

## SHANE C. STREET

Associate Professor of Chemistry, The University of Alabama

### Current Position:

Associate Professor and Director of Graduate Recruiting  
Department of Chemistry  
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### Professional Preparation:

Virginia Polytechnic Institute & State University, Chemistry, B.S. 1989  
University of Illinois, Chemistry, Ph.D. 1995  
Texas A&M University, Postdoctoral Fellow, 1995-1997

### Academic and Professional Appointments:

2003-Present Associate Professor of Chemistry, University of Alabama  
1997 - 2003 Assistant Professor of Chemistry, University of Alabama  
1995 - 1997 Post-doctoral research associate, Texas A&M University  
1989 - 1995 Graduate teaching and research assistant, University of Illinois

### Awards and Honors:

Phi Lambda Upsilon, Mort Trau Surface Science Student Award Finalist 1995

### Research Interests:

Ultrahigh vacuum surface science and surface analytical techniques. Tribology. Thin film organic/inorganic nanocomposites. Fuel and solar cell materials.

### Selected Publications:

- S. C. Street, A. Rar, J. N. Zhou, W. J. Liu, and J. A. Barnard, "Unique Structural and Mechanical Properties of Ultrathin Au Films Grown on Dendrimer-Mediated Substrates". *Chem. Mat.* **13**: 3669-3677 (2001).
- A. Nichols, Jr. and S. C. Street, "Spectroscopic Analysis of the Tribological Behavior of a Model Boundary Layer Lubricant," *Analyst* **126**: 1269-1273 (2001).
- A. Rar, J. N. Zhou, J. Liu, J. A. Barnard, A. Bennett, and S. C. Street, "Dendrimer-Mediated Growth of Very Flat Ultrathin Au Films". *Appl. Surf. Sci.* **175-176**: 134-139 (2001).
- F. T. Xu, P. P. Ye, M. Curry, J. A. Barnard, and S. C. Street, "Molecular Interlayers and the Mechanism of Abrasive Wear". *Trib. Lett.* **12**, 189-193 (2002).
- D. Arrington, M. Curry, and S. C. Street, "Patterned Thin Films of Polyamidoamine Dendrimers Formed Using Microcontact Printing", *Langmuir* **18**, 7788-7791 (2002).
- F. T. Xu, S. C. Street, and J. A. Barnard, "Coverage-Dependent Evolution of Two-Dimensional Dendrimer/Mica Domain Patterns", *J. Phys. Chem.* **B107**: 12762-12767 (2003).
- H. Guo, J. Burgess, S. Street, A. Gupta, T. G. Calvarese, and M.A. Subramanian, "Growth of Epitaxial Thin Films of the Ordered Double Perovskite  $\text{La}_2\text{NiMnO}_6$  on Different Substrates", *Appl. Physics Lett.* **89**: #022509 (2006).
- D. Arrington, M. Curry, S. Street, G. Pattanaik, and G. Zangari, "Copper Electrodeposition onto the Dendrimer-Modified Native Oxide of Silicon Substrates" *Electrochim. Acta* **53**: 2644-2649 (2008).
- J. Burgess, H. Guo, A. Gupta and S. Street, "Raman Spectroscopy of  $\text{La}_2\text{NiMnO}_6$  Films on  $\text{SrTiO}_3$

(1 0 0) and  $\text{LaAlO}_3$  (1 0 0) Substrates: Observation of Epitaxial Strain", *Vibrational Spectr.* **48**: (113-117 (2008).

H. Wan, S. Li, T. Konovalova, S. Shuler, D. A. Dixon, and S. Street, "Experimental and Theoretical Studies of the Photoreduction of Copper(II)-Dendrimer Complexes" *J. Phys Chem.* **C112**: 1335-1344 (2008).

### **Synergistic Activities**

PI on an NSF-CCLI (laboratory improvement) grant introducing environmental analysis in upper-level chemistry courses; faculty mentor to three REU/SURP students; graduate advisor to a SREB minority scholar and two Future Faculty fellows; curriculum reform in undergraduate engineering education under Foundation Coalition at UA (NSF EEC-9221460).

### **Collaborations & Affiliations**

#### *Recent Research Collaborations:*

W. Butler (UA); J. Barnard (U. Pittsburgh); W. A. Doyle (UA-deceased); J. W. Harrell (UA); T. Klein (UA); R. M. Metzger (UA); D. E. Nikles (UA); G. J. Szulczewski (UA); G. Warren (UA); M. Weaver (UA); J. Yang (U. Pittsburgh); G. Zangari (UA/U. Virginia)

#### *Thesis Advisors and Postgraduate-Scholar Sponsors*

D. Wayne Goodman (Texas A&M U.); Andrew J. Gellman (U. Illinois; Carnegie Mellon U. 1992-1995)

#### *Current Graduate Students and Research Assistants*

Graduate Students: B. Litao, C. Watkins