Brian Scott Day

Curriculum Vitae

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APPOINTMENTS

August 2008 **Assistant Professor,** Department of Chemistry, Marshall University, Huntington, WV

EDUCATION

2005-2008 **Postdoctoral Research Fellow,** Department of Chemistry, Marshall University

2001-2005 **Ph.D., Chemistry,** Virginia Tech (Blacksburg, VA), 2005.
Dissertation: The Dynamics of Gas-Surface Energy Transfer in Collisions of Rare Gases with Organic Thin Films
Advisor: John R. Morris

1997–2001 **B.S., Chemistry** (*summa cum laude*), Marshall University (Huntington, WV), 2001.

PROFESSIONAL EXPERIENCE

Fall '06, Spring '07,'08 **Adjunct Instructor,** Marshall University School of Extended Education
- General Chemistry I (CHM 203)

2002–2005 **Research Assistant**, Department of Chemistry, Virginia Tech
Blacksburg,VA, June 2002 - July 2005

2001–2002 **Teaching Assistant**, Department of Chemistry, Virginia Tech
Blacksburg, VA, August 2001 - May 2002
- 3 sections of general chemistry lab
- 2 sections of quantitative analysis lab

2000–2001 **Analytical Chemist**, Microbiological Consultants; Huntington, WV

RESEARCH INTERESTS

- Selective biomolecule functionalization
- Developing surface immobilization strategies
- Improving reproducibility and sensitivity of biopolymer sensors

AWARDS, FELLOWSHIPS AND SCHOLARSHIPS

- Graduate Research Award, 2005, Virginia Tech
- Marshall University Outstanding Graduating Chemist, 2001
- The Brammer Brothers Scholarship at Marshall University, 2000-2001
- Summer Undergraduate Research Fellowship (S.U.R.F), Marshall University, 2000
- Marshall University Outstanding Analytical Chemist, 2000
- Marshall University Outstanding Freshman Chemist, 1998

PROFESSIONAL AFFILIATIONS

American Chemical Society (2003 – present)

PUBLICATIONS

(1) Michael L. Norton, B. Scott Day, Huan Cao, Mashiur Rahman, and Aaron Gin, "Arrays of Nanoarrays: Elements of Binding," *IEEE Sensors Journal*, **8**, 874-879 (2008). *Invited*

(2) Nancy M. Santagata, Pengshun Luo, Amit M. Lakhani, Darryl J. DeWitt, B. Scott Day, Michael L. Norton, and Thomas P. Pearl, "Organizational Structure and Electronic Decoupling of Surface Bound Chiral Domains and Biomolecules," *IEEE Sensors Journal*, **8**, 758-766 (2008).

(3) Sungmin Hong, Luis A. Jauregui, Norma L. Rangel, Huan Cao, B. Scott Day, Michael Norton, Alexander S. Sinitskii, and Jorge M. Seminario, "Impedence Measurements on a DNA Junction," *J. Chem. Phys.*, **128**, 201103 (2008).

(4) Hideyo Takatsuki, Madhukar Kolli, Kevin M. Rice, B. Scott Day, Mashuir Rahman, Shinichi Asano, Kazahiro Kohama, and Eric R. Blough, "Assembly and Function of Myosin II on UV/Ozone Patterned Trimethyl-chlorosilane Substrates," *Nanobiotechnology, accepted 2008.*

(5) Uros Tasic, B. Scott Day, Tianying Yan, John R. Morris, and William L. Hase, "Chemical Dynamics of Intrasurface Hydrogen-Bonding Effects in Gas-Surface Energy Exchange and Accomodation," *J. Phys. Chem. C*, **112**, 476-490 (2008).

(6) William A. Alexander, B. Scott Day, H. Justin Moore, T. Randall Lee, John R. Morris, and Diego Troya, "Experimental and Theoretical Studies of the Effect of Mass on the Dynamics of Gas/Organic Surface Energy Transfer," *J. Chem. Phys.*, **128**, 014713 (2008).

(7) B. Scott Day, John R. Morris, William A. Alexander, and Diego Troya, "Theoretical Study of the Effect of Surface Density on the Dynamics of Ar + Alkanethiolate Self-Assembled Monolayer Collisions" *J. Phys. Chem. A* **110**, 1319-1326 (2006).

(8) James R. Lohr, B. Scott Day and John R. Morris, “Dynamics of HCl Collisions with Hydroxyl- and Methyl-Terminated Self-Assembled Monolayers” *J. Phys. Chem*. A **110**, 1645 (2006).

(9) B. Scott Day and John R. Morris, “Packing Density and Structure Effects on Energy Transfer Dynamics in Argon Collisions with Organic Monolayers” *J. Chem. Phys.* **122**, 234714 (2005).

