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EDUCATION

Ph.D., 1995. Organic Chemistry, University of California-Davis, Davis, CA
Advisor: Professor M. H. Nantz

B.S., 1990. Chemistry, Wayne State University, Detroit, MI, 1990
Advisor: Professor K. F. Albizati

RESEARCH & TEACHING EXPERIENCE

2004-present

Associate Professor, Illinois State University

Taught courses in undergraduate and graduate organic chemistry. Conducted research regarding the development of asymmetric methods. Performed services for the Department of Chemistry and Illinois State University.

1998-2004

Assistant Professor, Illinois State University

Instructed yearlong lecture course of sophomore organic chemistry and coordinated the associated laboratory course. Instructed semester survey course in organic chemistry for non-majors and coordinated associated laboratory component of course. Instructed graduate course in organic synthesis for graduate students. Conducted research concerning 3,4,5,6-tetrahydro-2*H*-1,3,4-oxadiazin-2-ones (design, synthesis, conformational analysis, and asymmetric application).

1996-1998

Postdoctoral Fellow, University of Wisconsin-Madison

Advisor: Professor E. Vedejs.

Prepared, isomerized and alkylated variety of chiral, non-racemic oxazaborolidinones, precursors to enantiomerically enriched α,α -disubstituted amino acids. Conducted studies pertaining to the asymmetric synthesis of chiral proton donors based on tetrahydroisoquinolines.

1990-1995

Graduate Student, University of California-Davis

Advisor: Professor M. H. Nantz.

Thesis: Chiral, C_2 Symmetric *ansa*-Titanocenes based on 1,2-Bis(2-indenyl)ethane. Synthesis, Complexation and Application in Catalytic Epoxidation of Unfunctionalized Alkenes. Prepared structurally novel organometallic complexes known as *ansa*-titanocenes. Utilized complexes in catalytic epoxidation trials of unfunctionalized olefins.

1984-1990**Wayne State University (Detroit, MI)**

Advisor: Professor K. F. Albizati Synthesized α -hydroxyketones not directly available through conventional means. Developed a tandem bis-aldol reaction for the preparation of polyketides.

HONORS

- University Research Initiative Award, 2000
- UNCF-Merck Postdoctoral Fellow, 1996-1998
- National Institutes of Mental Health-Minority Access to Research Careers Fellow, 1987-1990

PROFESSIONAL SERVICE

- Project Seed, sponsored by the American Chemical Society, 2005-present
- Red Tassel/Mortar Board Senior Advisor for Illinois State University, 2004-present
- American Chemical Society, member, 1992-present

PUBLICATIONS

In publications from Illinois State University, the names of undergraduate students have been underlined and the names of graduate students have been identified by an asterisk.

1. "Towards the Development of Oxadiazinanones as Chiral Auxiliaries: Synthesis and Application of N₃-Haloacetyloxadiazinanones," Hoover, T. R.; Groeper, J. A.; Parrott II, R. W.; Chandrashekar, S. P.; Finefield, J. M.; Dominguez, A.; **Hitchcock, S. R.*** *Tetrahedron: Asymm.* **2006**, *17*, 1831-1841.
2. "Synthesis, Reactivity and Conformational Stability of an L-Phenylalanine Derived Oxadiazinanone," Dore, D. D., Burgeson, J. R., Davis, R. A., **Hitchcock, S. R.*** *Tetrahedron: Asymm.* **2006**, *17*, 2386-2392.
3. "A scalable and expedient method of preparing diastereomerically and enantiomerically enriched pseudonorephedrine from norephedrine." Groeper, J. A.; **Hitchcock, S. R.***; Ferrence, G. M. *Tetrahedron: Asymm.* **2006**, *17*, 2884-2889.
4. "Intramolecular Chiral Relay at Stereogenic Nitrogen: Oxazolidine Catalysts Derived from *Ephedra* Alkaloids," Parrott II, R. W.; **Hitchcock, S. R.*** *Tetrahedron: Asymm.* **2006**, *accepted for publication*.
5. Shawn R. Hitchcock, "(1R,2S)-Ephedrine: An Update." *Electronic Encyclopedia of Reagents for Organic Synthesis* **2005**, edited by L. A. Paquette, P. Fuchs, D. Crich, and P. Wipf. *This is an invited contribution*.
6. Michael D. Squire, Ryan A. Davis, Karah A. Chianakas, Gregory M. Ferrence, Jean M. Standard and Shawn R. Hitchcock. "Synthesis, X-ray crystallography, and computational studies concerning an oxadiazinone derived from D-camphor: A structural limitation of oxadiazinones as chiral auxiliaries," *Tetrahedron: Asymmetry* **2005**, *16*, 1047-1053.

