

Ming Xian

Education

- 2003-2006** DOD Postdoctoral Fellow in Organic Chemistry, University of Pennsylvania, Philadelphia, PA
2003 Ph.D. in Chemistry, Wayne State University, Detroit, MI
1995 B.S. in Chemistry, Nankai University, Tianjin, China.

Experience

- 2011--** Associate Professor in Chemistry, Washington State University, Pullman, WA
Research Focus: *The core of Dr. Xian's research interests comprises the desire to combine organic synthesis with bioorganic chemistry to examine, understand, and solve problems of biological and medicinal significance.*
- 2006-2011** Assistant Professor in Chemistry, Washington State University, Pullman, WA
2003-2006 Postdoctoral Fellow (US Army Prostate Cancer Research Program Postdoctoral Fellowship) under supervision of Professor Amos B. Smith, III, University of Pennsylvania
Total synthesis of polyketide natural products and analogues; synthetic methodology development
- 1999-2003** Graduate Research under supervision of Professor Peng George Wang, Wayne State University
Synthesis and Evaluation of nitric oxide donors and carbohydrate derivatives with biological significance
- 1995-1999** Graduate Research under supervision of Professor Jin-Pei Cheng, Nankai University
Studies on NO bond energy and NO transfer mechanism

Awards/Affiliations

- NSF CAREER Award**, 2009
Young Faculty Achievement Award, Washington State University, 2009
Scientist Development Award, American Heart Association, 2009
Thieme Chemistry Journals Award 2009
U. S. Army Prostate Cancer Research Program Postdoctoral Fellowship 2004
Thomas C. Rumble Graduate Research Fellowship for outstanding graduate research, 2002, Wayne State University
Shi-Xian Yang Award for outstanding Graduate Research, 1998, Nankai University
Guanghua Awards for Graduate Students, 1995-1997, Nankai University
University Fellowships for top 3% Undergraduate Students, 1991-1995, Nankai University
Member of American Chemical Society, Nitric Oxide Society, Phi Lambda Upsilon (PLU)

Patents

6. Xian, M.; Pan, J. "Amide formation via S-nitroso intermediates" PCT Int. appl. 2011.
5. Xian, M.; Wang, H. "Phosphine based methods for the detection of S-nitrosothiols" PCT Int. appl. 2009.
4. Xian, M.; Zhao, Y. "Hydrogen sulfide releasing agents" PCT/US11/62820.
3. Zhang, J.; Liu, X.; Xian, M. "Rosin derived epoxides and curing agents" PCT Int. appl. 2010, WO 2010033593 A2 20100325.
2. Smith, A. B. III; Freeze, B. S.; Xian, M., "Synthesis of Discodermolide and Variants Thereof" PCT Int. appl. 2005, WO2005035489 A2 20050421.
1. Smith, A. B., III; Xian, M. "Cyclopropane Discodermolides and Methods" PCT Int. appl. 2005, appl. No: 60/709945.

Invited Talks

20. New chemical tools for hydrogen sulfide research. The 2nd International Conference on H₂S Biology and Medicine. Atlanta, Georgia, September 21, 2012.

