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Sergii M. Kukhtaruk

Curriculum Vitae

Personal Information

Date of Birth Apr 18, 1985
Marital Status Married, One Daughter
Nationality Ukrainian

Education

- 2013 **Ph.D. in Physics of Semiconductors and Dielectrics**, *Institute of Semiconductor Physics, NAS of Ukraine*, Ukraine, Department of Theoretical Physics.
- 2007 **M.S. in Physics**, *Taras Shevchenko National University of Kyiv*, Ukraine, Department of Theoretical Physics.
- 2006 **Bachelor in Physics**, *Taras Shevchenko National University of Kyiv*, Ukraine, Department of Theoretical Physics.

Professional Experience

- Nov 2010 - present **Research Associate**, *Institute of Semiconductor Physics, NAS of Ukraine*, Kyiv, Department of Theoretical Physics.
- Nov 2007 - Oct 2010 **Postgraduate study**, *Institute of Semiconductor Physics, NAS of Ukraine*, Kyiv, Department of Theoretical Physics.
- Jul 2007 - Oct 2007 **Junior Research Associate**, *Institute of Semiconductor Physics, NAS of Ukraine*, Kyiv, Department of Theoretical Physics.
- Sep 2006 - Jun 2007 **Master course**, *Taras Shevchenko National University of Kyiv*, Ukraine, Department of Theoretical Physics.
Master's thesis: "High-frequency properties of drifting electrons interacting with optical phonons" (in Ukrainian).
- Sep 2002 - Jun 2006 **Bachelor course**, *Taras Shevchenko National University of Kyiv*, Ukraine, Department of Theoretical Physics.
Bachelor's thesis: "Quasi-ballistic transport of electrons interacting with optical phonons in a potential with a complex configuration" (in Ukrainian).

Fields of interest

Main fields Theoretical Physics, Condensed Matter Theory
Other fields Applied Physics, Physics of Semiconductors and Semiconductor Devices, Physics of Low-Dimensional and Hybrid Structures

Current fields High-Field Electron Transport in Low-Dimensional Systems and Nanoscale Devices, High-Frequency Properties of Plasmonic Excitations interacting with Remote Nanoparticles and Optical Phonons, Plasmons in Graphene.

Previous Travel Experience

- Jul 2011 **Fifth Stig Lundquist Conference on the Advancing Frontiers of Condensed Matter Physics**, *The Abdus Salam International Centre for Theoretical Physics (ICTP)*, Miramare, Trieste, Italy.
- Jun–Jul 2011 **Workshop and School on Topological Aspects of Condensed Physics**, *The Abdus Salam International Centre for Theoretical Physics (ICTP)*, Miramare, Trieste, Italy.
- Jul 2009 **Summer College on Nonequilibrium Physics from Classical to Quantum Low Dimensional Systems**, *The Abdus Salam International Centre for Theoretical Physics (ICTP)*, Miramare, Trieste, Italy.
- Aug 2008 **ICTP Conference Graphene Week 2008**, *The Abdus Salam International Centre for Theoretical Physics (ICTP)*, Miramare, Trieste, Italy.

Publications

- [1] S. M. Kukhtaruk, "THz response of nonequilibrium electrons of highly doped graphene on a polar substrate", *Ukr. J. Phys. Opt.* **14**, 24 (2013).
- [2] V. A. Kochelap, S. M. Kukhtaruk, "Interaction between an isotropic nanoparticle and drifting electrons in a quantum well", *Ukr. J. Phys.* **57**, No 3, 367 (2012).
- [3] V. A. Kochelap and S. M. Kukhtaruk, "THz electrical instability of a hybrid system composed of quantum dot and quantum well with drifting electrons", *J. Appl. Phys.* **109**, 114318 (2011).
- [4] S. M. Kukhtaruk, "Interaction of drifting electrons with a remote dipole", *Ukr. J. Phys.* **55**, No 8, 916 (2010).
- [5] S. M. Kukhtaruk, "High-frequency properties of systems with drifting electrons and polar optical phonons", *Semicond. Phys., Quant. Electr. & Optoelectr.* **11**, No 1, 439 (2008).

Other

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