Douglas B. Hausner

Doug.Hausner@gmail.com - Office: (856) 225-6282 - Cell: (215) 962-2746

Highlight of Qualifications

- Over eight years of experience in instrumental techniques related to surface and materials characterization
- Publications and presentations relating to characterization of materials and surfaces
- Experience relating scientific information to individuals with and without scientific background including colleagues, clients, and academic departments
- Demonstrated effective program coordination and leadership abilities

Education

Doctorate of Philosophy in Physical Chemistry, Temple University, Philadelphia, PA May 2009
"Surface Science Investigations: Calcite Surface Reconstruction and Ferrihydrite Reactivity"
Advisor: Professor Daniel R. Strongin

Bachelor of Arts in Chemistry, University of Delaware, Newark, DE May 2003
Undergraduate research using SPM
Advisor: Thomas P. Beebe

Research Interests

Nanomaterials, Surfaces and Interfaces, Environmental Chemistry, Catalytic Chemistry, Alternative Fuels, Electron Microscopy, Infrared Spectroscopy, Scanning Probe and Electron Spectroscopy

Experience

Adjunct Assistant Professor, Temple University, Philadelphia, PA May 2009 – Present

- Managing the day to day direction and supervision of two research programs and three graduate students
- Responsible for the coordination and analysis of research data for publication in peer reviewed journals, including collaborative work involving multiple university and government laboratories

Graduate Research Assistant, Temple University, Philadelphia, PA September 2003 – May 2009

- Obtained extensive experience with a multitude of instrumental analysis techniques including: Atomic Force Microscopy (AFM), X-ray Photoelectron Spectroscopy (XPS), Electron Microscopy (SEM,TEM), X-ray diffraction (XRD), and Infrared Spectroscopy (IR)
- Published peer reviewed research
- Performed synthesis and characterization of inorganic environmental nanomaterials
- Aided other researchers within the chemistry and engineering departments by performing materials analysis and serve as a consultant for the interpretation of acquired results
- Lead and advise graduate students in a team environment
- Planned and coordinate collaborative research conferences
- Represented the chemistry department as a graduate student liaison for the recruitment of new graduate students and faculty members

Research Assistant, University of Delaware, Newark, DE June 2002 – May 2003

- Worked with Scanning Probe Microscopes (SPM), specifically Atomic Force Microscopy (AFM) and was responsible for the daily operation and maintenance of a Digital Instruments Multi Mode SPM
- Acquired knowledge of and experience in Time of Flight Secondary Mass Spectrometry, X-ray Photoelectron Spectroscopy, and Confocal Fluorescence Microscopy
- Provided surface chemistry support for the Chemistry and Biochemistry, Physics, and Engineering departments
- Served as IT support to laboratory group instrumentation and lab computers

Analytical/QC Technician, Micron Technologies Incorporated, Exton, PA June 2000 – September 2002

- Performed c-GMP analytical testing of bulk active pharmaceutical products using a variety of techniques to support manufacturing and external contract work
- Conducted daily operations using Malvern Mastersizer, HPLC, and FTIR instrumentation
- Created new and refined existing analytical methods
- Tracked incoming samples for routine testing
- Ensured on-time delivery of study results, including regular status updates to clients

