

Jennifer R. Hampton

Hope College
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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, "Analysis of Electrodeposited Nickel-Iron Alloy Film Composition Using Particle-Induced X-ray Emission," *Int. J. Electrochem.*, **2011**, 604395, (2011).
- 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," *Rev. Sci. Instrum.* **81**, 034102 (2010).
- 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 Studies Elucidate Molecular 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 Phospholipid 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 Studies 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

- "X-Ray Characterization of Electrodeposited Alloy Thin Films," American Physical Society March Meeting, Dallas, TX (March 2011), contributed talk.
- "Characterization of Electrodeposited Nickel-Iron-Copper Thin Films," Physics and Engineering Seminar, Hope College, Holland, MI (April 16, 2010).
- "Particle-Induced X-ray Emission analysis of electrodeposited alloy film composition," American Chemical Society National Meeting, San Francisco, CA (March 2010), contributed talk.

- “Characterization of Electrodeposited Nickel-Iron-Copper Thin Films,” Physics & Astronomy Department Seminar, Calvin College, Grand Rapids, MI (March 9, 2010).
- “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 Ferrocenic Materials for Use in Data Storage,” Physics and Astronomy Department Colloquium, 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, 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
 Executive Advisory Board Member, Nanoprobe Network 2010 – present

College Committee Service

Library Committee, Hope College	2011 – present
Health Professions Advisory Committee, Hope College	2010 – present
Natural and Applied Sciences Division Safety Committee, Hope College	2010 – present
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