7. James R. Burgeson, Delvis D. Dore, Jean M. Standard and Shawn R. Hitchcock, "Conformational preferences of the aldol adducts of oxadiazinones. ^1H NMR spectroscopy and computational studies of N_4 -methyl and N_4 -isopropylloxadiazinones," *Tetrahedron* **2005**, *61*, 10965-10974.
8. "Oxadiazinones as Chiral Auxiliaries: Increased Diastereoselectivities in the Glycolate Aldol Reaction of Oxadiazinones," Vaughn, J. F.; **Hitchcock, S. R.** *Tetrahedron: Asymmetry* **2004**, *15*, 3449-3455.
9. "(5*S*,6*R*)-3,4,5,6-Tetrahydro-5-methyl-6-phenyl-4-propyl-2*H*-1,3,4-oxadiazin-2-one," Szczepura, L. F.; **Hitchcock, S. R.**; Nora, G. P. *Acta Crystallographica* **2004**, *E60*, o1467-o1469.
10. "Synthesis of 3,4,5,6-Tetrahydro-2*H*-1,3,4-oxadiazin-2-ones Employing a Metal Hydride and Diethyl Carbonate: An Alternative Cyclization Method over 1,1'-CarbonylDiimidazole," Casper, D. M.; Kieser, D.; Blackburn, J. R.; **Hitchcock, S. R.** *Synth. Commun.* **2004**, *34*, 835-843.
11. "Towards the Development of a Structurally Novel Class of Chiral Auxiliaries. Conformational Properties of the Aldol Adducts of Oxadiazinones: Observation of Unusual Shielding," Burgeson, J. R.; Renner, M.; Hardt, I.; Ferrence, G. M.; Standard, J. M.; **Hitchcock, S. R.** *Journal of Organic Chemistry* **2004**, *69*, 727-734.
12. "Intramolecular Chiral Relay at Stereogenic Nitrogen. Synthesis and Application of A New Chiral Auxiliary Derived from (1*R*,2*S*)-Norephedrine and Acetone" for consideration for publication as an article. Hitchcock, S. R.; Casper, D. M.; Vaughn, J. F.; Finfield, J. M.; Ferrence, G. M.; Esken, J. M. *Journal of Organic Chemistry* **2004**, *69*, 714-718.
13. "Oxadiazinones as chiral auxiliaries: diastereoselective aldol addition reactions of N_3 -glycolyl-3,4,5,6-tetrahydro-2*H*-1,3,4-oxidiazin-2-ones," Hoover, T. R.; **Hitchcock, S. R.** *Tetrahedron: Asymm.* **2003**, *14*, 3233-3241.
14. "(5*S*,6*R*)-4,5-Dimethyl-6-phenyl-3-trimethylacetyl-2*H*-1,3,4-oxadiazinan-2-one," Ferrence, G. M.; Esken, J. M.; Blackburn, J. R.; **Hitchcock, S. R.** *Acta Cryst. E* **2003**, *E59*, o212-o214.
15. "An improved procedure for the asymmetric aldol reaction of the titanium enolate of a N_3 -propionyl-3,4,5,6-tetrahydro-2*H*-1,3,4-oxadiazin-2-one," Casper, D. M.; **Hitchcock, S. R.** *Tetrahedron: Asymm.* **2003**, *14*, 517-521.
16. "Conformational Studies of N_3 -Substituted [1,3,4]-Oxadiazinan-2-ones," Casper, D. M.; Blackburn, J. R.; Maroules, C. D.; Brady, T.; Esken, J. M.; Ferrence, G. M.; Standard, J. M.; **Hitchcock, S. R.** *J. Org. Chem.* **2002**, *67*, 8871-8876.
17. "Towards the Development of a New Class of Chiral Auxiliaries: Asymmetric Aldol Reactions of 3,4,5,6-Tetrahydro-1,3,4-2*H*-oxadiazin-2-ones," Casper, D. M.; Burgeson, J. R.; Esken, J. M.; Ferrence, G. M.; Hitchcock, S. R. *Organic Letters* **2002**, *4*, 3739-3742.
18. "Synthesis of Novel 1,3,4-Oxadiazinane-2-thiones Derived from Ephedrine, Pseudoephedrine and Norephedrine," **Hitchcock, S. R.**; Nora, G. P.; Casper, D. M.; Wiman, J. D.; Bentley, J. T.; Stafford, C.; Squire, Michael D. *J. Heterocyclic Chem.* **2002**, *39*, 1113-1115.

