

## DANIEL R. TALHAM

Department of Chemistry  
University of Florida  
Gainesville, Florida 32611

Tel.: (352) 392-9016  
FAX: (352) 392-3255  
talham@chem.ufl.edu

### Education

Undergraduate Studies, The Johns Hopkins University, Baltimore, MD., 1976 - 1979.

Ph.D. Inorganic Chemistry, The Johns Hopkins University, Baltimore, MD., May 1985.

"The Study of Intervalence Electron Transfer in Mixed-Valence Ferrocene Derivatives."  
Thesis Director: Professor Dwaine O. Cowan.

### Employment/Experience

Professor and Chair, Department of Chemistry, University of Florida, August 2006-present

Professor of Chemistry, University of Florida, August 2000-present.

Gibson Term Professor, College of Liberal Arts and Sciences, 2002-2003

Assistant Chair for Research and Technical Facilities, Department of Chemistry, 2001-2006.

Visiting Professor, Universite de Paris, May 2001.

Associate Professor of Chemistry, University of Florida, August 1995-August 2000.

Visiting Scientist, Centre de Recherche Paul Pascal, Universite de Bordeaux, Oct.-Dec., 1998.

Visiting Scientist, Institute Materiaux de Nantes, Universite de Nantes, Jan.-July, 1999.

Assistant Professor of Chemistry, University of Florida, August 1989-1995.

Postdoctoral Research Associate, Massachusetts Institute of Technology, Sept. 1987 – Aug. 1989.

SERC Postdoctoral Fellow, Oxford University, Oxford, UK, 1985 - Sept. 1987

Visiting Scientist, Universite Paris-Sud Orsay, France, Solid-State Physics Laboratory,  
October 1986 - March 1987

**Principal Research Interests:** Conductivity and Magnetism in Low-Dimensional Molecular Solids and Thin Films, Langmuir-Blodgett Films, Surface Derivatization, Structural Characterization of Mixed Organic/Inorganic Monolayers, Crystallization of Inorganic Particles at Organic Matrices.

### Recent Publications Relevant to the IGERT Program

1. "Presence of lipids in urine, crystals and stones: Implications for the formation of kidney stones" S. R. Khan, P. A. Glenton, R. Backov, and D. R. Talham *Kidney International* 2002, 62, 2062-2072.
2. "A New Approach to Oligonucleotide Arrays Using Zirconium Phosphonate-Modified Surfaces" G. Nonglaton, I. O. Benitez, I. Guisle, M. Pipelier, J. Leger, D. Dubreuil, C. Tellier, D. R. Talham, B. Bujoli *J. Am. Chem. Soc.* **2004**, 126, 1497-

1502.

3. "Conducting and Magnetic Langmuir-Blodgett Films" D. R. Talham *Chemical Reviews* **2004**, *104*, 5479-5501.
4. "Brewster Angle Microscopy of Calcium Oxalate Monohydrate Precipitation at Phospholipid Monolayer Phase Boundaries" I. O. Benitez and D. R. Talham *Langmuir* **2004**, *20*, 8287-93.
5. "Calcium Oxalate Monohydrate Precipitation at Phospholipid Monolayer Phase Boundaries." I. O. Benitez and D. R. Talham *Materials Research Society Proceedings: Biological and Bioinspired Materials and Devices* **2004**, *823*, 29-34.
6. "Role of Lipids in Urinary Stones: Studies of Calcium Oxalate Precipitation at Phospholipid Langmuir Monolayers." D. R. Talham, R. Backov, I. O. Benitez, D. M. Sharbaugh, Denise, S. Whipps, and S. R. Khan *Langmuir* **2006** *22*, 2450-2456.
7. "Three-Dimensional Opal-Like Silica Foams" F. Carn, H. Saadaoui, P. Masse, S. Ravaine, B. Julian-Lopez, C. Sanchez, H. Deleuze, D. R. Talham, and R. Backov *Langmuir*, **2006**, *22*, 5469-5475.

**Patent.** Process for manufacture of biochips via ionic bonds between metal ions on substrate and biopolymer phosphates/phosphonates. C. Tellier, M. Pipelier, D. Dubreuil, B. Bujoli, D. R. Talham WO2004011401.

### **Synergistic Professional Activities**

Advisory Board of *Langmuir*, 2002-.

Advisory Board, *Chemistry of Materials*, 2004-

Advisory Board, *Polyhedron*, 2004-

Organizer, Florida Advanced Materials Chemistry Conference, Palm Coast, Florida, 1992-1998.

Director, National Science Foundation Research Experiences for Undergraduates Site, 1992-95.

**International Collaboration:** maintains active cooperative projects with three different French CNRS laboratories. These include the Laboratoire de Synthèse Organique at the Université de Nantes, The Centre de Recherche Paul Pascal (CRPP) at the Université de Bordeaux, and the Université Paul Sabatier in Toulouse. Talham maintains a joint project with Dr. Bruno Bujoli and Dr. Charles Tellier in Nantes on the subject of inorganic interfaces for immobilizing biomolecules. Talham also cooperates with Dr. Rénal Backov and Prof. Serge Ravaine at the CRPP in Bordeaux and Dr. Christophe Mingotaud in Toulouse on biomineralization and biomimetic mineral synthesis. In the most recent four years, three Ph.D. students from Talham's labs have spent extended stays of two weeks or more in French laboratories carrying out a portion of their thesis research.

### **Research funding received in last 5 years:**

Approximately \$942,000; funding sources include NSF, NIH, NASA.