19. Chemical tools for probing sulfur-related biology problems. Department of Chemistry, Northwestern University, April 12, 2012.
18. Chemical tools for probing sulfur-related biology problems. Department of Chemistry, Marquette University, September 30, 2011.
17. New reactions to probe protein S-nitrosation. ACS-NORM, Portland, OR, June 27, 2011.
16. Chemical tools for probing S-related biology problems. Department of Chemistry, University of Montana, February 7, 2011.
15. Invited speaker for the Organic Chemistry Division Young Academic Investigators Symposium, the 240th ACS National Meeting, Boston, August 24, 2010.
14. Chemical approaches for the detection of S-nitrosothiols. Department of Chemistry, Portland State University, April 17, 2009.
13. New ligation reactions for the detection of protein S-nitrosation. 2009 Volcano Conference. Feb. 27, 2009.
12. New chemistry, new tools for nitric oxide research. Department of Chemistry, Washington State University, Feb. 2, 2009.
11. Tandem reactions for organic synthesis and chemical biology. College of Chemistry, Nankai University, Tianjin, China, June 25, 2008.
10. New ligation reactions for S-nitrosothiols. 4th Sino-US Chemistry Professors Conferences, Beijing, China, June 12, 2008.
9. "New tandem reactions mediated by silyl migration" Department of Chemistry, Southern Illinois University, Edwardsville, February 6, 2008.
8. "New tandem reactions mediated by silyl migration" Department of Chemistry, the University of Idaho, October 30, 2007.
7. "Using organic molecules to address biological problems" Department of Chemistry and Biochemistry, Montana State University, January 2006.
6. "Using organic molecules to address biological problems" Department of Chemistry, University of Arizona, January 2006.
5. "Using organic molecules to address biological problems" Department of Chemistry, University of Notre Dame, November 2005.
4. "Using organic molecules to address biological problems" Department of Chemistry, Washington State University, November 2005.
3. "Using organic molecules to address biological problems" Department of Pharmaceutical Sciences, University of Pittsburgh, November 2005.
2. "Using organic molecules to address biological problems" Department of Chemistry, Clemson University, November 2005.
1. "Using organic molecules to address biological problems" Department of Chemistry, Oklahoma State University, November 2005.

Current Grants

American Heart Association SDG-0930120N	\$308,000	01/01/2009 – 12/31/2012
Title: New Chemical Probes for Nitric Oxide Research		
Status: Active		
Role: PI		
NSF CAREER Award-0844931	\$656,643	09/01/2009 – 08/31/2014
Title: Novel Reductive Ligations of S-nitrosothiols		
Status: Active		
Role: PI		
NIH R01GM88226	\$1,391,665	09/30/2010 – 08/31/2015

Title: Chemical Approaches for Detecting Protein S-Nitrosation

Status: Active

Role: PI

USDA-NRI Award-2008-35504-04431

\$496,054

08/15/2008 – 08/14/2012

Title: Investigation of Starch-based Epoxy Curing Agent and Impregnating Crosslinker for Wood Composite Industry

Status: Active

Role: Co-PI

Pending Grants

NIH R01 application

Title: Novel sulfide releasing agents for ischemic injury

Role: PI

ACS-PRF new direction grant

Title: S-Nitrosation based synthetic strategies

Role: PI

ACS-Teva grant

Title: Explore new molecular entities for hydrogen sulfide research

Role: PI

NIH R21 application

Title: Nitric oxide, lactogenesis, and obesity

Role: Co-PI; PI: Michelle McGuire

Previous Grants

WSU ERI Project

\$123,311

07/01/2007 – 08/14/2009

Title: Curing Agents for Ambient-cure Waterborne Epoxy Coatings

Status: Completed

Role: Co-PI

NIH R13GM085865

\$5,640+\$10,000 matching fund from WSU

07/01/2009 – 07/31/2010

Title: Pacific Northwest Undergraduate Research Symposium on Organic Chemistry and Chemical Biology

Status: Active

Role: PI for 2010

Professional and Service Activities

Chair, Pacific Northwest Undergraduate Research Symposium on Organic Chemistry, 2010; Co-Chair, 2009&2011.

Member of the Graduate Admission Committee, Department of Chemistry, WSU (2006-).

Member of the Faculty Search Committee, Department of Chemistry, WSU (2007, 2008, 2009)

Faculty Advisor of the Graduate Chemical Society, WSU, (2008-).

Faculty Reviewer for WSU Regents Scholars program, 2008

Reviewer for Tetrahedron, Tetrahedron Lett., J. Org. Chem., Org. Lett., Acc. Chem. Soc., J. Am. Chem. Soc.,

Bioorg. Med. Chem. Lett., Bioorg. Med. Chem., Eur. J. Med. Chem., Bioconjugate Chem., J. Fluorine Chem., J.

Med. Chem., Nat. Chem. Biol.

Reviewer for grant proposals of NSF, ACS-PRF.

