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### Education

- 1997 B.S., Chemistry; Peking University, Beijing, China (Prof. G. Yuan)  
1999 M.S., Chemistry; New York University, New York, NY (Prof. J. W. Canary)  
2003 Ph.D., Chemistry; New York University, New York, NY (Prof. J. W. Canary)  
Dissertation: *Development of New Tools and Materials for DNA Nanotechnology*

### Professional Chronology

- 2005- Assistant Professor, Florida State University  
2003-2005 Postdoctoral Fellow, the University of Texas at Austin (Prof. E. V. Anslyn)

### Awards

- 2008 James & Esther King (Florida Biomedical Research Program) New Investigator  
2006 FSU First-Year Assistant Professor Award  
1997-1999 MacCracken Fellowship, New York University

### Professional Memberships

- 1999- American Chemical Society

### Publications

19. Brotherton, W. S.; Zhu, L.\* Nanostructures: Bottom-Up. *Encyclopedia of Supramolecular Chemistry*, Volume 3. Edited by Jerry L. Atwood, Jonathan W. Steed, and Karl Wallace. *Submitted*.
18. Zhang, L.; Murphy, C. S.; Constantino, M. H.; Davidson, M. W.\*; Zhu, L.\* Fluorescent Free Zinc Ion Sensing over Six Orders of Magnitude Concentration Range Using a Heteroditopic Ligand under Physiological Conditions. *Submitted*.
17. Zhang, L.; Kerszulis, J. A.; Clark, R. J.; Ye, T.\*; Zhu, L.\* Catechol Boronate Formation and Its Electrochemical Oxidation. *Chem. Commun.* **2009**, 2151-2153 (Invited contribution for celebrating Professor Seiji Shinkai's 65<sup>th</sup> birthday).

16. Zhu, L.\*; Zhang, L.; Younes, A. H. Mini Review: Fluorescent Heteroditopic Ligands of Metal Ions. *Supramol. Chem.* **2009**, DOI: 10.1080/10610270802538298.
15. Zhang, L.; Zhu, L.\* Photochemically Stable Fluorescent Heteroditopic Ligands for Zinc Ion. *J. Org. Chem.* **2008**, *73*, 8321-8330.
14. Zhang, L.; Whitfield, W. A.; Zhu, L.\* Unimolecular Binary Half-Adders with Orthogonal Chemical Inputs. *Chem. Commun.* **2008**, 1880-1882.
13. Zhang, L.; Clark, R. J.; Zhu, L.\* A Heteroditopic Fluoroionophoric Platform for Constructing Fluorescent Probes with Large Dynamic Ranges for Zinc Ions. *Chem. Eur. J.* **2008**, *14*, 2894-2903.
12. Huang, S.; Clark, R. J.; Zhu, L.\* Highly Sensitive Fluorescent Probes for Zinc Ion Based on Triazolyl-Containing Tetradentate Coordination Motifs. *Org. Lett.* **2007**, *9*, 4999-5002.
11. Zhang, L.; Dong, S.; Zhu, L.\* Fluorescent Dyes of Esculetin and Alizarin Families Respond to Zinc Ion Ratiometrically. *Chem. Commun.* **2007**, 1891-1893.
10. Zhu, L.; Shabbir, S. H.; Anslyn, E. V. Two Methods for the Determination of Enantiomeric Excess (*ee*) and Concentration of a Chiral Sample with a Single Spectroscopic Measurement. *Chem. Eur. J.* **2007**, *13*, 99-104.
9. Zhu, L.; Shabbir, S. H.; Gray, M.; Lynch, V. M.; Sorey, S.; Anslyn, E. V. A Structural Investigation of the N-B Interaction in an *o*-(*N,N*-Dialkylaminomethyl)arylboronate System. *J. Am. Chem. Soc.* **2006**, *128*, 1222-1232.
8. Zhu, L.; Anslyn, E. V. Signal Amplification via Allosteric Catalysis. *Angew. Chem. Int. Ed.* **2006**, *45*, 1190-1196.
7. Zhu, L.; Zhong, Z.; Anslyn, E. V. Guidelines in Implementing Enantioselective Indicator-Displacement Assays for  $\alpha$ -Hydroxycarboxylates and Diols. *J. Am. Chem. Soc.* **2005**, *127*, 4260-4269.
6. Zhu, L.; Lynch, V. M.; Anslyn, E. V. FRET Induced by an "Allosteric" Cycloaddition Reaction Regulated with Exogenous Inhibitor and Effectors. *Tetrahedron* **2004**, *60*, 7267-7275.
5. Zhu, L.; Anslyn, E. V. Facile Quantification of Enantiomeric Excess and Concentration with Indicator-Displacement Assays: An Example in the Analyses of  $\alpha$ -Hydroxyacids. *J. Am. Chem. Soc.* **2004**, *126*, 3676-3677.
4. Zhu, L.; dos Santos, O.; Koo, C. W.; Rybstein, M.; Pape, L.; Canary, J. W. Geometry-Dependent Phosphodiester Hydrolysis Catalyzed by Binuclear Copper Complexes. *Inorg. Chem.* **2003**, *42*, 7912-7920.
3. Zhu, L.; Lukeman, P. S.; Canary, J. W.; Seeman, N. C. Nylon-DNA: Single-Stranded DNA with a Covalently Stitched Nylon Lining. *J. Am. Chem. Soc.* **2003**, *125*, 10178-10179. A Science and Technology Concentrate describing this work appears in *Chem. & Eng. News* **81** [35] 28 (2003).
2. Zhu, L.; dos Santos, O.; Seeman, N. C.; Canary, J. W. Reaction of  $N^3$ -Benzoyl-3', 5'-*O*-(di-*tert*-butylsilylanediyl)uridine with Hindered Electro-philic: Intermolecular  $N^3$  to 2'-*O* Protecting Group Transfer. *Nucl., Nucl. & Nucl. Acids* **2002**, *21*, 723-735.

