

Hrvoje Petek - Curriculum Vitae

Main Research Interests:

- Ultrafast electron and nuclear dynamics in solids and at solid surfaces
- Surface femtochemistry of relevance to surface science and photocatalysis
- Ultrafast microscopy of coherent excitations in solids
- Ultrafast plasmonics in metallic nanostructures
- Nonequilibrium electronic phenomena in solids

Education:

1980-1985	Ph.D. in Chemistry University of California, Berkeley Advisor: Prof. C. Bradley Moore
1976-1980	B.S. in Chemistry Massachusetts Institute of Technology

Appointments:

Institute for Molecular Science

Aug. 1985 - Nov. 1987 Postdoctoral Fellow, Advisor: Prof. Keitaro Yoshihara
Dec. 1987 - Jan. 1993 Research Associate, Institute for Molecular Science

Hitachi Advanced Research Laboratory

Feb. 1993 - March 2000 Senior Research Scientist and Group Leader

The University of Pittsburgh

April 2000 - present Professor of Physics, University of Pittsburgh
Sept. 2002 - present Professor of Chemistry, University of Pittsburgh
Feb. 2005 - present Co-Director, Petersen Institute for NanoScience and Engineering

Honorary Positions:

March 2005 - Apr. 2007 Visiting Professor, Institute for Molecular Science
April 2004 - March 2005 Visiting Professor, National Institute for Materials Science
Dec. 2002 - March 2005 Eminent Visiting Professor,
Institute of Physical and Chemical Research, RIKEN
Jan. 2001 Visiting Professor, Hokkaido University

Awards and Honors:

- Chancellor's Distinguished Research Award, University of Pittsburgh, 2005
- Fellow, American Physical Society, 2003

- Alexander von Humboldt Research Award, 2000
- NEDO Joint International Research Grant Awardee, 1996 -1999, 2003 - 2006
- Yamada Science Foundation Postdoctoral Fellow, 1985
- National Science Foundation Postdoctoral Fellow, 1985 - 1987
- National Science Foundation Predoctoral Fellow, 1980 - 1984

Funding:

- 1) Department of Defense, DAAD 19-01-1-0619, “Enzyme, Antibody, and Photocatalytically Active Nanoscale Scavengers, and Sensors for CW and Biological agents.”
- 2) NSF, CHE-0209706, “The Role of Substrate Band Structure in Photochemistry on Metal Surfaces.”
- 3) DOE, DE-FG02-03ER15434, “Optical Manipulation of Ultrafast Electron and Nuclear Motion on Metal Surfaces.”
- 4) NSF, ECS-0403865 – NIRT “Plasmonic Nanostructured Devices for Chemical and Biological Sensing.”
- 5) NSF, CHE-0507147 - NIRT “Full Spatio-Temporal Coherent Control on Nanoscale.”
- 6) PRF, 44158-ACS - “The Structure and Dynamics of Wet Electrons on Metal Oxide Surfaces.”

Editorships and Conference Organization:

July 2006 - present	Editor-in-Chief, Progress in Surface Science
July 2000 - June, 2006	Editorial Board Member, Progress in Surface Science
1999-2001	Associate Editor: Review of Laser Engineering
2006	Thematic Issue Editor (with John T. Yates), “Photophysics and Photochemistry on Surfaces”, <i>Chemical Reviews</i>
2000	Special Issue Editor, (with T. F. Heinz) on “Electron Dynamics in Metals”, <i>Chemical Physics</i>
2006	Program Committee, 14 th International Conference on Ultrafast Phenomena, Monterey, CA
2006	International Steering Committee, Symposium on Ultrafast Surface Dynamics, Abashiri, Japan
2003	Organizer: Symposium on Ultrafast Surface Dynamics, Telluride, CO
2001	Organizer: Symposium on Electron Dynamics at Interfaces OSA Annual Meeting, Long Beach, CA
1999	Organizer: Symposium Photon and Electron Induced Surface Processes, Hayama, Japan

