

# BETTIE OBI JOHNSON, PH.D.

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## EDUCATION

Doctorate of Philosophy, Georgia Institute of Technology, June 1999  
Thesis: Mechanistic Analysis of Chemical Vapor Deposition from Metal-Organic Precursors  
Major: Analytical Chemistry; Minors: Inorganic and Biochemistry  
Advisor: Dr. William S. Rees, Jr.

Bachelor of Science, University of West Florida, May 1994  
Major: Chemistry, ACS Certified  
Undergraduate Research Project (at Georgia Tech): The Effect of the Molecular Chaperone Alpha-Crystalline on UV-Induced Aggregation of Lens Proteins, advisor: Dr. Robert F. Borkman

## EMPLOYMENT HISTORY

August 2004 – present: University of South Carolina at Lancaster  
**Assistant Professor of Chemistry** (2006-present), **Instructor of Chemistry** (2004-2006)  
Courses taught include:

- Chem 101 and 101L - Fundamental Chemistry I Lecture and Lab, 3 semesters
- Chem 102 and 102L - Fundamental Chemistry II Lecture and Lab, Introduction to Organic and Biochemistry, 3 semesters
- Chem 105 and 105L - Chemistry and Modern Society Lecture and Lab, 6 semesters
- Chem 107 and 107L – Forensic Chemistry Lecture and Lab, 2 semesters
- Chem 111L - General Chemistry I Lab, 6 semesters
- Chem 112L - General Chemistry II & Qualitative Analysis Lab, 6 semesters
- Chem 321 and 321L – Quantitative Chemical Analysis Lecture and Lab, 1 semester
- Chem 331L - Essentials of Organic Chemistry I Lab, 4 semesters
- Chem 332L - Essentials of Organic Chemistry II Lab, 3 semesters
- Chem 334L – Comprehensive Organic Chemistry II Lab, 2 semesters
- Chem 333 - Organic Chemistry I Lecture, taught part of course, 2 semesters

July 1999 – July 2004: Celanese Acetate, Charlotte, NC and Rock Hill, SC  
**Analytical Chemist**, Research & Development (Charlotte) & Process Technology (Rock Hill)

- Researched and developed test methods for cellulose acetate product and process improvements
- Participated in Fiber Finish Team to improve performance, cost, and analytical testing of fiber finishing oils
- Performed non-routine analyses to identify unknown samples using a combination of wet chemistry, chromatography, and spectroscopy

- Led Analytical Center of Excellence team between multiple sites within corporation
- Supervised five employees in the Research and Development analytical laboratories
- Performed method development and improvement for QC chemical laboratory
- Participated in technical partnership team with wood pulp supplier to improve product quality
- Completed the green belt in “Six-Sigma” process improvement methodology

## **PUBLICATIONS**

1. O. Just, B. Obi-Johnson, J. Matthews, D. Levermore, and W. S. Rees, Jr., “Design, Synthesis, and Characterization of Precursors for Chemical Vapor Deposition of Oxide-Based Electronic Materials”, *Mat. Res. Soc. Symp. Proc.*, 2000, 606, 3.
2. J. Matthews, O. Just, B. Obi-Johnson, and W. S. Rees, Jr., “CVD of MgO from a Mg(Beta-ketoiminate)<sub>2</sub>: Preparation, Characterization, and Utilization of an Intramolecularly Stabilized, Highly Volatile, Thermally Robust Precursor”, *Adv. Materials*, 2000, 6, 129.
3. B. Obi-Johnson and W. S. Rees, Jr. “Metal-Organic Chemical Vapor Deposition of Superconducting Metal Oxides,” *Bull. Inst. Chem. Academia Sinica*, 1999, 46, 59.
4. D. J. Otway, B. Obi, and W. S. Rees, “Precursors for Chemical Vapor Deposition of Yttrium Barium Copper Oxide,” *J. Alloys and Compds.* 1997, 251, 254.
5. R. F. Borkman, G. Knight, and B. Obi, “The Molecular Chaperone Alpha-Crystalline Inhibits UV-Induced Protein Aggregation,” *Exp. Eye Res.* 1996, 62, 141.

## **ACADEMIC SERVICE**

- USCL Public Schools Science Fair Liaison, 2006 – present
- USCL Regional Campuses Faculty Senate, September 2006 – present
- USCL Bookstore Committee Chair, 2007 – present
- USCL High School Honor’s Day, Chemistry Presentations, March 2006, 2008
- USCL History Day Judge, April 2006

## **PROFESSIONAL AFFILIATIONS AND HONORS**

American Chemical Society member, 1994–present  
Two Year College Chemistry Consortium Member, 2007 – present  
South Carolina Academy of Science Member, 2008 – present  
Georgia Tech Second Year Graduate Student Award, 1996  
University of West Florida Merck Index Award, 1994