

Jennifer R. Hampton

Hope College
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Professional Experience

Hope College

Assistant Professor
Department of Physics
July 2007 – present

Washington & Jefferson College

Assistant Professor
Department of Physics
August 2005 – June 2007

The Pennsylvania State University

Postdoctoral Scholar
Departments of Chemistry and Physics
Advisor: Paul S. Weiss
September 2002 – July 2005

Cornell University

Graduate Research Assistant
Department of Chemistry and Chemical Biology and Department of Physics
January 1998 – August 2002

Graduate Teaching Assistant
Department of Physics
Spring 1998, Spring 1999

Education

Cornell University

Ph.D., Experimental Physics
Minor in Chemistry/Chemical Physics
Thesis: Magnetic Studies of Electrodeposited Thin Films and Compositionally Modulated Structures
Advisor: Héctor D. Abruña
August 2002

M.S., Physics
May 1999

University of Cambridge

M.Phil., Physics
Thesis: Formation and Properties of Thermally Prepared Copper(I) Oxide
Advisor: C. John Adkins
November 1996

Oberlin College

B.A., Physics with Highest Honors
May 1995

Honors & Awards

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|---|-------------|
| Hope College Sigma Pi Sigma | 2008 |
| National Physical Science Consortium Fellowship | 1996 – 2002 |
| Winston Churchill Foundation Scholarship | 1995 – 1996 |
| Oberlin College Sigma Xi | 1995 |
| Oberlin College Phi Beta Kappa | 1994 |

Publications

- T. J. Mullen, J. N. Hohman, A. A. Dameron, J. R. Hampton, S. D. Gillmor, and P. S. Weiss, "Displaceable Monolayers and Microdisplacement Printing: 1-Adamantanethiol Assembly and Application," *Materials Matters* **1** (2), 8 (2006). Unrefereed publication.
- J. R. Hampton, A. A. Dameron, and P. S. Weiss, "Double ink dip-pen nanolithography to elucidate ink transport," *J. Am. Chem. Soc.* **128**, 1648 (2006).
- J. R. Hampton, A. A. Dameron, and P. S. Weiss, "Transport rates vary with deposition time in dip-pen nanolithography," *J. Phys. Chem. B* **109**, 23118 (2005).
- A. A. Dameron, J. R. Hampton, S. D. Gillmor, J. N. Hohman, and P. S. Weiss, "Enhanced molecular patterning via microdisplacement printing," *J. Vac. Sci. Technol. B* **23**, 2929 (2005).
- R. Stine, M. V. Pishko, J. R. Hampton, A. A. Dameron, and P. S. Weiss, "Heat-stabilized phospholipids films: Film characterization and the production of protein resistant surfaces," *Langmuir* **21**, 11352 (2005).
- A. A. Dameron, J. R. Hampton, R. K. Smith, T. J. Mullen, S. D. Gillmor, and P. S. Weiss, "Microdisplacement printing," *Nano Lett.* **5**, 1834 (2005).
- J. Powers, J. R. Manson, C. E. Sosolik, J. R. Hampton, A. C. Lavery, and B. H. Cooper, "Temperature dependent scattering of hyperthermal energy K^+ ions," *Phys. Rev. B* **70**, 115413 (2004).
- J. R. Hampton, J.-L. Martínez-Albertos, and H. D. Abruña, "SMOKE measurements of electrodeposited mono- and multilayers," *Langmuir* **19**, 4309 (2003).
- C. E. Sosolik, J. R. Hampton, A. C. Lavery, B. H. Cooper, and J. B. Marston, "Thermally enhanced neutralization in hyperthermal energy ion scattering," *Phys. Rev. Lett.* **90**, 013201 (2003).
- J. R. Hampton, J.-L. Martínez-Albertos, and H. D. Abruña, "Development of a versatile SMOKE system with electrochemical applications," *Rev. Sci. Instrum.* **73**, 3018 (2002).
- J. Hampton, J. P. Eisenstein, L. N. Pfeiffer, and K. W. West, "Capacitance of two-dimensional electron systems subject to an in-plane magnetic field," *Solid State Commun.* **94**, 559 (1995).

Presentations

- "Magnetic Measurements of Electrodeposited Thin Films and Multilayers," Colloquium, Physics Department, Western Michigan University, Kalamazoo, MI (March 17, 2008).
- "Magnetic Measurements of Electrodeposited Thin Films and Multilayers," Physics and Engineering Seminar, Hope College, Holland, MI (October 19, 2007).
- "Molecular Engineering of Single Molecular Switches and Molecular Assemblies," American Physical Society March Meeting, Los Angeles, CA (March 2005), invited talk.
- "The Effect of Substrate Hydrophobicity in Ink Transport During Dip-Pen Nanolithography," American Physical Society March Meeting, Los Angeles, CA (March 2005), contributed talk.
- "The Limits of Soft Lithographic Techniques: Pattern Stability and Molecular Order," Sponsors Days Poster Session, Department of Chemistry, The Pennsylvania State University, University Park, PA (October 12, 2004).

“Pattern Stability in Microcontact Printed Self-Assembled Monolayers,” American Chemical Society National Meeting, Philadelphia, PA (August 2004), contributed poster.

“Nanoscale Ferroic Materials for Use in Data Storage,” Colloquium, Department of Physics and Astronomy, Oberlin College, Oberlin, OH (February 27, 2003).

“SMOKE Measurements of Electrochemically Deposited Co Thin Films and Co-Cu Multilayers,” American Physical Society March Meeting, Indianapolis, IN (March 2002), contributed talk.

“Temperature-Dependent Scattering Dynamics of Hyperthermal-Energy K⁺ Incident on Cu(001),” American Physical Society March Meeting, Minneapolis, MN (March 2000), contributed talk.

“Temperature Dependent Alkali Ion Scattering from Cu(001),” European Science Foundation Conference *Particle-Solid Interactions: Dynamic Phenomena*, San Sebastian, Spain (September – October 1999), contributed poster.

Professional Activities

Member of: American Physical Society, American Chemical Society, Electrochemical Society, American Association of Physics Teachers, American Scientific Affiliation

Reviewer for: ACS Nano, Journal of Electroanalytical Chemistry, Langmuir, Nano Letters, Scanning

College Committee Service

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|---|----------------|
| Summer Hope Academic Research Program Departmental Director, Hope College | 2007 – present |
| Society of Physics Students Faculty Advisor, Hope College | 2007 – 2008 |
| Project Kaleidoscope Leadership Initiative Team, Washington & Jefferson College | 2006 – 2007 |
| Student Life Advisory Committee, Washington & Jefferson College | 2006 – 2007 |
| Committee on Prizes, Awards, and Fellowships, Washington & Jefferson College | 2006 – 2007 |