Current Research Group

Postdoctoral Associates

Dehui Zhang, 10/09-

Pei Zhang, 12/10-

Chunrong Liu, 02/11-

Chung-Min Park, 06/11-

Graduate Students

Nelmi O. Devarie-Baze, 01/07-

Yu Zhao, 08/09-

Jason Stein, 08/10-

Jia Cheng, 08/10-

Qing Lu, 08/10-

Bo Peng, 08/11-

Undergraduate Students

Tyler Biggs, 01/09- , winner of WSU Auvil Fellow Award 2009, WSU Undergraduate Summer Research Grant 2009.

Ethan Rosser, 08/10-

Nkohoua Yang, 08/11-

Former Group Members

Honghua Wang, PostDoc, 01/07-04/08, now an Associate Professor, Changchun Institute of Applied Chemistry, the Chinese Academy of Sciences, China.

Jiming Zhang, PostDoc, 04/08-10/09, now a Principle Scientist, Shanghai Chempartner, China.

Xiaoqing Liu, PostDoc, 04/08-10/09, now an Associate Professor, Ningbo Institute of Material Technology and Engineering, the Chinese Academy of Sciences, China.

Hua Wang, PostDoc, 11/06-04/11, now a Research Scientist, Northwestern University.

Jia Pan, Ph.D. 08/07-12/11, now a Postdoc Fellow, Scripps Research Institute, Florida.

Tom Hayes, rotation graduate student, 08/09-12/09

Hongli Li, rotation graduate student, 08/08-12/08

Brian J. Shuhler, undergraduate Student, 09/06-05/08, winner of College of Sciences Distinguished Undergraduate Student Award 2007, Frank and Sara McKnight Prize in Undergraduate Chemistry, University of Texas Southwestern Medical Center, 2007. Now employed by EPA

David Bross, undergraduate student, 01/07-05/08. Now a graduate student at WSU

Jamie Murphy, undergraduate student, 01/08-12/08, winner of WSU Undergraduate Summer Research Grant 2008, Best Presentation Award/Pacific Northwest Undergraduate Research Symposium on Organic Chemistry 2008.

Jake Adkins, undergraduate student, 12/08-06/09

Dan Collins, REU student from University of Arizona, 05/09-08/09

Yvette Strampe, undergraduate student, 01/08-06/10

Connor W. Brown, REU student from Hamilton College, 05/10-08/10

Olivia Salmon, REU student from Marquette University, 05/11-08/11

Publication List

Publications from independent research (WSU)

Note: # indicates undergraduate coauthors

66. Devarie, N. O.; Rosser, E. W.;[#] Xian, M. "Nitrosobenzene as new activator of thioacids for amidation". Manuscript submitted for publication.

