

EVGHENI STRELCOV

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Education

Moldova State University, Moldova	Inorganic Chemistry	B.S., 2003
Moldova State University, Moldova	Inorganic Chemistry	M.S., 2004
Southern Illinois University	Applied Physics	PhD, 2011

Professional Experience

2011–present	Postdoctoral Research Associate, Center for Nanophase Materials Sciences, Oak Ridge National Laboratory
2006–2011	Research & Teaching Assistant, Department of Physics, Southern Illinois University at Carbondale
2003–2005	Senior Laboratory Specialist, Department of Inorganic and Physical Chemistry, Moldova State University

Awards and Honors

2011	Migone-Daneshdoost-Zeman Scholarship from SIU Foundation
2010	Dissertation Research Assistantship Award from SIUC College of Science
2010	Honorable Mention at Global Venture Challenge 2010 at ORNL
2003	Scholarship of the Government from Moldavian Prime-Minister
2002	Scholarship of the Government from Moldavian Prime-Minister

Research Synopsis

- Probing bias-induced transformations in metal oxides*
Using in situ electron microscopy and atomic force microscopy for studies of structural, electronic and ionic transformations in electrochemically-active and ferroelectric oxide materials.
- Nanostructure growth*
Studies of metal oxide (VO_2 , V_2O_5 , SnO_2 , TiO_2 , ZnO etc.) and phthalocyanine nanostructures growth using optical and electron microscopy, including in situ techniques.
- Nanostructure-based metal-oxide gas sensors*
Development of novel receptor-transduction principles, optimization of the power consumption, sensitivity and selectivity of gas sensors, including electronic-nose types.
- Complex compounds of 3d and 4f elements*
Synthesis and electrical characterization of homo- and heteronuclear complex compounds of some 3d and 4f elements with Schiff-base ligands.

Patents

Real Space Mapping of Oxygen Vacancy Diffusion and Electrochemical Transformations by Hysteretic Current Reversal Curve Measurements,

S.V. Kalinin, N. Balke, A.Y. Borisevich, S. Jesse, P. Maksymovich, Y. Kim, E. Strelcov, 2012