

YURII ALEKSANDROVICH SIMONOV (1937-2010)

Bright crystallographer, doctor in physics and mathematics, head of the Laboratory of physical methods of solid-state investigation of the Institute of Applied Physics, Academy of Sciences of Moldova (1996-2010), Moldova state prizes laureate, honored worker in sciences “Om Emerit”.



Yurii Simonov passed away on May 23, 2010, following a serious illness, at his home in Chisinau, two days before his 73rd birthday. He played a crucial role in the development of crystallography in Moldova, being associated with the Laboratory of physical methods of solid-state investigations of the Institute of Applied Physics. Fifty years of his life were increasingly and fruitfully dedicated to research, and his scientific activities from the student body to the last day were connected exclusively with the Academy of Sciences of Moldova, where he passed the stages of the scientific career - from laboratory assistant to the head of laboratory.

His contribution to structural studies of coordination, organic, and supramolecular compounds was outstanding. About 600 scientific papers were published in internationally recognized (SCI) peer-reviewed influential journals; still more than six hundred were presented as abstracts of conferences and reports in local journals. According to the Science Citation Index, his results were cited over 3000 times in various scientific publications. He was the author of 21 inventor's certificates and was “Inventor of the USSR”. His scientific activity extended across national borders, he established and developed cooperation with chemists, physicists and crystallographers in Poland, Ukraine, Romania, Russia, Italy, France, Germany, Israel, Taiwan, Spain, Switzerland, Austria, England, the United States, Belgium, Bulgaria, Croatia, the Netherlands, Georgia, Uzbekistan, former Yugoslavia and Czechoslovakia.

Yurii Simonov was born on May 25, 1937, in Russia, in the settlement Steklazavod, near Gor'kii (now Nizhni Novgorod). In 1960, he graduated from the Chair of Crystallography of the Physics Department of the Gor'kii State University; his supervisor was famous Russian crystallographer, academician N.V. Belov, who was the President of International Union of

Crystallography from 1966 to 1969. At the request from Moldavia signed by Professor Iachim Serghievici Grosul, the future first President of the Academy of Sciences of Moldova, the young specialist in crystallography and crystal physics was assigned to the Department of Physics and Mathematics of Moldavian affiliated branch of the Academy of Sciences of the USSR, which was established on the base of the X-ray laboratory in 1958. On September 3, 1960 he began his activities in science as a laboratory assistant and, after three months, he became a superior laboratory assistant. It was his lucky chance that two famous scientists, the founders of the crystallography school in Moldova, Anton Ablov and Tadeush Malinowski, supervised Simonov's early research steps. The first scientific works entitled "Crystal structure of bis (pyridine) cadmium bromide" and "X-ray structural investigation of copper diammine acetate" with co-authorship of T.I. Malinowski and A.V. Ablov were published by Yurii Simonov in 1962 in "Proceedings of the USSR Academy of Sciences" (Doklady Akademii Nauk SSSR) and in the book of abstracts of the Conference of Physical methods investigation of coordination compounds, which took place in Chisinau. He filled next scientific position of junior research scientist in 1963. In 1966 Yurii Simonov worked for nine months on probation in the Moscow State University at the Chair of Crystallography headed by academician N.V. Belov. In 1967, he was awarded Doctor's degree for the thesis entitled "Investigations of the structure of some copper salts with monocarboxylic acids" and in 1969 became a senior scientist. It was the period of formation of X-ray analysis as a method not only in Moldova, but also all over the world, and Yurii Simonov belongs to the first generation of Moldavian crystallographers. His further employment in the ASM was as follows: a leading research scientist from 1986 to 1996; from 1996 till May 23, 2010 he was the head of the Laboratory of physical methods of solid-state investigation named after T.I. Malinowski. Yurii Simonov actively participates in public works; during the period of 1969-1972 he was the Chairman of the Trade Union of the Institute of Applied Physics. Over the next decades, he substantially developed structural investigations, created a network of cooperation in crystallography, which was very important for Moldovan scientists, and significantly contributed to holding scientific meetings, symposia, and summer schools in the respective field. He was a co-chairman of Moldavian-Polish-Ukrainian symposium on supramolecular chemistry, International conference "Physical methods in coordination and supramolecular chemistry", and International symposium on crystal chemistry of coordination, organic, and supramolecular compounds; as well he was an active member of organizing and program committees of International Chugaev conference on coordination chemistry, International seminars on inclusion compounds, International conferences on materials science and condensed matter physics, International conference of Chemical society of the Republic of Moldova, and International conference dedicated to the 50th anniversary of the foundation of the Institute of chemistry of the Academy of Sciences of Moldova. His wife, Lidia Lukinichna, was devotionally helping him by throwing house parties for conference participants when such conferences took place in Moldova and was taking care of Yurii Aleksandrovich during his whole career.

