Anton Sidorov

Research Engineer - Intel

Portland, OR
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Authorized to work in the US for any employer

WORK EXPERIENCE

Sr. Research and Development Engineer

Intel Corp. - Portland, OR - November 2014 to Present

Responsibilities
• Process development, Data analysis.
• Project management
• Collaboration with the customers and FSEs

Research Scientist I

Georgia Institute of Technology - Atlanta, GA - March 2013 to November 2014

Responsibilities
• Device design of sensors
• Modeling and optimization of devices to meet performance specifications
• Wafer level and package level device characterizations (DC, RF and noise testing)

Post-doctoral fellow

GEORGIA INSTITUTE OF TECHNOLOGY - Atlanta, GA - September 2009 to March 2013

• Developing Chemical Vapor Deposition method (process) for graphene growth on copper (graphene is one atom thick carbon sheet/layer) (Design and calibration of the CVD system).
• Determining new methods for measurement of the thermal properties of two dimensional nano- materials such as graphene.
• Developing graphene based gas sensors using thermal and chemical properties of the material.

Graduate Research Assistant/Teacher Assistant

UNIVERSITY OF LOUISVILLE - Louisville, KY - August 2003 to August 2009

• Developing of the novel technique "Electrostatic deposition of graphene" to control number of the transferred graphene monolayers on any substrate. I also optimized the developed technique.
• Studying mechanical and transport properties of graphene, carbon derived materials, polymers and nanofibers. Characterization deposited graphene by Raman spectroscopy, atomic force microscopy (AFM), and scanning electron microscopy (including variable pressure SEM) STM and TEM.
• Developing the method for fabrication of graphene nanoribbons and Carbon Nanotubes by simply rolling already electrically deposited graphene into a tube structure.

Graduate Research Assistant

PERM STATE UNIVERSITY - August 2001 to July 2003

Studying the properties and sensor applications of semiconductor nanowires and carbon nanotubes.
• Experimental work included manufacture of nanomaterials, sensor fabrication, involving facilities for electron beam and optical lithography, thermal evaporation methods, and measurements of electrical (I-V) characteristics of the sensors in different environments.

• Theoretical work included computational analysis of the electronic properties and I-V characteristics of the functionalized one-dimensional semiconductors using tight-binding approximation and transfer-matrix method for carbon nanotubes and "depletion model" for semiconductor nanowires.
I also studied the thermal properties of the thin films of carbon nanotubes by applying the third harmonic oscillation method.

Research Assistant

Undergraduate Research - Пермь - August 1998 to July 2001

Creating the expert systems that uses a knowledge base of human expertise for problem solving, or clarify uncertainties where normally one or more human experts would need to be consulted
(Artificial intellect, data mining)

EDUCATION

Post Doctoral in Physics/Chemistry

GEORGIA INSTITUTE OF TECHNOLOGY - Atlanta, GA
2009 to 2013

Ph.D. in Electrical and Computer Engineering

UNIVERSITY OF LOUISVILLE - Louisville, KY
2005 to 2009

M.S in Physics

UNIVERSITY OF LOUISVILLE - Louisville, KY
2003 to 2005

BS in Information systems and telecommunications

PERM STATE UNIVERSITY
1998 to 2003

SKILLS

Material Characterization • Scanning Electron Microscopy (SEM): Supra 35VP (Zesis), Leo-1350, EVO (Zesis) and experience working with nano-manipulator • Atomic Force Microscopy (AFM): XE-100 (Park instruments), NanoMan VS(Veeco), CP and M5 (Park Scientific instrument) • Raman Spectroscopy: Micro Raman systems (Renishaw, Horiba, Bruker) Micro/Nano Fabrication Processes (clean room skills) • Optical Lithography, E-Beam Lithography, RF/DC Sputtering, E-beam Evaporation, Wet/dry chemical etching, Wet/ dry oxidation, Wafer doping Material Synthesis • Chemical Vapor Deposition (CVD) • Hot-Filament Chemical Vapor Deposition (HF-CVD) Transport Properties Measurement • Electric characteristic measurements • Thermal transport properties measurement (termo-electric power and thermal conductivity measurements) • Magnetic characteristic (Magneto-resistance, Hall effect) Software and Programming • C++, LabView, MatLab, Igor-Pro, Origin, Datlab, Fortran 99, CAD, Spice, WinSpice, L-edit, Microsoft Office, Adobe, Windows XP, Windows Vista, Windows 7.

ADDITIONAL INFORMATION

HIGHLIGHTS OF QUALIFICATIONS:
• Experience in using Atom Probe Microscopy, SEM, Raman and mass spectroscopes.
• Experience with thin film process deposition and characterization as well as semiconductor device physics and micro-fabrication

• Experience in designing and maintaining ultra-high vacuum systems
• Unique background combining education and experience in the engineering field with experience in developing, delivering and evaluating engineering designs and systems as well as conducting and interpreting research
• Blend of organizational and analytical talents with creativity and strong communication skills
• Excellent problem-solving abilities
• Highly focused and motivated to pursue new career

PROFESSIONAL SKILLS
Material Characterization
• Scanning Electron Microscopy (SEM): Supra 35VP (Zesis), Leo-1350, EVO (Zesis) and experience working with nano-manipulator
• Atomic Force Microscopy (AFM): XE-100 (Park instruments), NanoMan VS(Veeco), CP and M5 (Park Scientific instrument)
• Raman Spectroscopy: Micro Raman systems (Renishaw, Horiba, Bruker)
Micro/Nano Fabrication Processes (clean room skills)
• Optical Lithography, E-Beam Lithography, RF/DC Sputtering, E-beam Evaporation, Wet/dry chemical etching, Wet/dry oxidation, Wafer doping
Material Synthesis
• Chemical Vapor Deposition (CVD)
• Hot-Filament Chemical Vapor Deposition (HF-CVD)
Transport Properties Measurement
• Electric characteristic measurements
• Thermal transport properties measurement (termo-electric power and thermal conductivity measurements)
• Magnetic characteristic (Magneto-resistance, Hall effect)
Software and Programming
• C++, LabView, MatLab, Igor-Pro, Origin, Datlab, Fortran 99, CAD, Spice, WinSpice, L-edit, Microsoft, JPM, Excel
Office, Adobe, Windows XP, Windows Vista, Windows 7.