1989 Organizer: U.S.-Japan Workshop for Young Investigators in Molecular Science, Okazaki, Japan

Advisory Panels:

2006 Visiting Committee, Surface Science Laboratory, RIKEN
2005 Panelist: DOE Workshop on the Future of Solar Energy Conversion
2004 Panelist: NSF Instrumentation for Materials Research/MRI
2002 Panelist: DOE Workshop on the Future of Catalysis

Languages:

Croatian (native), English, Japanese

Professional Memberships:

- American Chemical Society, 1977 - present
- American Physical Society, 1980 - present
- American Association for the Advancement of Science, 2005 - present

Patents:

Author of 17 US, Japanese, and European patents on optoelectronics, lasers, etc.

Invited lectures at international conferences (05/2005 -):

1. Gordon Research Conference on Renewable Energy; Ventura, CA; Jan. 2007
2. SPIE, Photonics West: Symposium on "Ultrafast Phenomena in Semiconductor and Nanostructured Materials IX"; San Jose, CA; Jan. 2007.
3. Second International Workshop of the Collaborative Research Centre SFB 616 "Energy Dissipation at Surfaces," Schloss Eichholz, Germany; Sept. 2006.
4. American Chemical Society Fall Meeting; San Francisco, CA; Sept. 2006.
5. ECOSS 24 - European Conference on Surface Science, Paris, France: Sept. , 2006.
6. SPIE 2006 Annual Meeting, Conference on Physical Chemistry of Interfaces and Nanomaterials V; San Diego, CA; Aug., 2006.
7. SPIE 2006 Annual Meeting, Conference on Metal Nanoplasmonics; San Diego, CA; Aug., 2006.
8. Institute for Molecular Science Photoscience Symposium; Okazaki, Japan; May 19, 2006.
9. Conference on Lasers and Electro-Optics, CLEO/QELS 2006 Symposium on Nonlinear Nanophotonics; Long Beach, CA; May, 25, 2006.
10. NIST, Gaithersburg, MD; April 20, 2006.
11. University of Maryland, Chemical Physics/Physical Chemistry Colloquium; College Park, MD; April 19, 2006.
12. European Physical Society Meeting; Dresden, Germany; March 31, 2006.

13. NEDO Molecular Electronics Symposium; Sendai, Japan; Dec. 11, 2005.
14. Northwestern University, Nanoscience Colloquium; Evanston, IL; Nov. 11, 2005.
15. DOE Condensed Phase and Interfacial Molecular Science Research Meeting; Warrenton, VA; Oct. 25, 2005.
16. Science 2005; University of Pittsburgh, Pittsburgh, PA; Oct. 7, 2005.
17. Condensed Matter Physics Seminar; Michigan State University, East Lansing, MI; Oct. 3, 2005.
18. Ultrafast Dynamics of Collective Excitations in Solids; Vitte, Hiddensee Islands, Germany; Sept. 13, 2005.
19. SPIE 2005 Annual Meeting, Conference on Physical Chemistry of Interfaces and Nanomaterials; San Diego, CA; Aug. 2, 2005.
20. SPIE 2005 Annual Meeting, Conference on Plasmonics; San Diego, CA; July 31, 2005.
21. Femtochemistry VII; Washington DC; July 20, 2005.
22. International Quantum Electronics Conference; Tokyo, Japan; July 12, 2005.
23. Photon science series seminar; Institute for Molecular Science, Okazaki, Japan; July 6, 2005.
24. Workshop on Ultrafast Soft X-Ray Science at LCLS; Stanford, CA,; June 28, 2005.
25. International RIKEN Nanoscience and Technology Conference; Iizuna Kogen, Japan; June 22, 2005.
26. Colloquium, BESSY II; Berlin, Germany; May 30, 2005.
27. Informal 2PPE Discussion; Berlin, Germany; May 27, 2005.
28. Colloquium Donostia International Physics Center; San Sebastian, Spain; May 24, 2005.