ANDREW M. DATTELBAUM

Staff Scientist

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Education

Ph.D. Inorganic Chemistry, North Carolina State University, Raleigh, NC — September 2000

Minor: Solid State Sciences

Mentor: James D. Martin (NCSU)

Bachelor of Science, Magna Cum Laude with Distinction in Chemistry — May 1995

James Madison University, Harrisonburg, VA

Appointments

Postdoctoral Researcher, Los Alamos National Laboratory — October 2000 to November 2002

Inorganic Surface Science/Bio-mimetic materials

Menotor: Andrew P. Shreve (LANL)

Technical Staff Member, Los Alamos National Laboratory — November 2002 to present

Center for Integrated Nanotechnologies

Publications

1. *PEGylation of a maltose biosensor promotes enhanced signal response when immobilized in a silica sol-gel.* A. M. Dattelbaum*, G. A. Baker, J. M. Fox, S. Iyer and J. D. Dattelbaum, Bioconjug. Chem. 2009, in press. (CINT user project)*
2. *Influence of hot spot features on the shock initiation of heterogeneous nitromethane. D. M. Dattelbaum, S. A. Sheffield, D. B. Stahl,* A. M. Dattelbaum*, APS Proceedings 2009, in press. (CINT user project)*
3. *Optical properties and critical-point energies of $BaTiO_3$ (001) from 1.5 to 5.2 eV. Choi, S. G.,* A. M. Dattelbaum*, S. T. Picraux, S. K. Srivastava and C. J. Palmstrøm, J. Vac. Sci. Technol. B, 2008, 26, 1718-1722. (CINT science)*
4. *Fluorescent single walled carbon nanotube/silica composite materials. B. C. Satishkumar, S. K. Doorn, G. A. Baker,* A. M. Dattelbaum*. ACSNano, 2008, 2, 2283-2290. (BES core project)*
5. *Structural and optical properties of ZnO thin films by rf magnetron sputtering with rapid thermal annealing. N. A. Suvorova, I. O.Usov, L. Stan, A. A. Suvorova, R. F. DePaula,* A. M. Dattelbaum*, and Q. X. Jia APL 2008, 92, 141911-1-3. (CINT science)*
6. *Surface assisted laser desorption-ionization mass spectrometry on nanoporous silica thin films.* A. M. Dattelbaum*, R. K. Hicks, J. Shelly, A. T. Koppisch and S. Iyer, Micropor. Mesopor. Mater. 2008, 114, 193-200. (CINT science)*
7. *Biocompatible thin films with minimal non-specific binding for waveguide-based assays. Functionalized waveguides for biological assays. A. S. Anderson,* A. M. Dattelbaum*, G. A. Montaño, J. G. Schmidt, J. S. Martinez, W. K. Grace, K. M. Grace and B. I. Swanson, Langmuir, 2008, 24, 2240-2247. (CINT science)*
8. *Optical Detection of Ion-Channel Induced Proton Transport in Supported Phospholipid Bilayers. T.-H. Yang, C. K.*

Yee, M. L. Amweg, S. Singh, A. M. Dattelbaum, A. P. Shreve, C. J. Brinker, and A. N. Parikh, Nano Letters, 2007, 7, 2446-2451. (BES core project)

9. *Surface Assisted Laser Desorption-ionization Mass Spectrometry. A. M. Dattelbaum and S. Iyer, Expert Rev. Proteomics 2006, 3, 153-161. (Invited Review Article, LANL, LDRD)*
10. *Surfactant Removal and Silica Condensation during the Photochemical Calcination of Thin Film Silica Mesophases. A. M. Dattelbaum, M. L. Amweg, J. D. Ruiz, L. E. Ecke, A. P. Shreve, and A. N. Parikh, J. Phys. Chem. B 2005, 109, 14551-14556. (BES core project)*

Collaborators: Atanassov, P. (University of New Mexico); Bao, Yuping (University of Alabama); Baker, G. A. (Oakridge National Laboratory); Bright, F. V. (SUNY Buffalo); Dattelbaum, J. D. (University of Richmond); Demas, J. A. (University of Virginia); Heilshorn, S. (Stanford University); Ladipo, O. (University of Kentucky); Lopez, G. (Duke University); Parikh, A. N. (UC Davis); Strey, H. (Stony Brook University)

Thesis Advisor and Postgraduate – Scholar Sponsor

Gautam Gupta (2009 to present, CINT funded post-doc); Post-doc, Satishkumar Chikkannanavar (2007-2008); currently at Univ. Mich.

Synergistic Activities

Honors:

R&D 100 Award (member of a team that designed an Artificial Retina)

Elected Vice Chair of LANL Post-doc Committee (assume chair in Jan. 2010)

Co-chair for a MRS Spring 2010 Symposium, entitled “Multifunctional Nanoparticles”

Technical reviewer for Nanotech abstracts (2008 to present)

Invited Lectures at Department of Chemical and Biological Engineering, University of Alabama (2009), Hughes Research Lab, Malibu, CA (2009), Spring 2008 MRS meeting, Department of Chemistry, James Madison University (2007), 2007 NSTI Nanotech Conference