Curriculum Vitae
Arsen Soukiassian

Current Position:

Ph.D. Student
Department of Materials Science and Engineering
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Education and Professional History:

1/2002- present:	Ph.D. Student, Department of Materials Science and Engineering, The Pennsylvania State University.
10/2000-1/2002:	Visiting Scholar, Department of Physics, The Pennsylvania State University.
1/1997-10/2000:	Graduate Student, P.N. Lebedev Physical Institute Russian Academy of Sciences, Moscow, Russia.
2/1993-2/1996:	M.S. in Physics, Moscow State Engineering Physics Institute, Specialized Department of Physics, Moscow, Russia.
8/1990-2/1993:	Undergraduate Student, Yerevan State University, Department of Radio-Physics and Electronics, Yerevan, Armenia.

Experience:

- Assembling and setting up Pulsed Laser Deposition (PLD) and Molecular Beam Epitaxy (MBE) systems from zero.
- Thin film growth by PLD, MBE, thermal evaporation and sputtering of various materials, such as superconductors ($YBa_2Cu_3O_7$, $La_{2-x}Sr_xCuO_4$, $Nd_{2-x}Ce_xCuO_4$, MgB_2), ferroelectrics ($Ba_xSr_{1-x}TiO_3$, $BaTiO_3$, $BaTiO_3/SrTiO_3$, $BaO/SrTiO_3$ and $BaTiO_3/SrO$ heterostructures) and other materials ($SrRuO_3$, $La_{0.67}Ba_{0.33}MnO_3$, Cr + Au, CaB_6, MgO, Al_2O_3).
- Synthesis of ceramic targets by solid-state reaction for pulsed laser deposition and ceramic feeds and seeds for laser pedestal growth of $Ba_xSr_{1-x}TiO_3$ single crystals (x = 0.05, 0.10, 0.20, 0.35 and 0.50).
- Characterization of thin films, single crystals and ceramics by:
  - Scanning Electron Microscopy (SEM) and Energy Dispersive Spectrometry (EDS)

- Four-circle X-ray Diffraction (XRD) including θ-2θ scan, ϕ scan and rocking curves, as well as Powder X-ray Diffraction and Laue Diffraction.
- Reflection High Energy Electron Diffraction (RHEED).
- Raman Scattering.
- Atomic Force Microscopy (AFM).

- Temperature dependence electrical measurements (from 4K to room temperature), such as Hall Effect, Polarization, Dielectric Constant and Loss at microwave frequencies, Critical Current, Resistivity, AC Susceptibility and other...
- Superconducting and ferroelectric thin film device preparation by photolithography, wet etching, Ar-ion beam milling and wire bonding.

Publication:

More than 15 technical papers in refereed journals and conference proceedings.

References:

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