

## **In Memoriam Vera Konstantinovna Adamchuk**

Prof. Dr. Vera Konstantinovna Adamchuk passed away on September 27 at age 83 in her hometown Sankt Petersburg, Russian Federation. She had studied physics at Leningrad State University (now Sankt Petersburg State University) and became a professor there in 1988.

Her first interest in photoelectron spectroscopy (Nobel prize in physics 1981 to Kai M. Siegbahn) had been inspired by her husband Fedor Ivanovich Vilesov, who did the first measurements of photoelectron spectra in vapors in 1960 and on molecular crystals in the mid-60s. She quickly understood the great potential of this novel experimental technique for the study of electronic structures of solid materials and later of surfaces and interfaces. Her first own publication using photoelectron spectroscopy appeared in 1972 – very early in the field - on the energy bands of CdSe layers.

One of the coauthors (G.K.) met Vera Konstantinovna first in the late 1980s at the Freie Universität Berlin, when his coauthor (S.L.M.), former student and PhD student of Vera Konstantinovna, had joined his research group in Berlin as an Alexander-von-Humboldt postdoctoral research fellow. The new synchrotron-radiation facility BESSY I, at that time the most advanced in the world, and the high-resolution SX700-II beamline of the Freie Universität Berlin at BESSY I, at that time with the very best energy resolution in the soft x-ray regime, offered superb opportunities for a rigorous research program in atomic, molecular, and materials science using in particular photoelectron and x-ray absorption spectroscopies. In this way, the collaboration with the Adamchuk group developed quickly, with several doctoral students and postdocs from Sankt Petersburg performing their research in Berlin, particularly after the opening of the Berlin wall.

When the former Soviet Union had been dissolved, the situation for research in the new Russian Federation deteriorated a lot in the 1990s, why the two coauthors in 1994 created the idea to build a special beamline at BESSY for collaborative research with scientists from Russia, an idea that was immediately supported by Vera Konstantinovna and soon after also by Mikhail V. Kovalchuk. Most of the initial funding did not come from the German government, but from the Berlin Lotto Foundation. I (G.K.) can honestly say that this idea would not have been brought forward without all the friendship and insight I had received from Vera Konstantinovna and members of her group in the early 1990s, when my understanding of Russia was still in an initial state. Therefore, I name her with full conviction the Mother of this very successful bilateral cooperation project, which certainly has served also as a seed for much larger Russian-German projects in later years.

Vera Konstantinovna was a full-blooded scientist and university professor, who devoted most of her life and much of her love to her students. When the two coauthors together met her last in August 2013 in Petergof in the Research Park of Sankt Petersburg State University, where she showed us a brand-new and most advanced photoemission spectrometer combined with an equally advanced variable-temperature STM/AFM microscope, allowing sample temperatures down to the liquid-He temperature range, her eyes glowed for joy, and she was very proud to have now such an advanced facility for use. She was an active scientist until her last days co-authoring sophisticated papers until very recently.

Vera Konstantinovna had a very warm character and was always heartily welcome and admired in Berlin and elsewhere. She introduced me (G.K.) to the deep Russian soul, the magnificent Russian culture, and the close cultural similarities between our two nations. When she proposed me (G.K.) to her Alma Mater as a candidate for an honorary doctoral degree, I was stunned and still very ashamed at the ceremony in June 1997, but then also very thankful and pleased by this extraordinary honor.

The death of Vera Konstantinovna leaves a large gap in the now flourishing Russian-German collaboration in science, and – we are certain - also in the physical faculty of the great Sankt Petersburg State University.

We bow to this wonderful woman and scientist Vera Konstantinovna Adamchuk.

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