

Alexander A. Puretzky

*Research Professor, Department of Materials Science and Engineering
University of Tennessee, Knoxville, Tennessee*

*P.O. Box 2008, Oak Ridge, Tennessee 37831-6056
(865) 574-5497, E-mail: lap@ornl.gov*

Education

B.S., (Physics and Mathematics), Moscow Inst. for Physics and Tech., Moscow, 1969.
M.S., (Physics), Moscow Inst. for Physics and Tech., Moscow, 1971.
Ph.D., (Physics), Institute of Spectroscopy, Troitsk, Moscow, 1977.
Second Doctorate Degree in Physics (Laser Spectroscopy), Institute of Chemical Physics, Moscow (1989).

Professional Positions

2003-present	Research Professor, Department of Materials Science and Engineering, University of Tennessee, Knoxville, TN.
1999-2003	Research Associate Professor, Department of Materials Science and Engineering, University of Tennessee, Knoxville, TN.
1995-1999	Research Scientist, Oak Ridge National Laboratory (ORAU), Oak Ridge, TN.
1992-1995	Visiting Scientists, Oak Ridge National Laboratory (ORAU), Oak Ridge, TN.
1971-1992	Research Scientist, Senior Scientist and Group Leader, Institute of Spectroscopy, Troitsk, Moscow, Russia.
1989 -1992	Science Alliance Professor of Physics (part time), Moscow Inst. for Physics and Tech.

Technical Specialties:

Synthesis and characterization of nanostructured materials including carbon nanotubes and nanoparticles. Development of fast plasma diagnostics and studies of gas phase processes during growth of thin films and nanomaterials. Techniques include optical imaging and spectroscopy, laser induced fluorescence, Rayleigh and Raman scattering, ion probe and spectroscopic investigations of atoms (resonant multi-step ionization) and molecules (IR multiphoton dissociation). Laser isotope separation.

Publications

Author of more than 160 articles in refereed journals and books in areas of nanomaterial synthesis and diagnostics, pulsed laser thin film deposition, laser plasma dynamics and diagnostics, laser spectroscopy, and laser isotope separation; Co-author of two books (Chemistry of Plasma: Selective Photoionization of Atoms by Laser Radiation, 1977 (in Russian) and Laser Spectroscopy of Highly Vibrationally Excited Molecules, ed. V.S. Letokhov, Adam Hilger, 1989).

Awards and Honors

Lockheed Martin Technical Achievement Award, 1999.
Lockheed Martin Technical Achievement Award, 1998.
Highest National Soviet Union Award for young scientists for outstanding achievement in science: "Isotopically-Selective Dissociation of Molecules and Isotope Separation in Strong Infrared Laser Field", 1978.