(10) B. Scott Day, John R. Morris, and Diego Troya, “Classical Trajectory Study of Collisions of Argon with Alkanethiolate Self-Assembled Monolayers: Potential Energy Surface Effects on Dynamics” *J. Chem. Phys.***122**, 214712 (2005).

(11) Andre A. Williams, B. Scott Day, Brett L. Kite, Melinda K. McPherson, Carla Slebodnick, John R. Morris, and Richard D. Gandour. “Homologous, Long-Chain Alkyl Dendrons Form Homologous Thin Films on Silver Oxide Surfaces” *Chemical Communications*, 5053-5055 (2005).

(12) James R. Lohr, B. Scott Day and John R. Morris, “Scattering, Accommodation, and Trapping of HCl in Collisions with a Hydroxylated Self-Assembled Monolayer” *J. Phys. Chem. B* **109**, 15469 (2005).

(13) Ferguson, M. K., Lohr, J. R., Day, B.S., Morris, J.R., “Influence of Buried Hydrogen-Bonding Groups within Monolayer Films on Gas-Surface Energy Exchange and Accomodation.” *Physical Review Letters* **92**, 073201 (2004).

(14) B. Scott Day and John R. Morris, "Even-Odd Orientation and Chain-Length Effects in Rare-Gas Scattering from n-Alkanethiol Monolayers," *J. Phys. Chem. B*, **107** (29), 7120-7128 (2003).

(15) B. Scott Day, Shelby F. Shuler, Adonis Ducre, and J. R. Morris, “The Dynamics of Gas-Surface Energy Exchange in Collisions of Ar with ω-Functionalized Self-Assembled Monolayers,” *J. Chem. Phys.***119**, 8084-8096 (2003).

(16) Brian S. Day, G. M. Davis, and J. R. Morris, "The Effect of Hydrogen-Bonding and Terminal Group Structure on the Dynamics of Ar Collisions with Self-Assembled Monolayers," *Analytica Chemica Acta* **496**, 249-258 (2003).

CONFERENCE PROCEEDINGS

(1) Michael Norton, David Neff, Ian Towler, Scott Day, Zachary Grambos, Mikala Shremshock, Heather Butts, Christiaan Meadows, Yuko Samiso, Huan Cao, and Mashuir Rahman, " Designed Self-Organization for Molecular Optoelectronics," Proceedings of SPIE, 6212 Terahertz for Military and Security Applications IV, Dwight L. Woolard, R. Jennifer Hwu, Mark J. Rosker, James O. Jensen, Editors, 621203, 2006.

(2) Michael Norton, David Neff, Scott Day, Zachary Grambos, Mikala Shremshock, Heather Butts, and Huan Cao, "Single Molecule Substrates for Lithography," Proceedings of IEEE-NANO 2006.

(3) Mashuir Rahman, B. Scott Day, Huan Cao, Heather Butts, and Michael Norton, "Ordered DNA Arrays Prepared via Soft Lithography," Proceedings of SPIE, 6370, Nanomaterial Synthesis and -Integration for Sensors, Electronics, Photonics, and Electro-Optics, Editors: Nibir K. Dhar, Achyut K. Dutta, M. Saif Islam, 2006.

CONFERENCE PRESENTATIONS

(1) 81st Colloid & Surface Science Symposium, ACS Division of Colloid and Surface Science, Newark, DE (2007)
Poster: *Multithiolated Dendrimers as Linkers for DNA Immobilization on Gold*
B. Scott Day, Larry Fiegland, Huan Cao, and Michael Norton

(2) Nanoelectronic Devices: Defense and Security, Washington, D. C. (2007)
Oral Presentation: *Multithiolated Dendrimers as Linkers for DNA Immobilization on Gold*
Poster: *Multithiolated Dendrimers as Linkers for DNA Immobilization on Gold*
B. Scott Day, Larry Fiegland, Huan Cao, and Michael Norton

(3) 228th ACS National Meeting, Philadelphia, PA (2004)
Poster: *Effects of Surface Mass and Packing Density on Energy Transfer in Gas Collisions with Organic Surfaces.*
B. Scott Day and John R. Morris

(4) American Chemical Society, Southeast Regional Meeting, Atlanta, GA (2003)
Oral Presentation: *Dynamics of Gas-Surface Collisions*
B. Scott Day and John R. Morris

(5) Gordon Research Conference on Dynamics at Surfaces, Andover, NH (2003)
Poster: *Terminal Group and Chain-Length Effects in the Energy Exchange of Argon Collisions with Self-Assembled Monolayers*
B. Scott Day and John R. Morris

(6) American Vacuum Society, Regional Meeting, Norfolk, Virginia (2002)
Poster: *Influence of Interfacial Structure and Functionality on Energy Transfer in Rare Gas Collisions*
B. Scott Day, Shelby F. Shuler, Gwen Davis, Melinda K. Ferguson, and John R. Morris