

# Peter V. Schwartz

## A. Professional Preparation:

MIT	Physics	B.S. – 1986
SUNY, Buffalo	Education courses	no degree 1989
Princeton University	Astrophysical Sciences	M.S. – 1993; Ph.D. - 1998
Northwestern University	Chemistry/Nanotechnology	1999-2000

## B. Appointments:

2003-present	California Polytechnic State University, San Luis Obispo, Physics Department, Assistant Professor
2000-2003	California Polytechnic State University, San Luis Obispo, Physics Department, Lecturer
1999-2000	Northwestern University, Post Doctoral Research Scientist
Summer 1999	Collaborative Research at Columbia University
1998-1999	Colorado College, Physics Department, Visiting Assistant Professor
1993-1998	Princeton Materials Institute, Princeton University, Ph.D. Graduate Student, Research and Teaching Assistant, Instructor for Leaders of Camping Trips
1991-1993	Princeton Plasma Physics Laboratory, Princeton University, Graduate Student, Research Assistant
1989-1991	Bakersfield High School, Bakersfield, California Physics Teacher
1986-1989	United States Peace Corps, Fiji, South Pacific High School Science, Math Teacher, Science Head of Department

## C. Selected Publications:

- 1. New Monolayer Phases of N-Alkane Thiols Self-Assembled on Au(111): Preparation, Surface Characterization and Imaging** N. Camillone III, P. Eisenberger, T.Y.B. Leung, P. Schwartz, G. Scoles, G.E. Poirier and M.J. Tarlov. *J. Chem Phys.* **1994**, *101*, 11031
- 2. Chain Length Dependence of the Striped Phases of Alkanethiol Monolayers Self-Assembled on Au(111)** An atomic beam diffraction study. N. Camillone III, T.Y.B. Leung, P. Schwartz, P. Eisenberger and G. Scoles. *Langmuir* **1996**, *12*, 2737-2746
- 3. Adsorption Mechanisms, Structures and Growth Regimes of an Archetypal Self-Assembling System: Decanethiol on Au(111)** F. Schreiber, A. Eberhardt, T.Y.B. Leung, P. Schwartz, S.M. Wetterer, D.J. Lavrich, L. Berman, P. Fenter, P. Eisenberger, G. Scoles, *Phys. Rev. B.* **1998**, *57*, 12476
- 4. Growth Kinetics of Decane Thiol Monolayers Self-Assembled on Au(111) By Molecular Beam Deposition: An Atomic Beam Diffraction Study** P. Schwartz, F. Schreiber, P. Eisenberger and G. Scoles, *Surface Science* **1999**, *423*, 208-224
- 5. Structure and Growth of 4-Methyl-4'-mercaptobiphenyl Monolayers on Au(111): A Surface Diffraction Study** T.Y.B. Leung, P. Schwartz, G. Scoles, F. Schreiber, and A. Ulman, *Surface Science* **2000**, *458*, 34-52
- 6. Meniscus Force Nanografting: Nanoscopic Patterning of DNA** P.V. Schwartz, *Langmuir*, **2001**, *17*, 5971
- 7. Molecular Transport From an AFM tip: a Comparative Study of Dip-Pen Nanolithography** P.V. Schwartz, *Langmuir*, **2002**, *18*, 4041
- 8. Overlayers of Long Chain Organic Molecules Physisorbed on the Surface of Self-Assembled Monolayers of Alkylthiols on Au(111)** P.V. Schwartz, D.J. Lavrich, G. Scoles *Langmuir*, **2003**, *19*, 4969
- 9. The Effect of Environmental Conditions on Dip-Pen Nanolithography of Mercaptohexadecanoic Acid** E. Peterson, B.L. Weeks, J.J. De Yoreo, P.V. Schwartz, *J Phys. Chem.* **2004** ASAP article
- 10. Controllable and Reversible Aggregation of DNA Derivatized Polystyrene Latex Microspheres** P. H. Rogers, B. Roberts, E. Michel, C. A. Bauer, S. Vanderet, D. Hansen, A. Calvez, J. B. Crews, James K. O. Lau, A. Wood, D. Pine, P. V. Schwartz *Langmuir*, **2004** submitted Dec. 2004

**D. Synergistic Activities:**

1. **Undergraduate Research Advisor** – In the past 4 years, I have advised 14 senior thesis, most of them involving full time research over one or two summers.
2. **Advisor** of Society of Physics Students
3. **Student Mentor** with “Upward Bound”. This program targets particularly minority highschool students to be first generation college graduates. Responsibilities include presentations to student groups and mentoring students who “shadow” me and/or my research students throughout daily activities.

**E. Collaborators and Other Affiliations:**

(i) **Collaborators** Nicholas Camillone III, Brookhaven National Laboratory  
David Pine, University of California, Santa Barbara  
Eric Michel, University of California, Santa Barbara  
James J. De Yoreo, Lawrence Livermore National Laboratory  
Brandon Weeks, Texas Tech University

(ii) **Graduate and Post Doctoral Advisors**

Giacinto Scoles, Princeton University  
Peter Eisenberger Columbia Univeristy  
Chad A. Mirkin, Northwestern University

(iii) **Thesis Advisor / Undergraduate Mentor**

Bradly Roberts, Cheuk H. Tang, Jackson Crews, Antoine Calvez, James Kwok On Lau, Ivan Hromada, Erik Peterson, Jamie Romnes, Phil Rogers, Carl Bauer, Steven Vanderet, Daniel Hansen, Matt Leyden, Joshua T. West, Tim Arlen, Nicholas Costa