65. Devarie, N. O.; Zhang, D.; Li, S.; Whorton, A. R. Xian, M. “Direct methods for the detection of protein S-nitrosation”. Invited article submitted to *Methods*.
64. Li, S.; Wang, H.; Xian, M.; Whorton, A. R. “Identification of protein nitrosothiols using phosphine-mediated selective reduction”. *Nitric Oxide* **2012**, *26*, 20.
63. Liu, C.; Pan, J.; Li, S.; Zhao, Y.; Wu, L. Y.; Berkman, C. E.; Whorton, A. R.; Xian, M. “Capture and visualization of hydrogen sulfide by a fluorescent probe”. *Angew. Chem. Int. Ed.* **2011**, *50*, 10327.
62. Pan, J.; Devarie, N. O.; Xian, M. “Facile amide formation via S-nitrosothioacids”. *Org. Lett.* **2011**, *13*, 1092.
61. Liu, X.; Wang, Y.; Cao, Y.; Yadama, V.; Xian, M.; Zhang, J. “Study of dextrin-derived curing agent for waterborne epoxy adhesive. *Carbohydr. Polym.* **2011**, *83*, 1180.
60. Zhao, Y.; Wang, H.; Xian, M. “Cysteine activated hydrogen sulfide (H₂S) donors”. *J. Am. Chem. Soc.* **2011**, *133*, 15.
59. Wang, H.; Xian, M. “Chemical methods to detect S-nitrosation”. *Curr. Opin. Chem. Biol.* **2011**, *15*, 32.
58. Pan, J.; Xian, M. “Disulfide formation via sulfenamides”. *Chem. Commun.* **2011**, 352. (Emerging Investigators Issue).
57. Zhang, D. H.; Davarie-Baez, N. O.; Pan, J.; Wang, H.; Xian, M. “One-pot thioether formation from S-nitrosothiols”. *Org. Lett.* **2010**, *12*, 5674.
56. Zhang, J.; Li, S.; Zhang, D.; Wang, H.; Whorton, R.; Xian, M. “Reductive ligation mediated one-step disulfide formation of S-nitrosothiols”. *Org. Lett.* **2010**, *12*, 4208.
55. Devarie, N.; Xian, M. “Facile preparation of 3-substituted benzisothiazoles from o-mercapto-acylphenones”. *Org. Lett.* **2010**, *12*, 752.
54. Wang, H.; Zhang, J.; Xian, M. “Facile formation of dehydroalanine from S-nitrosocysteines”. *J. Am. Chem. Soc.* **2009**, *131*, 13238.
53. Wang, H.; Liu, X.; Liu, B.; Zhang, J.; Xian, M. “Synthesis of rosin-based flexible anhydride type curing agents and properties of the cured epoxy”. *Polym. Int.* **2009**, *58*, 1435.
52. Zhang, J.; Wang, H.; Xian, M. “An unexpected bis-ligation of S-nitrosothiols”. *J. Am. Chem. Soc.* **2009**, *131*, 3854. (this work is featured by *Chemical & Engineering News* 2009, March 16, Vol 87).
51. Devarie, N.; Kim, W.; Smith, A. B. III, Xian, M. “Multicomponent type II anion relay chemistry (ARC): one-pot syntheses of 2,3-disubstituted furans and thiophenes exploiting 2-trialkylsilyl-3-formyl bifunctional linchpins”. *Org. Lett.* **2009**, *11*, 1861.
50. Pan, J.; Downing, J. A.; McHale, J. L.; Xian, M. “A fluorogenic dye activated by S-nitrosothiols”. *Mol. BioSyst.* **2009**, *5*, 918. (Emerging Investigators Issue)
49. Zhang, J.; Wang, H.; Xian, M. “Exploration of the traceless reductive ligation of S-nitrosothiols”. *Org. Lett.* **2009**, *11*, 477.
48. Wang, H.; Liu, B.; Liu, X.; Zhang, J.; Xian, M. “Synthesis of biobased epoxy and curing agents using rosin and study of cure reactions”. *Green Chem.* **2008**, *10*, 1190.
47. Wang, H.; Shuhler, B. J.; [#] Xian, M. “Total synthesis of diospongins A and B”. *Synlett* **2008**, 2651.
46. Wang, H.; Xian, M. “Fast reductive ligation of S-nitrosothiols”. *Angew. Chem. Int. Ed.* **2008**, *47*, 6598.
45. Xian, M.; Zhu, C.-J. “2-[Bis-(3,5-bis(trifluoromethyl)-phenyl)-[(trimethylsilyl)oxy]-methyl]-pyrrolidine. *Encyclo. Reagents for Org. Syn.* **2008**.
44. Devarie, N.; Shuhler, B. J.; [#] Wang, H.; Xian, M. “Solvent controlled C(sp²)→O silyl migration: the one-pot synthesis of 2,3-disubstituted thiophenes” *Org. Lett.* **2007**, *9*, 4655.
43. Wang, H.; Shuhler, B. J. [#] Xian, M. “A versatile strategy for the synthesis of 2,6-disubstituted dihydropyranones” *J. Org. Chem.* **2007**, *72*, 4280.
42. Xian, M.; Shuhler, B. J. [#] “Study of the synthesis of poecillanosine” *Tetrahedron Lett.* **2007**, *48*, 1209.

