

BIOGRAPHICAL SKETCH

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Lilia M. Woods

Department of Physics, PHY 114
University of South Florida
4202 East Fowler Avenue
Tampa, FL 33620-5700

Phone: 813-974-2862
Fax: 813-974-5813
Birthday: May 28, 1969
Citizenship: United States

EDUCATION

- B. A. Sofia University, Bulgaria, June 1990
- M. S. in nuclear and elementary particle physics, Sofia University, Bulgaria, Oct 1993
- Ph.D. theoretical condensed matter physics, University of Tennessee, Knoxville, May 1999

PROFESSIONAL APPOINTMENTS

- 8/2003-present Assistant Professor, Department of Physics,
University of South Florida
- 8/2001 – 8/2003 NRC Postdoctoral Fellow, Naval Research Laboratory
- 5/1999 – 8/2001 Postdoctoral Associate, Oak Ridge National Laboratory and
University of Tennessee

PUBLICATIONS MOST RELEVANT TO THIS PROPOSAL

- L.M. Woods, S. C. Badescu, and T.L. Reinecke, *Adsorption of Simple Benzene Derivatives on Carbon Nanotubes*, Phys. Rev. B **75**, 155415 (2007)
- L.M. Woods and T.L. Reinecke, *Electron-spin decoherence due to hyperfine coupling in quantum dots*, Proceedings of the 27th International Conference on the Physics of Semiconductors, 2005
- L. M. Woods, T. L. Reinecke, and R. Kotlyar, *Hole Spin Relaxation in Quantum Dots*, Phys. Rev. B **69**, 125330 (2004)
- L.M. Woods and T.L. Reinecke, *Nonlinear polaritonic effects in photonic wires*, Phys. Rev. B **67**, 115336 (2003)
- L. M. Woods and T. L. Reinecke, *Spin Relaxation in Quantum Dots*, Phys. Rev. B **66**, R161318 (2002)
- L.M. Woods, *Magnon-phonon effects in ferromagnetic manganites*, Phys. Rev. B **65**, 014409 (2002)
- D. Mandrus, J.R. Thompson, R. Gaal, L. Forro, J.C. Bryan, B.C. Chakoumakos, L.M. Woods, B.C. Sales, R.S. Fishman, and V. Keppens, *Continuous metal-insulator transition in pyrochlore $Cd_2Os_2O_7$* , Phys. Rev. B **63**, 195104 (2001)
- L.M. Woods, *Electronic structure of Ca_2RuO_4 : A comparison with the electronic structures of other ruthenates*, Phys. Rev. B **62**, 7833 (2000)
- L. M. Woods and G. D. Mahan, *Electron-Phonon effects in Graphene and Armchair (10,10) Single-Wall Carbon Nanotubes*, Phys. Rev. B **61**, 10 651 (2000);
- Also published in “Selected Papers on Nanotechnology – Theory and Modeling” edited by F. Wang and A. Lakhtakia, 2006
- G.D. Mahan and L.M. Woods, *Phonon modulated electron-electron interactions*, Phys. Rev. B **60**, 5276 (1999)

G. D. Mahan and L. M. Woods, *Multilayer Thermionic Refrigeration*, Phys. Rev. Lett. **80**, 4016 (1998)

L.M. Woods and G.D. Mahan, *Nonlinear electron-phonon heat exchange*, Phys. Rev. B **57**, 7679 (1998)

SYNERGISTIC ACTIVITIES

- Gave talks at APS Annual March Meetings – 1998 till present, every year
- Gave talks at the 2002 and 2004 International Conferences of Semiconductors
- Gave four invited talks
- Phys. Rev. and Phys. Rev. Lett. Reviewer
- National Science Foundation and Petroleum Research Fund Reviewer

FUNDING

- USF New Research Grant Award - \$7,000, 2004-2005
- Type G Petroleum Research Fund – “Adsorption on defective and deformed carbon nanotubes”, \$35,000; 9/01/06-8/31/08
- DOE Grant – “Theoretical studies of carbon nanotube interactions”; \$252,289; 07/15/06-06/30/09

COLLABORATORS WITHIN THE LAST 48 MONTHS (and in progress)

Norma Alcantar, USF; Stefan Badescu, Naval Research Laboratory; Venkat Bhethanabotla, USF; Galina Dovbeshko, Academy of Science in Ukraine; Thomas Reinecke, Naval Research Laboratory; Sergei Rudin, Army Research Laboratory; Eric Snow, Naval Research Laboratory; Thomas Reinecke, Naval Research Laboratory; Igor Bondarev, North Carolina Central University

INVESTIGATOR’S OWN GRADUATE AND POSTDOC ADVISORS

1. G. D. Mahan, Penn State University, PhD thesis advisor (1996-1999) and Postdoctoral sponsor (1999-2001)
2. T. L. Reinecke, Naval Research Laboratory, Postdoctoral sponsor (2001-2003)

STUDENTS CURRENTLY BEING DIRECTED

Yaroslav Shtogun, PhD in Physics, USF;
Kevin Tatur, PhD in Physics, USF;
Adrian Popescu, PhD in Physics, USF;
J. Pritz, Master’s in Physics, USF