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Publications

9. Debnath, S; Smolen, J; Kondaveeti, S; Ginder-Vogel, M; **Hausner, D.B.;** Sparks, D; Strongin, D.R.; Reductive dissolution of birnessites by arsenite. *Geochimica et Cosmochimica Acta,* submitted July **2009**
8. Debnath, S; **Hausner, D.B.**; Kubicki, J.D.; Strongin, D.R.; Reductive dissolution of ferrihydrite by ascorbic acid and the inhibiting effect of phospholipid. *Journal of Colloid and Interface Science,* submitted June **2009**
7. Harrington, R; **Hausner, D.B.**; Bhandari, N; Strongin, D.R.; Chupas, P. J.; Chapman, K.W.; Middlemiss, D.S.; Grey, C.P.; Parise, J.B.; Investigation of surface structures by powder diffraction: A differential Pair Distribution Function (d-PDF) study into arsenate sorption on ferrihydrite. *Journal of Applied Crystallography*, submitted May **2009**
6. **Hausner, D. B.**; Bhandari, N; Pierre-Louis, A. M.; Kubicki, J. D.; Strongin, D. R.; Ferrihydrite Reactivity Toward Carbon Dioxide. *Journal of Colloid and Interface Science* **2009,** 337,(2), 492-500
5. Smirnov, A.; **Hausner, D**.; Laffers, R.; Strongin, D. R.; Schoonen, M. A. A., Abiotic ammonium formation in the presence of Ni-Fe metals and alloys and its implications for the Hadean nitrogen cycle. *Geochemical Transactions* **2008**, 9.
4. Liu, G.; Debnath, S.; Paul, K. W.; Han, W.; **Hausner, D. B**.; Hosein, H.-A.; Michel, F. M.; Parise, J. B.; Sparks, D. L.; Strongin, D. R., Characterization and Surface Reactivity of Ferrihydrite Nanoparticles Assembled in Ferritin. *Langmuir* **2006**, 22, (22), 9313-9321.
3. **Hausner, D. B**.; Reeder, R. J.; Strongin, D. R., Humidity-induced restructuring of the calcite surface and the effect of divalent heavy metals. *Journal of Colloid and Interface Science* **2006**, 305, (1), 101-110.
2. Chada, V. G. R.; **Hausner, D. B.**; Strongin, D. R.; Rouff, A. A.; Reeder, R. J., Divalent Cd and Pb uptake on calcite {1014} cleavage faces: An XPS and AFM study. *Journal of Colloid and Interface Science* **2005**, 288, (2), 350-360.
1. Zhang, Z.; Ma, H.; **Hausner, D. B**.; Chilkoti, A.; Beebe, T. P., Jr., Pretreatment of Amphiphilic Comb Polymer Surfaces Dramatically Affects Protein Adsorption. *Biomacromolecules* **2005**, 6, (6), 3388-3396.

Honors

Temple University College of Science and Technology Graduate Student Outstanding Research Award 2007

Affiliations

American Chemical Society (ACS), Member	2002 – present
American Association for the Advancement of Science (AAAS), Member	2008 – present
Microscopy Society of America (MSA), Member	2009 – present
Mineralogical Society of America (MSA), Member	2009 – present

Leadership Positions

Philadelphia Local Section Younger Chemists Committee (PSYCC), Chair	2008 – present
Philadelphia Local Section American Chemical Society Annual Poster Session Coordinator	2008 – present

Workshops

Lehigh University Microscopy School: SEM and X-ray Microanalysis short course, June 4-8th 2007, Lehigh University, Bethlehem PA

CEKA (Center for Environmental Kinetics Analysis) Molecular Modeling Workshop; August 14-18th 2006, Penn State University, State College PA

EXAFS Data Collection and Analysis; June 22-25, 2004; Brookhaven National Laboratory, Upton NY

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Presentations

Ferrihydrite Reactivity Towards Carbon Dioxide **Douglas B. Hausner,** James D. Kubicki, Daniel R. Strongin, talk at the 238th National Meeting of the American Chemical Society, August 16-22, 2007, Washington, DC

The Chemistry Graduate School Experience: Perspective from a Philadelphia graduate school student; **Douglas B. Hausner,** talk given at Temple University's College of Science and Technology Open House 2009, March 27, 2009, Temple University, Philadelphia, PA

The Chemistry Graduate School Experience: Perspective from a Philadelphia graduate school student; **Douglas B. Hausner,** recruiting talk given to the American Chemical Society Student Affiliates University of Delaware Chapter, November 3, 2007, University of Delaware, Newark, DE

Humidity-induced Restructuring of the Calcite Surface and the Effect of Divalent Heavy Metals; **Douglas B. Hausner**; Strongin, Daniel R.; Reeder, Richard J.; talk at the 234th National Meeting of the American Chemical Society, August 19-23, 2007, Boston, MA

The Chemistry Graduate School Experience: Perspective from Philadelphia graduate school students; **Douglas B. Hausner**, talk given to the American Chemical Society Mid-Atlantic Regional Meeting, May 16, 2007, Ursinus College, Collegeville, PA

Humidity-induced Restructuring of the Calcite Surface and the Effect of Divalent Heavy Metals; **Douglas B. Hausner**, D. R. Strongin, R. J. Reeder; CEMS annual meeting, Nov 2-3, 2006, Stony Brook University, NY

Dynamic Calcite {1014} surfaces exposed to controlled humidity, implications to ion mobility on surfaces; **Douglas B. Hausner**, D. R. Strongin, R. J. Reeder; CEMS annual meeting, Nov 2-3, 2005, Stony Brook University, NY

Teaching Activities

Instructor - Chemistry 1953 Honors General Chemistry Laboratory	Temple University	Fall 2008
Teaching Assistant - Chemistry 1034 General Chemistry 2	Temple University	Spring 2004
Teaching Assistant - Chemistry 1033 General Chemistry 1	Temple University	Fall 2003