Publications from postdoctoral research (UPenn)

41. Shaw, S. J.; Menzella, H. G.; Myles, D. C.; Xian, M.; Smith, A. B., III. “Coumarin-derived discodermolide analogues possessing equivalent antiproliferative activity as the natural product—a further simplification of the lactone region” *Org. Biomol. Chem.*, **2007**, *5*, 2753.

40. Smith, A. B., III; Kim, D.-S.; Xian, M. “Anion relay chemistry extended. Synthesis of a gorgonian sesquiterpene” *Org. Lett.* **2007**, *9*, 3307.
39. Smith, A. B., III; Xian, M.; Kim, W. -S.; Kim, D.-S. “The 1,5-Brook rearrangement: an initial application in anion relay chemistry” *J. Am. Chem. Soc.* **2006**, *128*, 12368.
38. Smith, A. B., III; Xian, M. “Anion relay chemistry: an effective tactic for diversity oriented synthesis” *J. Am. Chem. Soc.* **2006**, *128*, 66. (This work is featured by Chemical & Engineering News 2006, January 2, Vol 84).
37. Smith, A. B., III; Xian, M. “Design, synthesis and biological evaluation of simplified analogues of discodermolide, additional insights on the importance of the diene, the C(7) hydroxyl, and the lactone” *Org. Lett.* **2005**, *7*, 5229.
36. Smith, A. B., III; Xian, M.; Liu, F. “Design, total synthesis and evaluation of C13,C14 cyclopropane analogues of discodermolide” *Org. Lett.* **2005**, *7*, 4613.
35. Shaw, S. J.; Sundermann, K. F.; Burlingame, M. A.; Myles, D. C.; Freeze, B. S.; Xian, M.; Brouard, I.; Smith, A. B., III. “Toward understanding how the lactone moiety of discodermolide affects activity” *J. Am. Chem. Soc.* **2005**, *127*, 6532.
34. Smith, A. B., III; Freeze, B. S.; Xian, M.; Hirose, T. “Total synthesis of (+)-Discodermolide: A highly convergent fourth-generation approach” *Org. Lett.* **2005**, *7*, 1825.
33. Smith, A. B., III; Freeze, B. S.; LaMarche, M. J.; Hirose, T.; Brouard, I.; Xian, M.; Myles, D. C.; Sundermann, K. F.; Shaw, S. J.; Burlingame, M. A. “Design, synthesis and evaluation of analogues of (+)-14-normethyldiscodermolide” *Org. Lett.* **2005**, *7*, 315.
32. Smith, A. B. III; Freeze, B. S.; LaMarche, M. J.; Hirose, T.; Brouard, I.; Rucker, P. V.; Xian, M.; Myles, D. C.; Sundermann, K. F.; Shaw, S. J.; Burlingame, M. A. “Carbamate-substituted analogues of (+)-discodermolide” *Org. Lett.* **2005**, *7*, 311.

Publications from graduate research (Nankai & Wayne State)