19. "Enantiomerically enriched *vic*-aminoalcohols from D-Camphor," Squire, M. D.; Burwell, A.; Ferrence, G. M.; **Hitchcock, S. R.** *Tetrahedron: Asymm.* **2002**, *13*, 1849-1854.
20. "Synthesis of N₄-Substituted[1,3,4]-oxadiazinan-2-ones Derived from Norephedrine," **Hitchcock, S. R.**; Casper, D. M.; Nora, G. P.; Blackburn, J. R.; Bentley, J. T.; Taylor, D. C. *J. Heterocyclic Chem.* **2002**, *39*, 823-828.
21. "X-ray Crystallographic and ¹³C Nuclear Magnetic Resonance Studies of 3,4,5,6-tetrahydro-2*H*-1,3,4-oxadiazin-2-ones Derived from Ephedrine and Pseudoephedrine," **Hitchcock, S. R.**; Nora, G. P.; Casper, D. M.; Squire, M. D.; Maroules, C. D.; Ferrence, G. M.; Szczepura, L. F.; Standard, J. M. *Tetrahedron* **2001**, *57*, 9789-9798.
22. "X-ray Crystallographic and Proton Nuclear Magnetic Resonance Studies of β-Hydroxy-*N*-nitrosamines derived from α-Amino acids and Ephedrine," **Hitchcock, S. R.**; Nora, G. P.; Hedberg, C.; Casper, D. M.; Buchanan, L. S.; Squire, M. D.; West, D. X. *Tetrahedron* **2000**, *56*, 8799-8806.
23. "Reductive dehydroxy couplings of 2-(hydroxymethyl)indenes to prepare ethano-bridged bis(2-indenyl)*ansa*-titanocenes," Palandoken, H.; Wyatt, J. K.; **Hitchcock, S. R.**; Olmstead, M. M.; Nantz, M. H. *Journal of Organometallic Chemistry* **1999**, *579*, 338-347.
24. "Asymmetric Memory at Labile, Stereogenic Boron; Enolate Alkylation of Oxazaborolidinones," Vedejs, E.; Fields, S. C.; Hayashi, R.; **Hitchcock, S. R.**; Powell, D. R.; Schrimpf, M. R. *J. Am. Chem. Soc.* **1999**, *121*, 2460-2470.
25. "Cyclohexane-Linked Indenyl Rings in 5,8-Bis(Trimethylsilyl)-6,7,12*B*,12*C*-Tetrahydro-indeno(2,1*c*) Fluorene," Olmstead, M. M.; **Hitchcock, S. R.**; Nantz, M. H. *Acta Crystallographica, Section C* **1996**, *52*, 1523-1525.
26. "Synthesis of *ansa*-Titanocenes from 1,2-Bis(2-indenyl)ethane and Structural Comparisons in the Catalytic Epoxidation of Unfunctionalized Alkenes," **Hitchcock, S. R.**; Situ, J. J.; Covell, J. A.; Olmstead, M. M.; Nantz, M. H. *Organometallics* **1995**, *14*, 3732-3740.
27. "The Structure of Ethylene Bis[1,2-η⁵-(2-indenyl)]TiCl₂," Parkin, S. R.; **Hitchcock, S. R.**; Hope, H.; Nantz, M. H. *Acta Crystallographica, Section C* **1994**, *50*, 169-171.
28. "A Disulfone Approach to *ansa*-Titanocenes: Synthesis of Ethylene Bis(2-indenyl)titanium Dichloride," Nantz, M. H.; **Hitchcock, S. R.**; Sutton, S. C.; Smith, M. D. *Organometallics* **1993**, *12*, 5012-5015.
29. "The Optical Resolution of 2,3-Dimethylsuccinic Acid," Sutton, S. C.; Nantz, M. H.; **Hitchcock, S. R.** *Org. Prep. Proced., Int.* **1992**, *24*, 39-43.
30. "Generation of Polypropionate Fragments via a Tandem Aldol-Bis-oxidation Procedure," Pratt, N. E.; Zhao, Y.-b.; **Hitchcock, S. R.**; Albizati, K. F. *SynLett* **1991**, 361-363.

31. “Efficient Synthesis of α -(Hydroxymethyl)ketones not Available through Aldol-Type Processes,”
Hitchcock, S. R.; Perron, F.; Martin, V. A.; Albizati, K. F. *Synthesis* **1990**, *11*, 1059-1061.

REFERENCES

Available upon request.