

Dr. PENG ZHAO

EDUCATION

Ph.D. Chemistry, University of Minnesota, Minneapolis, MN	2005
M.S. Chemistry, University of Minnesota, Duluth, MN	1999
B.S. Chemistry, Nankai University, Tianjin, China	1995

TEACHING EXPERIENCES

North Hennepin Community College, Brooklyn Park, MN 2006-present
Full-time Chemistry Faculty

Minneapolis College, Minneapolis, MN 2006
Adjunct Chemistry Instructor

Hamline University, St. Paul, MN 2006
Adjunct Chemistry Instructor

University of Minnesota, Minneapolis, MN 1999-2001
Graduate Teaching Assistant

University of Minnesota, Duluth, MN 1997-1999
Graduate Teaching Assistant

RESEARCH EXPERIENCES

University of Minnesota, Minneapolis, MN 2001-2005

- Scaled up eleven-step total synthesis of the natural products xestospongins A and C and demonstrated that the absolute configuration of the secondary alcohol center could not be changed during the final macrocyclic dimerization step.
- Developed a new route of synthesis of the natural products xestospongins A and C via dimerization metathesis.
- Initiated a methodology of building up the chlorocyclopropane moiety in natural product callipeltoside A.
- Designed and synthesized six C(11) and C(8) methylated xestospongins with twenty steps. (Macromodel 6.0 was used to perform MM2* Monte Carlo multi-conformational searches.)
- Developed a new methodology of *o*-quinone methide imine formation through 1,5-H shift.
- Synthesized the west aurantioclavine moiety and east aromatic lactam moiety of the natural product communesin B. Final couplings are underway.
- Supervised the research of an undergraduate student studying scale up of xestospongins A and C synthesis.

University of Minnesota, Duluth, MN 1997-1999

- Synthesized four amino acid-derived benziodazole oxides, applied them to alcohol and sulfide oxidations and developed asymmetric oxidation of sulfides.
- Directed an undergraduate student synthesizing the precursors of benziodazole oxides.

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PRESENTATIONS & PUBLICATIONS

1. Design and synthesis of methylated analogs of the important calcium release inhibitor, xestospongins C. Thomas R. Hoye; **Peng Zhao** *The 218th ACS meeting 2003* (oral presentation)
2. Design and synthesis of methylated analogs of the important calcium release inhibitor, xestospongins C. Thomas R. Hoye; **Peng Zhao** *The 38th National Organic Symposium 2003* (poster)
3. A Useful Modification of the Kraus Procedure for Preparation of α -Bromo-1-alkenes by HMPA-promoted Elimination of HBr from 1,6-Dibromoalkanes Thomas R. Hoye; Joshua J. Van Veidhuizen; Tricia J. Vos; **Peng Zhao** *Synth. Commun.* **2001**, *31*, 91-95.
4. Synthesis and Reactions of Amino Acid-derived Benziodazole Oxides: New Chiral Oxidizing Reagents. Viktor V. Zhdankin; Jason T. Smart; **Peng Zhao**; Paul Kiprof *Tetrahedron Lett.* **2000**, *41*, 5299.
5. Molecular Recognition Study on Supramolecular System. 14. Synthesis of Modified Cyclodextrins and Their Inclusion Complexation Thermodynamics with L-Tryptophan and Some Naphthalene Derivatives. Liu, Y.; Han, B.-H.; Li, B.; Zhang, Y.-M.; **Zhao, P.**; Chen, Y.-T.; Wada, T.; Inoue, Y. *J. Org. Chem.* **1998**, *63*, 1444-1454.
6. Study on Cobalt (II) Ionprobe for Cysteine Determination. Zhang, Guizhu; Wang, Yuemei; **Zhao, Peng**; He, Xiwen; Shi, Huiming; Lu, Jixin *Rare Metals* **1998**, *17*, 134-139.
7. Studies on Interaction between Adriamycin and Serum Albumin as well as Effect of Ions on the Reaction. Zhang, Guizhu; **Zhao, Peng**; He, Xiwen; Shi, Huiming; Lu, Jixin *Acta Chimica Sinica* **1997**, *55*, 915-920.