

BACHLIEN DANG

drbachliendang@hotmail.com

Curriculum Vitae

GOAL

Flexible and organized educational professional with more than 10 years of teaching expertise with an unparalleled ability to explain complicated mathematical concepts in an easily understandable manner. Talent for employing unique teaching strategies to effectively engage all students and foster a fun and fascinating learning environment. Encouraging and patient; provide individualized and extracurricular support for students that are struggling with learning concepts and mathematical topics.

BACKGROUND HIGHLIGHTS

Technology Integration.

Accomplished scientist/faculty with strong teaching credentials designing curricula and providing instruction within various academic environments for the past fifteen years.

Personable and can easily interface with students, faculty and staff across diverse backgrounds.

EDUCATION

Ph.D. in Environmental Chemistry (3.80/4.00), 2007 – Texas Southern University, Houston, Texas.

M.S in Mathematics (3.82/4.00), 2012 – Texas Southern University, Houston, Texas

M.S in Chemistry (4.00/4.00), 2001 – Texas Southern University, Houston, Texas

B.S. in Mathematics, 1993 – University of Houston Downtown, Houston, Texas.

AREAS OF TECHNICAL EXPERTISE

- Differential Scanning Calorimetry (DSC), Thermal Gravimetric Analyzer (TGA), Dynamic Mechanical Analyzer (DMA), UV/Vis Spectrophotometer, Electrochemical Analyzer, Fourier Transform Infrared (FTIR), Nuclear Magnetic Resonance spectroscopy (NMR), Infrared spectroscopy (IR), Instron Tester.

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- Transmission Electron Microscopy (TEM), Scanning Electron Microscopy (SEM), X-ray Photoelectron Spectroscopy (XPS), Atomic Force Microscopy (AFM).

PROFESSIONAL EXPERIENCE

UNIVERSITY OF HOUSTON DOWNTOWN, Houston, Texas

Adjunct Faculty, 1/2008 to Present

Provide instruction for General Chemistry Lab I & II courses. Prepare and deliver classroom presentations on various introductory and advanced chemistry subjects. Create classroom materials and design laboratory experiments. Maintain student grading and attendance records.

HOUSTON COMMUNITY COLLEGE, Houston, Texas

Academic Instructor, 1/2001 to Present

Provide instruction for Development Math 0306, 0308, 0312 and College Algebra courses.

Also provide instruction for General Chemistry Lab I & II courses. Deliver classroom presentations and designed/led laboratory experiments. Provide support to students in completing assignments. Interface daily with collage faculty and staff. Maintain chemical laboratory supplies.

TEXAS SOUTHERN UNIVERSITY, Houston, Texas

Teaching Assistant, 1/1999 to 5/2007

Provided support to instructors of various chemistry courses. Instructed several courses. Designed and prepared chemicals for laboratory experiments.

UNIVERSITY OF HOUSTON, Houston, Texas

Research Assistant, 8/2001 to 12/2003

Conducted research into a variety of chemistry-related subjects. Designed and ran experiments, utilizing Excimer laser to adjust and correct the methods and powers of UV light. Worked with poisonous gasses such as HCN, BrCN and ClCN gas, as well as liquid Nitrogen at low pressure. Interfaced with gas manufacturers in procuring gasses for experiments. Tracked gas cylinder inventory in Excel. Developed and implemented safe methods for opening and cleaning laser chamber.

TEXAS SOUTHERN UNIVERSITY, Houston, Texas

Research Assistant, 1/2004 to 8/2007

Utilized single-wall, double-wall and triple-wall carbon nanotubes in conducting research into leading-edge nanotechnologies. Delivered presentations to high school students and teachers regarding the deposition of metal on carbon nanotube. Interfaced with research assistants from various universities.

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RESEARCH ACCOMPLISHMENTS

US Air Force Research Laboratory, Minority Leaders Program at Texas Southern University, Houston, Texas (1/2004 to 5/2007)

- Steered development of a novel electroplating process to modify the surface of a carbon nanotube.
- Drove design, optimization and evaluation of disperse and curing techniques of epoxy resin composites.
- Facilitated studies on carbon nanotubes-filled Epoxy, including polymer literature research, experiment design, polymer synthesis, polymer analysis, and development of technical reports and papers for publication.
- Developed chemical analysis systems utilizing HPLC, FTIR, UV/VIS spectrophotometer, and electrochemical analyzers.
- Analyzed mechanical, thermal and electrical properties of polymers filled with functionalized carbon nanotubes using DSC, TGA, and DMA.
- Collaborated with team members in revealing an important relationship between an enzyme-mediator complex formation process and a stability issue in a second-generation glucose-detecting electrochemical biosensor.
- Participated actively in a study of the effects of carbon nanotubes fillers on the curing process of epoxy resin-based composites.
- Studied the effects of purification on carbon nanotubes and epoxy resin-based composites.

University of Houston, Houston, Texas (8/2001 to 12/2003)

- Steered resolution of spectroscopic features of HCN in the ground electronic state near 6000 cm^{-1} vibrational energy and in the first excited electronic state by utilizing a new approach based on collisional energy transfer at high vibrational excitation.

PUBLICATIONS

1. Tao, K.; Yang, S. Y.; Grunlan, C. J.; Kim, S. Y.; Deng, Y. J.; **Dang, B. L.**; Thomas, L. R.; Wilson, L. B. and Wei, X., "Effects of Carbon Nanotubes Fillers on the Curing Processes of Epoxy Resin-Based Composites." *J. Applied of Polymer Science* 2006, 102, 5248-5254.
2. **Dang, B. L.**; Wei, X.; Barrera, V. E.; Zeng, Q.; Grunlan, C. J.; Kim, S. Y.; Deng, Y. J.; Thomas, L. R.; Wilson, L. B., "Instantaneous Electrodeposition of Metal Nanostructures on Carbon Nanotubes." Submitted.
3. Wei, Xin; Grunlan, C. J.; Kim, S. Y.; **Dang, B. L.**; Barrera, E. V.; Zeng, Q.; Deng, Y. J.; Ying, Y.; Tian, F.; Thomas, L. R.; Phan, D. T. and Wilson, L. B; "Fast Metallization of Carbon Nanotubes: Methodology and Utility", to be submitted (*Advanced Material*).

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4. **Dang, B. L.**; Deng, Y. J.; Tao, K. and Wei, X.; “Electrochemical Deposition of Metal Nano-Structures on Carbon Nanotubes”, 232nd American Chemical Society National Meeting and Exposition. San Francisco, California, September 10-14, 2006. pp. 132-TECH
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COLLABORATIONS

1. Professor Grunlan, C., Texas A&M, Houston, Texas.
 2. Professor Barrera, V. E., Rice University, Houston, Texas.
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PRESENTATION

“Electrochemical Deposition of Metal Nano-Structures on Carbon Nanotubes”, 232nd National Meeting and Exposition of the American Chemistry Associate, Division of Polymeric Material: Science & Engineering at San Francisco, California, USA, September 10 – 14, 2006.

HONORS & AWARDS

- Outstanding Service in Student Support Service Program, Texas Southern University, Houston, Texas (Spring 2002 & Spring 2003).
 - Outstanding Graduate Student Award, Texas Southern University, Houston, Texas (Spring 2001).
 - Outstanding Service Member, Southeast Asian Woman’s Health Conference (1999)
 - Dean’s List, University of Houston Downtown (1986)
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PROFESSIONAL ASSOCIATIONS

American Chemistry Society (2006 to Present)
Southeast Asian Woman’s Health Conference (1999)
Red Cross, Pulau Tengar, Trengganu, Malaysia (1979)