Yuri D. Glinka's CV

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DEGREE:

1989 Ph.D. in Physics, Shevchenko State University, Department of Physics (Kiev, Ukraine)

CURRENT RESEARCH ACTIVITIES:

1. Ultrafast heterodyne-detected transient-grating spectroscopy;
2. Two-dimensional Fourier transform spectroscopy;
3. Ultrafast carrier dynamics in semiconductors;
4. Time-resolved second harmonic generation in semiconductor heterostructures;
5. Photoluminescence spectroscopy of semiconductor nanoscale materials.

PROFESSIONAL AWARDS:

8. Scholarship from Max-Planck Society (2004, Max-Planck Institute for Solid State Research, Stuttgart, Germany).
7. Scholarship from National Research Council (1996, Kent, OH, USA)
6. Travel Grant and Award from International Science Foundation (Soros Foundation) to attend the 5-th International Conference on Fundamentals of Adsorption (1995, Asilomar, CA, USA)
5. Travel Grant and Award from European Chemical Society to attend the International Conference on Molecular Spectroscopy (1995, Leipzig, Germany)
4. Travel Grant and Award from International Science Foundation (Soros Foundation) to attend the 22nd European Congress on Molecular Spectroscopy (1994, Essen, Germany)
3. Travel Grant and Award from International Science Foundation (Soros Foundation) to attend the 49-th Ohio State University International Conference on Molecular Spectroscopy (1994, Columbus, OH, USA)
2. Travel Grant and Award from International Science Foundation (Soros Foundation) to attend the 48-th Ohio State University International Conference on Molecular Spectroscopy (1993, Columbus, OH, USA)
1. Travel Grant and Award from Japanese Chemical Society to attend the Fourth International Conference on Fundamentals of Adsorption (1992, Kyoto, Japan)

PROFESSIONAL EXPERIENCE:

Employment

Department of Physics, West Virginia University, Morgantown, WV, USA (Post-Doc, 01.2013 – present time).
Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC, USA (Senior Research Associate, 03.2012 – 12.2012).
Department of Physics, University of Texas at Austin, Austin, TX, USA (Research Fellow, 11.2009 – 11.2011).

Institute of Physics, National Academy of Sciences of Ukraine, Kiev, Ukraine (Senior Research Scientist, 05.2009 – 11.2009).
Department of Physics, Jackson State University, Jackson, MS, USA (Visiting Research Professor 02.2009 – 05.2009).
Institute of Physics, National Academy of Sciences of Ukraine, Kiev, Ukraine (Senior Research Scientist, 09.2008 - 03.2009).
The Nano and Micro Devices Center at the University of Alabama in Huntsville, Huntsville, AL, USA (Research Scientist, 2005-2008) and The Weapons Sciences Directorate, The Army's Aviation and Missile Research, Development, and Engineering Center, Redstone Arsenal, AL, USA (a contractor - Senior Research Scientist, 2005-2008).
Department of Physics and Astronomy, Vanderbilt University, Nashville, TN, USA (Research Assistant Professor, 2004-2005).
Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany (Research Scientist, 2003-2004).
Department of Physics and Astronomy, Vanderbilt University, Nashville, TN, USA (Research Assistant Professor, 2001-2003).
Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan (Visiting Scientist, 1997-2001).
Chemistry Department of Kent State University, Kent, OH, USA (Visiting Scholar, 1996-1997).
Institute of Surface Chemistry, National Academy of Sciences of Ukraine, Kiev, Ukraine (Senior Research Scientist, 1992-1996).
Institute of Surface Chemistry, National Academy of Sciences of Ukraine, Kiev, Ukraine (Research Scientist, 1991-1992).
Institute of Surface Chemistry, National Academy of Sciences of Ukraine, Kiev, Ukraine (Junior Research Scientist, 1989-1991).
Shevchenko State University, Department of Physics, Kiev, Ukraine (Ph.D. Student and Researcher, 1985-1989).
Shevchenko State University, Department of Physics, Kiev, Ukraine (Research Assistant, 1982-1985).

Invited talks and lectures

2012 – Presentation at the Physical-Chemistry Seminar, University of South Carolina, Columbia, USA.
2004 – Presentation at the International Workshop on Cooperative Phenomena in Optics and Transport in Nanostructures, Dresden, Germany.
2004 – Presentation at the K. von Klitzing Laboratory Seminar, Max-Planck Institute, Stuttgart, Germany.
2002 – Presentation at 29th Conference on the Physics and Chemistry of Semiconductor Interfaces, Santa Fe, NM, USA.
2000 – Presentation at 10th International Symposium on Small Particles and Inorganic Clusters, Atlanta, GA, USA.
1999 – Presentation at First IUPAC Workshop on Advanced Materials: Nanostructured Systems, Hong Kong, China.
1997 – Lecture at the Microphysics Laboratory, Physics Department of University of Illinois at Chicago, Chicago, USA.
1997 – Presentation at the 52nd Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, USA.
1995 – Presentation at 5th International Conference on Fundamentals of Adsorption, Asilomar/Pacific Grove, CA, USA.
1994 – Short visit program and lectures at the Institute of Physical Chemistry and Electrochemistry at Hanover University, Hanover, Germany (Prof. J. Heidberg).
1994 – Presentation at the 22nd European Congress on Molecular Spectroscopy, Essen, Germany.
1994 – Presentation at the 49th Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, USA.
1993 – Presentation at the 48th Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, USA.

