

Refereed Publications

- Ni, B.; Zhang, Q.; Garre, S.; Headley, A. D. *Advanced Synthesis & Catalysis*, **2009** (in Press). *Ionic Liquid (IL) as an Effective Medium for the Highly Efficient Hydroacylation Reaction of Aldehydes with Azodicarboxylates*.
- Ni, B.; Zhang, Q.; Dhungana, K.; Headley, A. D. *Org. Lett.* **2009**, 11(4), 1037-1040. *Ionic Liquid-Supported (ILS) (S)-Pyrrolidine Sulfonamide, a Recyclable Organocatalyst for the Highly Enantioselective Michael Addition to Nitroolefins*.
- Garre, S.; Parker, E.; Ni, B.; Headley, A. D. *Org. Biomol. Chem.* **2008**, 6, 3041-3043. *Design and Synthesis of Bistereogenic Chiral Ionic Liquids and their Use as Solvents for Asymmetric Baylis-Hilman Reactions*.
- Zhang, Q.; Ni, B.; Headley, A. D. *Tetrahedron* **2008**, 64, 5091-5097. *Asymmetric Michael Addition Reactions of Aldehyde with Nitrostyrenes Catalyzed by Functional Chiral Ionic Liquids*.
- Bukuo, N.; Zhang, Q.; Headley, A. D. *Tet. Lett.* **2008**, 49, 1249-1252. *Pyrrolidine-Based Chiral Pyridinium Ionic Liquids (ILs) as Recyclable and Highly Efficient Organocatalysts for the Asymmetric Michael Addition Reactions*.
- Ni, B.; Zhang, Q.; Headley, A. D. *Tet. Asymmetry* **2007**, 18, 1443-1447. *Highly Enantioselective Michael Addition of Ketones to Nitroolefins Catalyzed by (S)-Pyrrolidine Arenesulfonamide*.
- Headley, A. D.; Ni, B. *Aldrichimica ACTA*, **2007** 40(4), 107-117. *Imidazolium Ionic Liquids: Synthesis and their Influence on the Outcome of Organic Reactions*.
- Ni, B.; Zhang, Q.; Headley, A. D. *Green Chemistry* **2007**, 9, 737-739. *Functionalized Chiral Ionic Liquid as Efficient Organocatalyst for Asymmetric Michael Addition to Nitroalkenes*.
- Ni, B.; Garre, B.; Headley, A. D. *Tet. Lett.* **2007**, 48, 1999-2002. *Design and Synthesis of Fused-Ring Chiral Ionic Liquids from Amino acid Derivatives*.
- Wang, Y.-N.; Ni, Bukuo.; Headley, A. D.; Li, G. *Adv. Synth. Catal.* **2007**, 349, 319 – 322. *Ionic Liquid, [bmim][N(SO₂CF₃)₂] Resulted in the First catalyst-Free Aminohalogenation of Electron-Deficient Alkenes*.
- Headley, A. D.; Kotti, S. R. R. S.; Ni, B. *Heterocycles*. **2007**, 71(3), 589-596. *Solvation Effects on Imidazolium Salts with Alkyl Side Chains*.
- Ni, B.; Headley, A. D. *Tet. Lett.* **2006** 47, 7331-7334. *Novel Imidazolium Chiral Ionic Liquids That Contain a Urea Functionality*.
- Ni, B.; Zhang, Q.; Headley, A. D. *J. Org. Chem.* **2006**, 71, 9857-9860. *Design and Synthesis of Pyridinium Chiral Ionic Liquids Tethered to a Urea Functionality*.
- Ni, B.; Headley, A. D.; Li, G. *J. Org. Chem.* **2005**, 70, 10600-10602. *Design and Synthesis of C-2 Substituted Chiral Imidazolium Ionic Liquids from Amino Acid Derivatives*.
- Headley, A. D.; Kotti, S. R. R. S.; Nam, J.; Li, K. *J. Phys. Org. Chem.* **2005**, 18, 1018-1022. *Effect of hydrophobic side-chains on the solvation of imidazolium salts*.