31. Zhu, L.; Kedenburg, J.; Xian, M.; Wang, P. G. “A systematic strategy for preparation of uncommon sugars through enzymatic resolution and ring closing metathesis” *Tetrahedron Lett.*, **2005**, *46*, 811-813.
30. Cheng, H.; Xian, M.; Wu, J.; Tunac, J. B.; Sun, D.; Wang, P. G. “Synthesis and enzyme-specific activation of carbohydrate-geldanamycin conjugates with potent anticancer activity” *J. Med. Chem.* **2005**, *48*, 645-652.
29. Xian, M.; Fatima, Z.; Zhang, W.; Fang, J.; Pei, D.; Loo, J.; Stevenson, T.; Wang, P. G. “Identification of alpha-Gal epitope mimetics through rapid generation and screening of C-linked glycopeptide library” *J. Comb. Chem.* **2004**, *6*, 126-134.
28. Jia, Q.; Cai, T.; Huang, M. Li, H.; Xian, M.; Poulos, T. L.; Wang, P. G. “Isoform-selective substrates of nitric oxide synthases” *J. Med. Chem.*, **2003**, *46*, 2271.
27. Li, H.; Shimizu, H.; Flinspach, M.; Jamal, J.; Yang, W.; Xian, M.; Cai, T.; Wen, Z.; Jia, Q.; Wang, P. G.; Poulos, T. L. “The novel binding mode of N-alkyl-N'-hydroxyguanidine to nNOS provide mechanistic insights into NO biosynthesis” *Biochemistry* **2002**, *41*, 13868.
26. Jia, Q.; Janczuk, A.; Cai, T.; Xian, M.; Wen, Z.; Wang, P. G. “NO donors with anticancer activity” *Expt. Opin. Therap. Pat.* **2002**, *12*, 819.
25. Cai, T. W.; Xian, M.; Wang, P. G. “Electrochemical and peroxidase oxidation study of N-hydroxyguanidine derivatives as NO donors” *Bioorg. Med. Chem. Lett.* **2002**, *12*, 1507.
24. Wu, X.; Tang, X.; Xian, M.; Brauschweiger, P. G.; Wang, P. G. “Synthesis and cytotoxicities of mannose conjugated SNAP” *Bioorg. Med. Chem.* **2002**, *10*, 2303.
23. Xian, M.; Fujiwara, N.; Cai, T.; Wen, Z.; Kazuma, S.; Janczuk, A.; Tang, X.; Telyatnikov, V.; Miyamoto, Y.; Taniguchi, N.; Wang, P. G. “Novel substrates for nitric oxide synthases” *Bioorg. Med. Chem.* **2002**, *10*, 3049-3055.
22. Wang, P. G.; Xian, M.; Tang, X. -P.; Wu, X. -J.; Wen, Z.; Cai, T. -W. “Nitric oxide donors: chemical activities and biological applications” *Chem. Rev.* **2002**, *102*, 1091.

