**Sarah Dongning Lu, Ph.D.**

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**EDUCATION**

* **Ph.D. in Chemistry**, The Ohio State University Mar 2009
* **M.S. in Applied Statistics**, The Ohio State University Aug 2008
* **B.S. in Chemistry**, Peking University, Beijing, P.R.China Sep 2003

**TEACHING EXPERIENCES**

* **Professor in Chemistry**, Houston Community College Central Jan 2011-present
	+ - Instructor for General Chemistry 1411 & 1412, and Organic Chemistry 2423 & 2425.
		- Co-author of the new General Chemistry 1411/1412 laboratory manual for HCC central campus.
		- Served as faculty mentor of the undergraduate summer research project organized jointly by HCC and the University of St. Thomas, funded by CCRAA grant in 2010.
		- The CCRAA Summer Research poster coordinator since 2009.
* **Adjunct Professor in Chemistry**, Houston Community College Central Jun 2009-Dec 2010

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* **Introductory and General Chemistry Laboratory Instructor**, The Ohio State University

Sep 2004-Jun 2008

* **Introductory and General Chemistry Recitation Instructor,** The Ohio State University

Sep 2004-Jun 2008

**RESEARCH EXPERIENCES**

* **Adjunct Professor in Chemistry**, Houston Community College Central Jun 2010-Aug 2010
	+ - Served as faculty mentor of the undergraduate summer research project organized jointly by HCC and the University of St. Thomas, funded by CCRAA grant in 2010.
		- The project is to synthesize substituted dibenzalacetones by aldol condensation reaction. A total of 12 electron-withdrawing or electron-donating substituted dibenzalacetone were synthesized. GC-MS was used to determine the molecular weight and purity of the products. The products were also characterized by UV-Vis and FTIR spectra, which demonstrated that the maximum wavelength in the UV spectra and the wave number of carbonyl group in the FTIR spectra are both correlated to the Hammet constant of substituents.
		- The project combines the knowledge and skills from organic synthesis, physical organic study, advanced instrumental analysis and molecular orbital theory into one academic exercise. It integrates abstract concepts that students learned in the classroom with the real hands-on scientific research, which greatly stimulated students’ interests in leaning.
* **Adjunct Professor in Chemistry**, Houston Community College Central Jun 2009-Aug 2009
	+ - Supervised international college students in undergraduate summer research program to study hydrogen bonding effects of hydroxyl group in alcohols in their 1H NMR spectra.
		- Developed experimental protocols to incorporate the new NMR, FT-IR, UV-*Vis*, GC-MS instruments in chemistry laboratory classes. Such as using UV-Vis spectroscopy to study the caffeine content in different coffee and tea, NMR analysis for the structure determination of butyl alcohol isomers, and identification of functional groups using FT-IR Spectroscopy.
* **Research Assistant,** Chemistry Department, The Ohio State University Jun 2004- Mar 2009
	+ - Designed and efficiently synthesized novel heterocyclic molecules with improved properties for potential use in the treatment of hypertension and cancer, and performed tests on the effect of the molecules under different conditions.
		- Studied the enzymatic hydrolysis of sugar-containing pro-drugs for developing specific drug-delivery method.
		- Developed bi-functional free radical probes to be used as novel superoxide radical anion detector.
* **Student Statistical Data Analyst,** Statistics Department, The Ohio State University

 Jun 2006-Jun 2008

* + - Designed experiments through a detailed assessment of collaborators’ needs; performed data analysis and made statistical inferences.
		- Collaborated with pharmaceutical research group to determine the significant factors that affect the physical properties of nano-sized devices during throughout stages of production to increase the delivery efficiency of anti-cancer drugs.
		- Analyzed the product manufacturing process to understand the cause of system variations and to ensure the quality control of the products.