- Xu, X.; Kotti, S.R.S.S.; Liu, J.; Cannon, J. F.; Headley, A. D.; Li, G. *Org. Lett.* **2004**, 6, 4877-4879. *Ionic Liquid Media Resulted in the First Asymmetric Aminohalogenation Reaction of Alkenes*.
- Kotti, S.R.S.S.; Xu, X.; Wang, Y.; Headley, A. D.; Li, G. *Tetrahedron Lett.* **2004**, 45, 7209-7212. *Ionic Liquid Media Resulted in More Efficient Regio- and Stereoselective Aminohalogenation of Cinnamic Esters*.

- Chen, D.; Timmons, C.; Liu, J.; Headley, A. D.; Li, G. *Eur. J. Org. Chem.* **2004**, *15*, 3330-3335. *The First Enantioselective Halo Aldol Reaction of Allenates and Aldehydes.*
- Timmons, C.; Cannon, J. F.; Headley, A. D.; Li, G. *Org. Lett.* **2004**, *6*, 2075-2078. *New Asymmetric Halo Aldol Reaction Provides a Novel Approach to Biologically Important Chiral Cyclothers and Cycloamines.*
- Saibabu Kotti, S. B. S.; Xu, Xin.; Li, G.; Headley, A. D. *Tetrahedron Letters*, **2004**, *45*, 1427-1431. *Efficient Nucleophilic Substitution Reactions of Highly Functionalized Allyl Halides in Ionic Media.*
- Pei, W.; Wei, H-X, Headley, A. D.; Li, G. *J. Org. Chem.* **2003**, *68*, 8404-8408. *N,N-Dichloro-2-Nitrobenzenesulfonamide (2-NsNCl₂) as the Electrophilic Nitrogen Source for Direct Diamination of Enones.*
- Karur, S.; Kotti, S. R. S. S.; Xu, X.; Cannon, J. F.; Headley, A. D.; Li, G. *J. Am. Chem. Soc.* **2003**, *125* (44), 13340-13341. *A Novel Catalytic Reaction of Alkynes via Multiple-Site Functionalization.*
- Li, G.; Xu, X.; Chen, D.; Timmons, C.; Carducci, M. D.; Headley, A. D.; Li, G. *Organic Letters*, **2003**, *5*(3), 329. *Asymmetric Halo Aldol Reactions (AHA).*
- Karur, S.; Hardin, J.; Headley, A. D.; Li, G. *Tetrahedron Letters*, **2003**, *44*, 2991-2994. *A Novel Approach to Mortia-Baylis-Hillman (MBS) Lactones via the Lewis Acid-Promoted Couplings of α,β -Unsaturated Lactone with Aldehydes.*
- Headley, A. D.; Ganesan, R.; Nam, J. *Bioorganic Chemistry*, **2003**, *31*, 97. *The Effect of the Cyclopropyl Group on the Conformation of Chemotactic Formyl Tripeptides.*
- Headley, A. D.; Jackson, N. M. *J. Phys. Org. Chem.* **2002**, *15*, 52. *The Effect of the Anion on the Chemical Shifts of the Aromatic Hydrogens of Liquid 1-Butyl-3-Methylimidazolium Salts.*
- Headley, A. D.; Nam, J. *J. Mol. Struct. (THEOCHEM)* **2002**, *589*, 423. *A Theoretical Analysis of Substituted Formamide Conformers.*
- Headley, A. D.; Nam, J. *J. Phys. Org. Chem.* **2002**, *15*, 62. *Analysis of the Basicity of Substituted Dimethylamines in Different Solvents by Theoretical Descriptors.*
- Headley, A. D.; Starnes, S. D. *J. Mol. Struct. (THEOCHEM)*, **2001** *572*, 89. *Conformational Analysis of α -Trifluoroalanine: A Theoretical Study.*
- Headley, A. D.; Starnes, S. D. *J. Compt. Chem.* **2000**, *21*(6), 426. *Conformational Analysis of Fluoroglycine.*
- Headley, A. D.; Starnes, S. D. *J. Mol. Struct. (THEOCHEM)*, **2000**, *507*, 281. *Anomeric Effect in Difluoroglycine.*