1. Canary, J. W.; Zahn, S.; Chiu, Y.-H.; dos Santos, O.; Liu, J.; Zhu, L. Chiroptical Switches and Sensors Based on Ligand Conformational Changes in Labile Coordination Complexes. *Enantiomer* **2000**, *5*, 397-403.

### Conference Presentations

12. US-China Early Career Workshop on Supramolecular Chemistry (organized by NSF and NSFC), Beijing, China, October 26-30, **2009** (*invited talk*).
11. 85th Annual Florida Meeting and Exposition (FAME 2009), Orlando, FL, May 14-16, **2009** (*invited talk, Inorganic*).
10. The 3rd Joint International Symposium on Macrocyclic & Supramolecular Chemistry (III ISMSC), Las Vegas, NV, July 13-18, **2008** (*invited talk*).
9. 234th ACS National Meeting, Boston, MA, August 19-25, **2007** (*invited talk*).
8. Gordon Research Conference: Photochemistry, Bryant University, Rhode Island, July 8-13, **2007** (*poster*).
7. 83rd Annual Florida Meeting and Exposition (FAME 2007), Orlando, FL, May 10-12, **2007** (*invited talk, Organic*).
6. 233rd ACS National Meeting, Chicago, IL, March 25-29, **2007**, ORGN-802 (*contributed talk*).
5. The Second Sino-US Chemistry Professors Conference, Shanghai, China, July 8-9, **2006** (*invited talk*).
4. NIH Workshop on Mentoring for the Future, Greenbelt, MD, May 11-13, **2006** (*invited talk*).
3. 228th ACS National Meeting, Philadelphia, PA, August 22-26, **2004**, ORGN-238 (*contributed talk*).
2. 224th ACS National Meeting, Boston, MA, August 18-22, **2002**, INOR-103 (*poster*).
1. 223rd ACS National Meeting, Orlando, FL, April 7-11, **2002**, ORGN-216 (*poster*).

### Academic Lectures

10. Oct. 9, 2009 Arizona State University
9. Apr. 24, 2009 University of New Mexico
8. Apr. 6, 2009 Tulane University
7. Mar. 12, 2009 University of South Florida
6. Feb. 5, 2009 University of Florida
5. Nov. 13, 2008 Florida International University
4. Oct. 23, 2008 Valdosta State University
3. Apr. 25, 2008 University of Southern Mississippi
2. Feb. 28, 2006 Savannah State University

1. Nov. 28, 2005 Florida State University, MARTECH

### Patents

2. Anslyn, E. V.; Folmer-Andersen, J. F.; Zhu, L. Determining Enantiomeric Excess Using Indicator Displacement Assays. *U. S. Pat. Appl. Publ.* **2006**, 48pp.
1. Canary, J. W.; Seeman, N. C.; Zhu, L.; Lukeman, P. S. Nucleic Acid - Nylon Ladder Polymers. *Application 60/473,915* (licensed to Nanoscience Technologies, Inc., August **2003**).

### Current Funding:

1. Florida State University, Start-up Fund
2. Florida Department of Health, James & Esther King Biomedical Research Program New Investigator Research Award.  
Dates of Grant: 07/01/2008 – 06/30/2011.  
Total Cost: \$375,000.
3. National Science Foundation, CHE 0809201  
Date of Grant: 08/15/2008 – 08/14/2011.  
Total Cost: \$330,000.