2007, she received in 2008 the Macedonian state award "Goce Delčev" together with Valentin Mirčeski and Milivoj Lovrić. From 2009 until 2014, she served as the regional representative of the International Society of Electrochemistry.

The main characteristics of Šebojka's scientific work was the combination of theory and experiment with the purpose of developing new electroanalytical methods. Her achievements can be grouped into three general areas. After the discovery of quasi-reversible maximum in square

wave voltammetry, the method for the measurement of kinetics of surface electrode reactions was developed and applied to adsorbed azobenzene, alizarin red S, indigo, cinnoline, simvastatin and Adriamycin.

Šebojka was investigating the transfer of ions across the boundary of two immiscible liquids, for instance nitrobenzene and water, and using the standard three electrodes cell, she has measured the Gibbs free enthalpy of transfer of electroinactive organic anions such as oxalate, malonate, maleate, succinate, glutarate, phenolate, formiate, acetate, propionate, butyrate, valerate, and capriate.

Finally, she was analyzing the properties of solid microparticles of insoluble inorganic salts and organic substances that are mechanically attached to the surface of an inert solid electrode and immersed into an aqueous electrolyte. The purpose was to study the possibilities for the direct analysis of powders. She was working on the electrochemical identification of active components in pharmaceutical preparations and on the analysis of other biologically important substances, such as cocaine, benzoylecgonine, ciprofloxacin, azithromycin, benzocaine, cinchocaine, lidocaine, procaine, codeine, lutetium bisphthalocyanine, catechins, stevioside, chlorophyllin, myricetin, cannabinoids, capsaicinoids, and carotenoids.

Dr. Komorsky-Lovrić was collaborating with many scientists, and they all agree that she was humorous, cheerful, and collegial. She was fond of good books, symphonic concerts, comfortable shoes, and precious jewels. Her death is a great loss for all of us that knew her.

Milivoj Lovrić