- Headley, A. D.; Starnes, S. D. *J. Mol. Struct. (THEOCHEM)*, **1999**, *467*, 95. *Theoretical Investigations of the Gas Phase Tautomerization of Sarcosine.*
- Headley, A. D.; Starnes, S. D. *J. Phys. Org. Chem.* **1999**, *12*, 289. *The Nature of the Association of Phenylglycine in Water.*
- Headley, A. D.; Starnes, S. D. *J. Mol. Struct. (THEOCHEM)*, **1998**, *453*, 247. *Theoretical Studies on the Gas Phase Tautomerization of N,N-Dimethylglycine.*
- Headley, A. D.; Corona, R. E.; Cheung, E. T. *J. Phys. Org. Chem.* **1997**, *10*, 898. *Effects of Solvents on the Tautomerization of N,N-Dimethylglycine.*
- Headley, A. D.; Petal, B.; Cheung, E. T. *Tetrahedron Lett.* **1996**, *37*, 6673. *Solvation Effects of the Tautomerization of N,N-Dimethylvaline.*

- Headley, A. D.; Starnes, S. D. *J. Mol. Struct. (THEOCHEM)*. **1996**, 370, 147. *Conformational Analysis of N-Methylglycine and N,N-Dimethylglycine by ab Initio Calculations.*
- Headley, A. D.; Starnes, S. D. *J. Am. Chem. Soc.* **1995**, 117, 9309. *The Effects of Branching on the Tautomeric Equilibrium of Amino Acids.*
- Headley, A. D.; Starnes, S. D.; Cheung, E. T.; Malone, P. L. *J. Phys. Org. Chem.* **1995**, 8, 26. *Solvation Effects on the Relative Basicity of Propylamines.*
- Headley, A. D.; Starnes, S. D.; Wilson, L. Y.; Famini, G. R. *J. Org. Chem.* **1994**, 59, 8040. *Analysis of Solute/Solvent Interactions for the Acidity of Acetic Acids by Theoretical Descriptors.*
- Headley, A. D.; McMurry, M. E.; Starnes, S. D. *J. Org. Chem.* **1994**, 59, 1863. *The Effects of Substituents on the Acidity of Acetic Acids.*
- Headley, A. D.; McMurry, M. E. *J. Phys. Org. Chem.* **1994**, 7, 63. *The Influence of Solvents on the Basicity of Dipolar Amines.*
- Headley, A. D. *J. Org. Chem.* **1991**, 56, 3688. *Quantitative Analysis of Solvation Effects and the Influence of Alkyl Substituents on the Basicity of Amines.*
- Headley, A. D. *J. Chem. Soc., Perkin Trans. II.*, **1989**, 5, 457. *Solvation Effects of Dipolar Substituents in Close Proximity to a Charged Reaction Centre.*
- Taft, R. W.; Abboud, J. L. M.; Anvia, F.; Berthelot, M.; Fujio, M.; Gal, J.-F.; Headley, A. D.; Henderson, W. G.; Koppel, I.; Qian, J. H.; Mishima, M.; Taagepera, M.; Ueji, S. *J. Am. Chem. Soc.*, **1988**, 110, 1797. *Regarding the Inherent Dependence of Resonance Effects of Strongly Conjugated Substituents on Electron Demand.*
- Jinfeng, C.; Topsom, R. D.; Headley, A. D.; Koppel, I.; Mishima, M.; Taft, R. W.; Ueji, S. *J. Mol. Struct. (THEOCHEM)*, **1988**, 168, 141. *Acidities of Substituted Acetic Acids.*
- Headley, A. D. *J. Org. Chem.*, **1988**, 53, 312. *Solvent Effects on the Basicity of Substituted Dimethylamines.*
- Headley, A. D. *J. Am. Chem. Soc.*, **1987**, 109, 2347. *Substituent Effects on the Basicity of Dimethylamines.*
- Hehre, W. J.; Pau, C.-F.; Headley, A. D.; Taft, R. W.; Topsom, R. D. *J. Am. Chem. Soc.*, **1986**, 108, 1711. *A Scale of Directional Substituent Polarizability Parameters from ab Initio Calculations of Polarizability Potentials.*