**PUBLICATIONS**

1. Dongning Lu, Pallavi Sharma, Davis Nguyen and Wheeler Crawford. “Synthesis of Dibenzalacetones by the Aldol Condensation Reaction” (manuscript in preparation)
2. Yiyan Bai, Shuhsien Batamo, Carolyn Judd, Dongning Lu, Shamusuddin Shaikh. “General Chemistry 1411 & 1412 Laboratory Manual with Instrumental Analysis”, Houston Community College, Central Campus. 2009, **ISBN - 978-1-59984-157-1**
3. Prashant Pradhan, Jingjiao Guan, Dongning Lu, Peng G. Wang, L. James Lee, Robert J. Lee. “A Facile Microfluidic Method for Production of Liposomes” ***Anticancer Research***, 2008,28, 943-948. Co-first author.
4. Huifei Cui, Jie Shen, Dongning Lu, Tao Zhang, Wenpeng Zhang, Duxin Sun, Peng George Wang, “4-Aryl-1,3,2-oxathiazolylium-5-olate: a novel GST inhibitor to release JNK and activate c-Jun for cancer therapy” ***Cancer Chemotherapy and Pharmacology*** 2008, 62, 509-515.
5. Dongning Lu, Janos Nadas, Guisheng Zhang, Wesley Johnson, Jay L. Zweier, Arturo J. Cardounel, Frederick A. Villamena, and Peng George Wang. “4-Aryl-1,3,2-oxathiazolylium-5-olates as pH-Controlled NO-Donors: The Next Generation of S-Nitrosothiols” ***Journal of the American Chemical Society*** 2007, 129 (17), 5503 -5514.
6. Cai, T. Bill, Dongning Luand Wang, Peng George. “N-Hydroxyguanidines as Substrates of Nitric Oxide Synthases” ***Current Topics in Medicinal Chemistry*** 2005, 5(7), 721-736.
7. Cai, T. Bill, Dongning Lu, Tang, Xiaoping, Zhang, Yalong, Landerholm, Megan, Wang, Peng George. “New Glycosidase Activated Nitric Oxide Donors: Glycose and 3-Morphorlinosydnonimine Conjugates” ***Journal of Organic Chemistry*** 2005, 70(9), 3518-3524.
8. Cai, T. Bill, Dongning Lu, Landerholm, Megan, Wang, Peng George. “Sialated Diazeniumdiolate: A New Sialidase-Activated Nitric Oxide Donor” ***Organic Letters*** 2004, 6(23), 4203-4205.

**POSTERS**

1. Pallavi Sharma, Davis Nguyen, Wheeler Crawford and Dongning Lu. “Synthesis of Dibenzalacetones by the Aldol Condensation Reaction” ***University of St. Thomas and Houston Community College CCRAA Research Symposium,*** Houston, TX, August, 2010.
2. Dongning Lu, Tram Le, Mai Tran, Ratna Ng, Melvin Hadinata. “Spectroscopic Analysis in Chemistry Experiments” ***University of St. Thomas and Houston Community College CCRAA Research Symposium,*** Houston, TX, August, 2009.
3. Dongning Lu, Janos Nadas, Peng George Wang. “”Cyclic” S-NO as pH-Controlled NO-Donors: The Next Generation of S-Nitrosothiols” ***Fifth International Conference Biology, Chemistry and Therapeutic Applications of Nitric Oxide,*** Monterey, CA, June, 2006.
4. Dongning Lu, Janos Nadas, Frederick A. Villamena, Peng George Wang. “4-Aryl-1,3,2-oxathiazolylium-5-olates as pH-Controlled NO-Donors: The Next Generation of S-Nitrosothiols”, ***2007 DHLRI Research Retreat Abstract Competition***, Columbus, OH, March, 2007.
5. Dongning Lu, Janos Nadas, Peng George Wang. “The NO-releasing Mechanism of 4-Aryl-1,3,2-oxathiazolylium-5-olates”, ***2007 Recruiting Weekend Poster Session***, Columbus, OH, May, 2007