1992 – Presentation at the International Conference on Advanced and Laser Technologies, Moscow, Russia.
1992 – Presentation at the 4th International Conference on Fundamentals of Adsorption, Kyoto, Japan.
1991 – Presentation at the International Conference on Coherent and Nonlinear Optics, St Petersburg, Russia.

Honored duties

1. Chair of the Section for the First International Conference on Advanced Materials for Nanoscale Technology (1999, Hong-Kong, China).
2. Invited reviewer for The Journal of Luminescence.
3. Invited reviewer for The Journal of Physical Chemistry.
4. Invited reviewer for Applied Physics Letters and The Journal of Applied Physics.
5. Invited reviewer for Optics Communications.
6. Invited reviewer for Physical Review B.
7. Invited reviewer for Optics Express.

Research projects

- **Department of Physics, West Virginia University, Morgantown, WV, USA**
  1. Second harmonic generation studies of carrier dynamics in oxides, thin films and organics.
  2. Determination of pulsed terahertz generation from chalcopyrite crystals.

- **Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC, USA**
  1. Ultrafast heterodyne-detected transient-grating spectroscopy of CdSe/ZnSe quantum dots.

- **Department of Physics, University of Texas at Austin, Austin, TX, USA**
  1. Two-dimensional Fourier-transform spectroscopy of excitons in single GaAs/AlGaAs quantum wells.

- **Institute of Physics, National Academy of Sciences of Ukraine, Kiev, Ukraine**
  1. Femtosecond optical studies of semiconductor heterostructures.
  2. Time-resolved surface plasmonics of metal nanoparticles.

- **Department of Physics, Jackson State University, Jackson, MS, USA**
  1. Ultrafast carrier dynamics in semiconductor quantum wells.

- **Institute of Physics, National Academy of Sciences of Ukraine, Kiev, Ukraine**
  1. Femtosecond optical studies of semiconductor heterostructures.
  2. Time-resolved surface plasmonics of metal nanoparticles.

- **The Weapons Sciences Directorate of the Army's Aviation and Missile Research, Development, and Engineering Center, Huntsville, AL, USA**
  1. Femtosecond optical studies of semiconductor heterostructures.
  2. Optical characterization of surface plasmonics and wide bandgap semiconductor nanostructures.

- **Department of Physics and Astronomy, Vanderbilt University, Nashville, TN, USA**
  1. Femtosecond optical studies of semiconductor heterostructures (ultrafast switches, spintronics).

2. Ultrafast contactless control of high-k dielectric materials for MOS transistors.

- **Max-Planck Institute for Solid State Research, Stuttgart, Germany**
  1. Subpicosecond optoelectronic transductions in semiconductor superlattices (novel optoelectronic switches for ultrafast devices).
  2. Ultrafast spin dynamics in semiconductor asymmetric quantum wells.

- **Department of Physics and Astronomy, Vanderbilt University, Nashville, TN, USA**
  1. Femtosecond optical studies of superconducting and nonsuperconducting cuprates (high Tc Superconducting Materials).
  2. Femtosecond optical spectroscopy of nanoscale semiconductor materials (advanced materials for spintronics).
  3. Pump-probe second harmonic generation in multiplayer semiconductor heterostructures (femtosecond dynamics of interfacial electric fields).
  4. Time-dependent second harmonic generation in thin oxide layers on silicon (contactless control of high-k dielectric materials for MOS transistors).

- **Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan**
  1. Time-resolved power-laser-induced photoluminescence spectroscopy of diamond nanoparticle composites (optical properties of diamond nanoparticles for nanoscale technology).
  2. Time-resolved photoluminescence spectroscopy of silica nanoparticles (size effect in wide band-gap materials).
  3. Photoluminescence spectroscopy of mesoporous silica and porous silicon (the nature of light-emitters in silicon-based nanoscale materials).
  4. Quantum Chemical Modeling of the energetic structure of light-emitters in silicon and silica-based nanosolids.

- **Chemistry Department of Kent State University, Kent, OH, USA**
  1. Laser spectroscopy studies of adsorption activities of the composites of silica nanoparticles and mesoporous silicas.
  2. Shape-selective Raman Scattering spectroscopy for silica nanoparticles.
  3. Molecular luminescence probes for testing the adsorption heterogeneity.

- **Institute of Surface Chemistry, National Academy of Sciences of Ukraine, Kiev, Ukraine**
  1. Interaction between intense laser light and nanoscale solids (multiphoton processes in wide band-gap nanoscale materials).
  2. Time-resolved up-conversion spectroscopy of silica nanoparticles.
  3. Resonance Enhanced Multiphoton Ionization (REMPI) spectroscopy of nanoscale solids and molecular ions adsorbed on the surface of dispersed materials.

- **Shevchenko State University, Department of Physics, Kiev, Ukraine**
  1. Laser spectroscopy of crystals and glasses doped by molecular ions (developments of advanced materials for novel laser systems).
  2. Power-laser-light induced photoluminescence from doped crystals (optical pumping of novel laser crystals).

Publications

The author or co-author of over 70 publications, mostly in the area of ultrafast nonlinear spectroscopy and nanoscale material characterization (See the attached list of publications).