

# Alexandr B. Aleksandrov

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## Research Interests

Physics and chemistry of solid surfaces. Photon- and electron-stimulated processes at the interface and in the bulk of solids in heterogeneous systems.

## Experience

- 2000-** **Senior Research Scientist**, Chemistry at Georgia Institute of Technology.  
Research work, concerning radiation-, photo- and thermally- induced processes at a solid/gas (vacuum) interface.  
**DOE** – funded investigations of electron and photo-induced interactions of zirconia and ceria surfaces with adsorbed molecules; properties and surface reactions of materials prospective for fuel cell technology.  
**NASA** – funded investigations of ices formed from super-cooled salts and acids solutions, behavior of water sub-monolayers on the oxides and metals surfaces in UHV at temperatures 50-200K  
**Ford Motor** – funded research of zeolite catalysts and mixed-oxide sensors.
- 1998-2000** **Visiting Scientist**. W.R. Wiley Environment Molecular Sciences Laboratory, *Pacific Northwest National Laboratory*.
- 1980-1998** **Senior Scientist**. Department of chemistry of coolants and materials in nuclear power plants / All-Union Project and Research Institute of Power Technology, *St.Petersburg, Russia (Department of Nuclear Energy of Russia)*.
- 1977-1980** **Research Scientist** The Central Research Institute of Materials, *St.Petersburg, Russia*.

## Education

- Ph.D. in Physical Chemistry, 1984.**  
St. Petersburg Institute of Technology, St. Petersburg , Russia.  
Major: Radiation Physics of solids, Physical and Radiation Chemistry.
- M.S. in Physical Chemistry, 1977.**  
St. Petersburg Institute of Technology, Department of Radiation Material Science, St.Petersburg, Russia.  
Major: Nuclear Power Technology, Physical and Radiation Chemistry.

## Publications

A monograph “Radiation Physics and Chemistry of the Alkali-Halide Crystals Surface” (Latvian Academy of Science, 1989, published in Russian).  
More than 50 articles in top peer-reviewed journals in the fields of chemistry, physical chemistry and physics.