

Clifford Adam Schlecht

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EDUCATION

- Doctorate of Philosophy**, Chemistry March 2009
Washington University in Saint Louis, St. Louis, MO
- Master of Arts**, Chemistry May 2007
Washington University in Saint Louis, St. Louis, MO
- Master of Science**, Chemistry August 2004
Furman University, Greenville, SC
- Bachelor of Science**, *Cum Laude*, ACS-certified in Biochemistry May 2003
Furman University, Greenville, SC
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ADMITTED

- United States Patent and Trademark Office 2008
(reg. no. 63,644)
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LEGAL EXPERIENCE

Contractor/Patent Agent, Harness, Dickey and Pierce, Clayton, MO

Principal: J. Timothy Keane December 2008 – present

- Drafted and proofed documents for prosecution of pharmaceutical (compound *per se*, formulation, method-of-use), chemical vapor deposition, liquid salt, and silicone adhesive patents.
 - Drafted patents for polyurethane molding technology, alternative fuel, and fuel cells.
 - Assisted on patent due-diligence assessments in areas of nanotechnology and nutrition.
 - Analyzed patent claim embracement of humanized antibodies and pharmaceuticals.
 - Researched clinical indication and compound disclosure to interpret claim scope and priority date.
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TECHNICAL EXPERIENCE

Graduate Assistant, Washington University in Saint Louis, Saint Louis, MO

Research Director: Professor Joshua Maurer August 2004 – December 2008

- Developed technology for direct-write protein patterning on surfaces for guiding neuronal growth.
- Designed monomers with trimethoxysilyl, carboxylic and phosphonic acid head groups for self-assembled monolayers (SAMs) on glass and metal oxides.
- Prepared SAMs and optimized SAMs using infrared spectroscopy.
- Studied microcontact-printed SAM stability by protein adsorption and fluorescence microscopy.
- Synthesized photocaged acid monomers and studied the photochemical properties thereof.

Graduate Research Assistant, Furman University, Greenville, SC

Research Director: Professor Larry Trzupsek June 2003 – August 2004

- Prepared SAM monomers on gold, including a riboflavin-functionalized monomer.
- Studied electrochemical and fluorometric biosensor for riboflavin-binding protein using cyclic voltammetry and fluorimetry.

Undergraduate Summer Research Program, Los Alamos National Laboratory

Research Directors: Dr. James Bailey and Dr. Robert Donohoe June 2002 – August 2002

- Analyzed redox and pH-dependent secondary and tertiary conformational changes of cytochrome *c* and cytochrome *c*₃ by difference IR spectroscopy.

Undergraduate Research Fellow, Furman University, Greenville, SC

Research Director: Professor Moses Lee

June 2001 – August 2001

- Developed prostate cancer treatments, including synthesis of prodrug for prostate-specific antigen.
- Attached a tetrapeptide prosthetic group to a class of anti-cancer drug.

Advanced SHARP Research Apprentice, NASA/Marshall Space Flight Center

Research Director: Richard Hoover

June 1999 – August 1999

- Examined meteorite and permafrost samples by environmental scanning electron microscopy.
- Developed a visual library of known extremophilic organisms for comparison to structures found in carbonaceous chondrites.

PUBLICATIONS

Sinko, John E.; Schlecht, Clifford A. "Reflection Fourier Transform Infrared Spectroscopy of Polymer Targets for CO₂ Laser Ablation" *Proceedings of SPIE*, **2008**, Vol. 7005, 70052P1-12.

John E. Sinko and Clifford A. Schlecht, "CO₂ Laser Ablations Propulsion Tractor Beams", Sixth International Symposium on Beamed Energy Propulsion, November **2009**, Scottsdale, AZ, USA, Ed. C. R. Phipps, K. Komurasaki, J. E. Sinko, AIP Conference Proceedings, American Institute of Physics, Melville, NY

Schlecht, Clifford A.; Maurer, Joshua, A. "The Relationship Between Alkyl Chain Length and Monolayer Ordering in Trimethoxysilanes on Glass, and Elucidating Their Stability by Protein Resistance", *submitted*.

Schlecht, Clifford A.; Maurer, Joshua, A. "Evidence of a Gradual Fill-In Mechanism for Alkoxysilane Self-Assembled Monolayer Formation", *submitted*.

LANGUAGE SKILLS

Proficient in German; Familiar with Spanish and French.

SCHOLARSHIPS

Dreyfus Scholarship	2003
Milliken Scholar	2003
Keeler Chemistry Scholar	2003
DaimlerChrysler Corporations Fund Scholarship	1999-2003

AWARDS AND HONORS

Marcus Lecture Committee	2005
The American Institute of Chemists Foundation Award	2003
Phi Eta Sigma	2001
Dean's List	1999-2003
Eagle Scout Award	1999
DuPont Challenge Honorable Mention	1998

AFFILIATIONS

American Chemical Society	2003-present
American Association for the Advancement of Science	2001-present
Institute for Materials, Energetics and Complexity	2009-present