

Lev V. Vilkov (1931–2010): scientist, friend, editorial board member

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Lev V. Vilkov (photograph courtesy of Igor F. Shishkov, Moscow)

The recent death (on February 8, 2010) of Lev V. Vilkov, Distinguished Professor of Chemistry at the Department of Chemistry, Moscow State Lomonosov University (MGU), and Foreign Member of the Norwegian Academy of Science and Letters, is leaving behind a void that will be difficult to fill. He was a charter member of the Editorial Board of *Structural Chemistry* and an enthusiastic supporter of our publication. Our journal is going to devote a whole issue to his memory early next year and I am grateful to his successor in heading the Moscow electron diffraction group, Igor F. Shishkov, his long time associate, Olga V. Dorofeeva, and his daughter—a chemist on her own right—Anna L. Vilkova, for taking up the responsibility of organizing such a special compilation of contributions. Lev had a lot of friends in our

science and we look forward to a substantial collection of papers in structural chemistry in a broad sense. Anyone who is wishing to submit a manuscript—original research paper or review—should feel free to contact Igor Shishkov (ged.moscow@gmail.com) or myself for further information. The deadline for collecting the manuscripts will be the end of October of this year. The submissions then will undergo the usual review procedure of *Structural Chemistry*.

Here I merely give a brief remembrance of Lev. He was born on June 1, 1931, to parents, freshmen students of chemical engineering, who had come to Moscow—his mother from the Ukraine and his father from Kostromskaya oblast, east of Moscow. Lev went to school in Moscow and studied at MGU between 1948 and 1953. He joined the fledgling laboratory of gas-phase electron diffraction at the Department of Physical Chemistry 1 year before graduation when the laboratory itself was merely 1 year old, and spent the rest of his career in the same laboratory, serving for many years as group leader, and eventually rising to be in charge of the Laboratory of Electron Diffraction. Immediately after graduation, Lev started his doctoral studies and he defended his so-called candidate of science—PhD equivalent—dissertation in 1957 and his higher doctorate, DSc—necessary to become a professor—in 1969. From the moment he was admitted to MGU—the most prestigious institution of higher education in the Soviet Union—he spent his entire professional life there.

Lev did his undergraduate studies and his doctoral studies at a time when even science was pregnant with ideological strife. Suffice it to mention the brutal unscientific crusade against the theory of resonance in official Soviet chemistry, but Lev never became mixed up in this controversy and he never succumbed to compromise himself by letting politics interfering with his science for sake of expediency. His thinking and demeanor were both

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liberal and autonomous, and his objective—almost aloof—approach to everyday problems of life made him trustworthy and reliable in the eyes of his colleagues.

I got to know him during the 9 months I spent with him as his Diploma student—Master's equivalent—during the academic year of 1964/1965, but his impact on me was more substantial than such a short period might have justified. Indeed, many have thought that I did years of my doctoral studies with him, which was not the case; those I would do in Budapest, and on my own, that is, without a supervisor. Thus, Lev was my last and only supervisor and I have always counted myself lucky for having him for such a role.

One of the fundamental requirements Lev insisted on toward his students was to know the literature. This was no small demand under the circumstances of scarcity of journals and monographs, but it instilled the importance of literature—and the knowledge of what one's peers were doing—in all who spent any length of time in Lev's orbit. He was not given to extreme opinions, neither to pontification; rather, he reasoned thoughtfully and never hid if he had not yet known the answer to a question.

The seminars at the Moscow electron diffraction laboratory were most educational. I remember when one of the established scientists, and it was not Lev, gave a long argument for an unambiguous interpretation of some experimental facts, and when it was pointed out that the data were of the opposite sign than he had thought, he gave an equally eloquent reasoning in order to arrive at the opposite conclusion. Lev's style was different; he liked thinking aloud, slowly, deliberately, weighing the facts pro and contra, and involving his partners in the discussion in arriving at some outcome, which may have still been shaky, but then he did not mask its uncertainties.

In the laboratory, he gave himself to science and to his students in full, as if the outside world had ceased to exist. All what counted was bond lengths, bond angles, and conformations; experimental and random errors; precision and uncertainty; suppositions and reliable interpretation; and the like. He could make one feel important even when yielding only a miniscule result, and he never let anybody

down. My experience of him has been drawn much beyond my single academic year with him. This has been a shared experience of many, over decades. He possessed a never faltering ability to inspire. Even now, while thinking and writing about him, he wields inspiration.

There was hardly anything that he would not know about the structures of relatively small organic molecules and the techniques capable of their determination. He studied them, wrote about them, gave courses about them, and reviewed them in papers and monographs. He had an anthropomorphic approach toward them; they were his extended family. His interest was primarily in uncovering the structures of individual molecules of increasing complexity, very often of novel substances; observing trends in the structural variations of extended classes of organic and hetero-organic compounds; perfecting the experimental techniques and the approaches of analysis in structure elucidation; and in the combined application of various experimental and computational techniques aiming at reliable structure determination.

He was an enthusiastic pedagogue; he gave his lectures with zest; and was always ready to discuss research problems with his students and associates. He supervised over one hundred Diploma works (Master's degree equivalent), 50 candidate of science theses (PhD equivalent); and was mentor to 16 scientists who defended their higher doctorates (DSc degrees). He authored and co-authored about 300 research publications, 27 review articles, and four textbooks and two monographs. He was hard-working and prolific, but not the type who would not see anything beyond scientific production, and he enjoyed life in its totality, including sports, hiking, and social gatherings.

Lev's health was not very robust lately, but he persevered, and recovered from various illnesses. On February 6, he attended some festive celebrations in the home of one of his closest friends from his university years, but on the 7th he was taken ill and was admitted to hospital, where he died in the morning of February 8. He is survived by his wife, Lidia, whom he married in 1956, his daughter, Anna, born in 1958, and his grandson, Alexei, and his numerous friends all over the world among structural chemists.