

**Kurt Winkelmann, Ph.D.**

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Melbourne, FL 32901

## Experience

2002 - present

Assistant Professor, Florida Institute of Technology

- Photochemistry of  $K_2FeO_4$  (with Dr. Virender Sharma) and photoreduction of CFCs in irradiated  $TiO_2$  suspensions
- Surface photochemistry monitored via STM / STOS

2001 - 2002

Visiting Assistant Professor, Florida Institute of Technology

2000 - 2001

Post Doctoral Research Fellow, Institute for Environmental Catalysis, Northwestern University (Advisor: Eric Weitz)

- Studied laser photolysis, fluorescence of organic molecules in zeolites

1995 - 2000

Graduate Assistant, Auburn University (Advisor: G. Mills)

- Heterogeneous photocatalytic dehalogenation of CFCs
- Model of Ag particle growth during photographic development
- Synthesis of reversible, pH responsive organic semiconducting polymers
- Preparation of CdS,  $TiO_2$  and Pt nanoparticles in organic polymers

Funding Received:

- 2002, NSF Nanotechnology in Undergraduate Education, \$100,000 (with faculty in physics and chemical engineering departments)
- 2002, Florida Space Grant Consortium, \$15,490
- 2002 and 2001, Florida Tech Academic IT Committee, \$1000

Over \$50,000 in grant requests for research and instructional technology are currently being reviewed by NSF and other agencies.

## Education

2000

Ph.D., Chemistry, Auburn University, Auburn, AL

Dissertation title: "Photoinitiated Reactions on Semiconductor Particles"

1995

B.S., Chemistry, English Minor, Virginia Tech, Blacksburg, VA

## Selected Publications

- Sharma, Virender K.; Winkelmann, Kurt; Krasnova, Yekaterina; Lee, Changyoul; Sohn, Mary **Heterogeneous Photocatalytic Reduction of Ferrate(VI) in UV-Irradiated Titania Suspensions: Role in enhancing Destruction of Nitrogen-Containing Pollutants**, *Int. J. Photoenergy*, **2003**; in press.
- Calhoun, R. L.; Winkelmann, K. J.; Mills, G. **Photoreduction of CFC-11 in  $TiO_2$  Suspensions**. *J. Phys. Chem. B*; **2001**; 105(40); 9739-9746.