The scientific interests of Dr Simonov spread in a wide spectrum of fundamental problems of structure of matter, application of single crystal X-ray method, and the problem "structure-properties". His contribution to the development in domain crystal chemistry of coordination compounds was represented by many different topics. Starting from 1978, the scientific interests of Yurii Simonov were focused on the problems related with the crystallography of supramolecular compounds. In the same period, his research activity was related also with the structure of biologically active compounds including the psychotropic and antimycotic drugs, the compounds formed through the nitrosation of amino groups. The main works of Yurii Simonov on the structure of biologically active compounds were related with A.V. Bogatsky Physicochemical Institute of the national Academy of Sciences of Ukraine, which have a great progress due to tight collaboration and friendship with leader of this Institute, academician

Sergei Andronati. During 50 years of prolific scientific activity in the Academy of Sciences of Moldova Yuri Simonov studied over a thousand of crystal structures of a series of organic, inorganic, and supramolecular compounds. He was also known through his editorial activity: in 1975-1997 he was a member of the Editorial Board of the journal "Bulletin of the Academy of Sciences of Moldova" (physics and technique); from 2002 he was assistant editor of the "Moldavian Journal of the Physical Sciences".

Yurii Simonov shared his knowledge and experience with his collaborators with great enthusiasm; 14 theses of doctor in physics and mathematics and in chemistry in domain of crystallography and crystal physics were prepared under his supervision. He was an immensely energetic person and talented organizer, who skillfully motivated his collaborators to fruitful research activity and aroused their interest to new scientific topics. Yurii Simonov took care of the involvement of his collaborators into international collaboration; due to his heroic efforts, the Laboratory participated in a number of international projects, including INTAS, MRDA/CRDF, SCOPES, NSF (Soros), RFFI, and individual grants; his co-workers had possibilities to attend many high level international meetings, summer schools, conferences, and workshops.

For many years, Yurii Simonov worked jointly with Tadeush Malinowski, Moldavian academician of Polish origin, who established close cooperation with different Polish scientific centers. To illustrate, it is worth mentioning here that Yurii Simonov was a co-author of Polish researches in more than 170 scientific papers. Just due to his collaboration and friendship with Polish scientists, many of Moldavian crystallographers many times visited Poland and had possibility for tight scientific contacts and for access to modern X-ray diffractometers to carry out their experimental works in the Institute of Physical Chemistry of the Polish Academy of Sciences in Warsaw, at the Faculty of Chemistry of the Adam Mickiewicz University in Poznan, and in the Gdansk University of Technology. As well, Polish scientists many times visited Moldova to participate in conferences and to discuss joint scientific results and planning future joint research.

For his scientific activity and merits in cooperation frameworks, Yurii Simonov was greatly appreciated and was awarded Moldavian and Polish distinctions and medals: in 1983, State Prize of the Republic of Moldova in the field of science and technology; 1994, State Prize of the Republic of Moldova in the field of science and technology; 1996, 1997, 2004, and 2006, Diplomas of Honor of the Academy of Science of Moldova; 1996, Medal of Moldova for society serving "Meritul civic"; 1996, Medal of Honor of Gdansk Technical University (Poland); 1997, Prize of the Presidium of the Academy of Sciences of Moldova in the field of science and technology; 1998, Prize of the Presidents of the Academies of Sciences of Ukraine, Moldova, and Belarus for the achievements in science and technology; 2005, Diplomas of Honor of the Government of R. Moldova; 2006, Medal of Honor of the Institute of Physical Chemistry of the Polish Academy of Sciences; 2006, Honorary title "Om Emerit"; 2007, Prize of the Academy of Sciences of Moldova; and 2007, Medal of the Academy of Sciences of Moldova "Dimitrie Cantemir".

The role of Yurii Simonov in the development of crystallography as an important part of the scientific system in R. Moldova was exceptional. Not long ago, he succeeded in raising funds necessary for purchasing a modern single-crystal X-ray diffractometer that was installed just when he was about to pass away.

All his colleagues, disciples, and friends, all those who had the pleasure to get into contact and cooperate with him will certainly remember those days and will keep Yurii Simonov in grateful memory.

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