

# Jennifer R. Hampton

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## Professional Experience

### Hope College

Assistant Professor July 2007 – present  
Department of Physics

### Washington & Jefferson College

Assistant Professor August 2005 – June 2007  
Department of Physics

### The Pennsylvania State University

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

### Cornell University

Graduate Research Assistant January 1998 – August 2002  
Department of Chemistry and Chemical Biology  
Department of Physics  
Graduate Teaching Assistant Spring 1998, Spring 1999  
Department of Physics

## Education

### Cornell University

Ph.D., Experimental Physics August 2002  
Minor in Chemistry/Chemical Physics  
Thesis: Magnetic Studies of Electrodeposited Thin Films and Compositionally Modulated Structures  
Advisor: Héctor D. Abruña  
M.S., Physics May 1999

### University of Cambridge

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

### Oberlin College

B.A., Physics with Highest Honors May 1995

## Honors & Awards

|   |             |
|---|-------------|
| 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

- A. A. Frey, N. R. Wozniak, T. B. Nagi, M. P. Keller, J. M. Lunderberg, G. F. Peaslee, P. A. DeYoung, and J. R. Hampton, "Particle-Induced X-ray Emission Analysis of Electrodeposited Alloy Film Composition," submitted to *J. Electrochem. Soc.*
- N. R. Wozniak, A. A. Frey, L. W. Osterbur, T. S. Boman, and J. R. Hampton, "An Electrochemical Cell for the Efficient Turn Around of Wafer Working Electrodes," submitted to *Rev. Sci. Instrum.*
- 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

- "Characterization of Electrodeposited Nickel-Iron-Copper Thin Films," Physics Department Seminar, Grand Valley State University, Allendale, MI (October 19, 2009).
- "Characterization of Electrodeposited Nickel, Iron, and Nickel-Iron Thin Films," American Chemical Society National Meeting, Salt Lake City, UT (March 2009), contributed poster.
- "Characterization of Electrodeposited Magnetic Thin Films," Chemistry Department Seminar, Hope College, Holland, MI (January 23, 2009).

- “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 Ferroc 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<sup>+</sup> 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, Council on Undergraduate Research, American Association of Physics Teachers, American Scientific Affiliation  
 Reviewer for: ACS Nano, Journal of Electroanalytical Chemistry, Langmuir, Nano Letters, Scanning, NSF CCLI Program

## College Committee Service

|   |                |
|---|----------------|
| 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    |