21. Chen, X. C.; Wen, Z.; Xian, M.; Wang, K.; Ramachandran, N.; Schlegel, H. B.; Mutus, B.; Wang, P. G. "Fluorophore-labeled S-nitrosothiols" *J. Org. Chem.*, **2001**, *66*, 6064.
20. Xian, M.; Li, X. P.; Tang, X. P.; Chen, X. C.; Zheng, X. L.; Galligan, J. J.; Kreulen, D. L.; Wang, P. G. "N-hydroxyl derivatives of guanidine based drugs as enzymatic NO donors" *Bioorg. Med. Chem. Lett.* **2001**, *11*, 2377-2380.
19. Wu, X. J.; Tang, X. P.; Xian, M.; Wang, P. G. "Glycosylated diazeniumdiolates: a novel class of enzyme-activated nitric oxide donors" *Tetrahedron Lett.* **2001**, *42*, 3779.
18. Tang, X. P.; Xian, M.; Trikha, M.; Honn, K. V.; Wang, P. G. "Synthesis of peptide-diazeniumdiolate conjugates: towards enzyme activated antitumor agents" *Tetrahedron Lett.* **2001**, *42*, 2625.
17. Wang, K.; Wen, Z.; Zhang, W.; Xian, M.; Cheng, J. P.; Wang, P. G. "Equilibrium and kinetics studies of transnitrosation between S-nitrosothiols and thiols" *Bioorg. Med. Chem. Lett.* **2001**, *11*, 433.
16. Guo, Z.-M.; Xian, M.; Zhang, W.; McGill, A.; Wang, P. G. "N-Nitrosoanilines: A new class of caspase-3 inhibitors" *Bioorg. Med. Chem.* **2001**, *9*, 99.
15. Zhu, X.-Q.; He, J.; Li, Q.; Xian, M.; Lu, J. M.; Cheng, J.-P. "N-NO bond dissociation energies of N-nitroso diphenylamine derivatives (or analogues) and their radical anions: Implications for the effect of reductive electron transfer on N-NO bond activation and for the mechanisms of NO transfer to nitranions" *J. Org. Chem.* **2000**, *65*, 6729.
14. Lu, J.; Zhu, X.; Li, Q.; He, J.; Xian, M.; Cheng, J.-P. "Determination of heterolytic and homolytic S-NO bond dissociation energies in acetonitrile" *Chem. J. Chin. Univ.* **2000**, *21*, 570.
13. Xian, M.; Wang, M.; Chen, X.-C.; Wang, K.; Wang, P. G. "S-Nitrosothiols as novel, reversible inhibitors of human rhinovirus 3C protease" *Bioorg. Med. Chem. Lett.* **2000**, *10*, 2097-2100.
12. Xian, M.; Chen, X. -C.; Liu, Z.; Wang, K.; Wang, P. G. "Inhibition of papain by S-nitrosothiols: formation of mixed disulfides" *J. Biol. Chem.* **2000**, *275*, 20467-20473.
11. Wang, K.; Zhang, W.; Xian, M.; Chen, X. -C.; Cheng, J. -P.; Wang, P. G. "New chemical and biological aspects of S-nitrosothiols" *Curr. Med. Chem.* **2000**, *7*, 821.
10. Xian, M.; Zhu, X. -Q.; Lu, J. -M.; Wen, Z.; Cheng, J. -P. "The first O-NO bond energy scale in solution: heterolytic and homolytic cleavage enthalpies of O-nitrosyl carboxylate compounds". *Org. Lett.* **2000**, *2*, 265-268.
9. Xian, M.; Wang, K.; Chen, X. -C.; McGill, A.; Zhang, Z. -Y.; Cheng, J. -P.; Wang, P. G. "Inhibition of protein tyrosine phosphatases by low-molecular-weight S-nitrosothiols and S-nitrosylated human serum albumin". *Biochem. Biophys. Res. Commun.* **2000**, *268*, 310-314.
8. Wang, K.; Hou, Y. C.; Zhang, W.; Ksebati, M. B.; Xian, M.; Cheng, J. -P.; Wang, P. G. "¹⁵N NMR and electronic properties of S-nitrosothiols". *Bioorg. Med. Chem. Lett.* **1999**, *9*, 2897.
7. Zhu, X. -Q.; Xian, M.; Wang, K.; Cheng, J. -P. "Is NO (nitric oxide) an electron acceptor or an electrophile? A detailed thermodynamic investigation on the mechanisms of NO-initiated reactions with 3,6-dibromocarbazolide anion and related carbanion". *J. Org. Chem.* **1999**, *64*, 4187-4190.
6. Xian, M.; Zhu, X. -Q.; Li, Q.; Cheng, J. -P. "A high-yielding and facile preparation of N-substituted thioureas by substitution of nitrosothioureas with alkylamines". *Tetrahedron. Lett.* **1999**, *40*, 1957.
5. Cheng, J. -P.; Xian, M.; Wang, K.; Zhu, X. -Q.; Yin, Z.; Wang, P. G. "Heterolytic and homolytic Y-NO bond energy scales of nitroso-containing compounds: Chemical origin of NO release and NO capture" *J. Am. Chem. Soc.* **1998**, *120*, 10266-10267.
4. Xian, M.; Lu, J. -M.; Zhu, X. -Q.; Mu, L. -J.; Cheng, J. -P. "A facile and high-yielding preparation of 1-aryl-3,3-dialkylureas". *J. Chem. Res. (S)*. **1998**, 442.
3. Lu, Y.; Xian, M.; Zhu, X. -Q.; Mu, L. -J.; Cheng, J. P. "Studies on structure-reactivity relationship for NAD(P)H model compounds: Electronic effect of the 3-acyls". *Chem. J. Chinese. U.* **1999**, *20*, 59.
2. Lu, Y.; Xian, M.; Cheng, J. -P.; Xia, C. -Z. "Investigation on the reduction of carbocations by BNAH - Kinetics, thermodynamics, and reaction mechanisms". *Acta. Chim. Sinica.* **1997**, *55*, 1145.
1. Lu, Y.; Xian, M.; Cheng, J. -P. "Studies on the Mg²⁺-catalyzed reductions of N-arylfluorenimines by NAD(P)H models". *Chem. J. Chinese. U.* **1997**, *18*, 1484.