

CV and Bio-dates of Prof Vladimir I. Vysotskii

Dr. Vladimir I. Vysotskii is Professor of Faculty of Radiophysics, Electronics and Computer Systems and Head of Theoretical Radiophysics Department at Kiev National Shevchenko University, Ukraine.

He received his Master degree (Quantum Radiophysics) from Kiev National Shevchenko University, Radiophysical Faculty in 1969.

He has received Ph.D. (Theoretical Physics) from Kiev Institute of Theoretical physics of Ukrainian Academy of Science in 1975. Since 1976 V. I. Vysotskii was employed as a senior scientific researcher, since 1979 - as an associate professor of Radiophysical Faculty of Kiev National Shevchenko University, since 1993 - as full professor of the same university.

Since 2006 he is Head of Theoretical Radiophysics Department at Radiophysical Faculty (now - Faculty of Radiophysics, Electronics and Computer Systems) of Kiev National Shevchenko University.

He has also received the additional Doctor Habilitus degree in Theoretical Physics and Solid State Physics (degree of Doctor of Sciences) from Kiev National Shevchenko University in 1992.

He is reading several courses of lectures for students: quantum mechanics; nuclear physics and astrophysics; short-wave laser physics, molecular biology and radiobiology.

During the whole period of work at Kiev National Shevchenko University V. I. Vysotskii has performed investigations on several main topics:

1. Theory, investigation, creation and using of new generation systems of the coherent, intensive and directed short-wave X-ray and gamma-radiation (the problems of X-ray lasers and gamma-ray lasers, sources of short-wave radiation of fast electrons and positrons in crystals, the methods of creation, forming and controlling of directed flow of neutrons, X-rays and gamma-quanta) for the aims of coherent atomic and nuclear physics,
2. New methods of coherent physics, nuclear physics and nuclear optics of condensed matter (the problem of spontaneous gamma-decay and beta-decay controlling, X-ray controlling and UV-ray decay controlling; nonlinear both X-ray and gamma-ray optics, channeling of atoms, neutrons, X-rays and gamma-quanta in (or near) perfect crystals, the problem of controlled nuclear transmutation at low energy, nuclear reactions in biological systems),
3. General problem of matter stability and nuclear physics at extreme conditions (the models, conditions and mechanisms of creation of self-controlled collapse of electron-nuclear plasma in a laboratory and in Universe; origin of cosmic rays; problem of neutron and proton-electron stars creation etc).
4. Nuclear physics at low and extreme low energy (including investigation of isotopes anomalies in living systems and study of possible nuclear reactions in biological systems).
5. Modern problems of radiobiology: investigation and modeling of nonlinear

phenomena in biosystems at combined action of hard and soft radiation, free radicals, temperature, viscosity property of intermolecular and intercellular medium on depolymerization, degradation, repairing and stability of DNA. biophysics and environmental problems in the past 20 years. **The main topics of investigation in this area are:**

- Investigation and modelling of nonlinear phenomena in DNA (depolymerization, degradation, repairing) at combined action of hard and soft radiation and action of free radicals in real intermolecular and intercellular mediums.
- The problems of hormesis, radiation synergism and antagonism at combined irradiation of living systems and the problem of low dose.
- Investigation of physical properties, memory phenomena and biological effects of regular and activated water.
- Investigation of biophysical properties and both biological and medical application of activated water.
- Investigation of isotopes anomalies in living systems and study of possible nuclear reactions in biological and microbiological systems.
- Radiation ecology and the problem of natural accelerated utilization (deactivation) of radioactive waste.

He is a head of scientific groups on these problems.

Total number of scientific publications is about 500 (including about 60 publications in biophysics and radiobiology) and 9 books (creative works):

- Vysotskii V.I., Kuzmin R.N. Gamma-Ray lasers, Moscow, Moscow State Univ Publishing House, Russia, 1989, 176 p.
- Vysotskii V.I., Kornilova A.A. Nuclear Fusion and transmutation of isotopes in biological systems, Moscow, MIR Publishing House, Russia, 2003, 302 p.
- Vysotskii V.I., Smirnov I.V., Kornilova A.A. Introduction to the Biophysics of Activated Water, Universal Publishers, Boca Raton, Florida, USA, 2005, ISBN: 1-58112-478-3, 160 p.
- Vysotskii V.I., Adamenko S.V. Stability of electron-nucleus form of matter and methods of controlled electron-nuclear collapse. Chapter in the Book: Controlled Nucleosynthesis. Breakthroughs in Experiment and Theory, (Editors S.V. Adamenko, F. Selleri, A. van der Merwe), Series: Fundamental theories in Physics, v.156, Springer, 2007; pp. 415-541.
- Vysotskii V.I. Quantum Mechanics and its Application in Applied Physics, Textbook for universities, Kiev, Ukraine, 2009, 358 p.
- Vysotskii V.I., Kornilova A.A. Nuclear transmutation of stable and radioactive isotopes in biological systems, Pentagon Press, India, 2010, 187 p.
- Vysotskii V.I., Kornilova A.A., Smirnov I.V. Applied biophysics of activated water (the physical properties, biological effects and medical applications of MRET activated water), World Scientific Publishing, Singapore, 2009, 317 p.
- Vysotskii V.I. et al. Atomic and nuclear physics in tests and questions, Textbook for universities, Kiev, Ukraine, 2011, 511 p.

- Vysotskii V.I., Kornilova A.A. (Co-Author book). MOSSBAUER SPECTROSCOPY: APPLICATIONS IN CHEMISTRY, BIOLOGY, AND NANOTECHNOLOGY, Editors: Virender K. Sharma, Gostar Klingelhofer, and Tetsuaki Nishida, (Tentative) Publication Date: April 2013, Projected Page Count: 450 pages, John Wiley and Sons, Inc. Book ISBN: 9781118057247. Chapter 14, Controlled spontaneous decay of Mossbauer nuclei (theory and experiments), p. 292-315.

Current Memberships:

Chair of Kiev branch of Ukrainian Physical Society, Kiev, 1992 – 1995.

Member of Ukrainian Biophysical Society.

Member of Russian Academy of Natural Science, Moscow (since 2004).

Member of New York Academy of Science (since 1996).

Member of Condensed Matter Nuclear Science Society (since 1998).

Prof. V.I.Vysotskii was awarded Honorary Scientist of Ukraine (2014).

Prof. V.I.Vysotskii was awarded US Air Force Window for Science, INTAS, CRDF, IAEA, etc and was the recipient of different research grants from these and other International Programs.

He is listed in Who's Who in Science and Who's Who in the World since 1998.