

Mira A. Kanzelberger

CURRICULUM VITAE

Education

RUTGERS UNIVERSITY, Piscataway, New Jersey

Ph.D., Chemistry

2004

Dissertation: *C—H Bond Activation and Related Chemistry of PCP-Pincer Ligated Iridium*

Advisor: Alan S. Goldman

CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, California

B.S., Chemistry

1987

Recent Experience

FRANCISCAN UNIVERSITY OF STEUBENVILLE, Steubenville, Ohio

Senior Research Scientist, Department of Chemistry

2015 – Present

SHORELINE COMMUNITY COLLEGE, Shoreline, Washington

Associate Faculty, Science Division

2005 – 2011

Publications

Dinitrogen Complexes of Pincer-Ligated Iridium. R. Ghosh, M. Kanzelberger, T. Emge, G. S. Hall, and A. S. Goldman. *Organometallics* 2006, 25, 5668-5671.

Selective Addition to Iridium of Aryl C—H Bonds Ortho to Coordinating Groups. Not Chelation-Assisted. X. Zhang, M. Kanzelberger, T. Emge, and A. S. Goldman. *J. Am. Chem. Soc.* 2004, 126(41), 13192-13193.

Distinct Thermodynamics for the Formation and Cleavage of N—H Bonds in Aniline and Ammonia. Directly-Observed Reductive Elimination of Ammonia from an Isolated Amido Hydride Complex. M. Kanzelberger, X. Zhang, T. Emge, A. S. Goldman, J. Zhao, and J. F. Hartwig. *J. Am. Chem. Soc.* 2003, 125, 13644-13645.

Combined Computational and Experimental Study of Substituent Effects on the Thermodynamics of H₂, CO, Arene, and Alkane Addition to Iridium. K. Krogh-Jespersen, M. Czerw, K. Zhu, B. Singh, M. Kanzelberger, N. Darji, P. Achord, K. Renkema, and A. S. Goldman. *J. Am. Chem. Soc.* 2002, 124(36), 10797-10809.

DFT/ECP Study of C—H Activation by (PCP)Ir and (PCP)Ir(H)₂ (PCP = *eta*³-1,3-C₆H₃(CH₂PR₂)₂). Enthalpies and Free Energies of Associative and Dissociative Pathways. K. Krogh-Jespersen, M. Czerw, M. Kanzelberger, and A. S. Goldman. *J. Chem. Inf. Comput. Sci.* 2001, *41*, 56-63.

Addition of C—H Bonds to the Catalytically Active Complex (PCP)Ir (PCP = *eta*³-2,6-(*t*-Bu₂PCH₂)₂C₆H₃). M. Kanzelberger, B. Singh, M. Czerw, K. Krogh-Jespersen, and A. S. Goldman. *J. Am. Chem. Soc.* 2000, *122*(44), 11017-11018.

Azole Phenoxy Hydroxyureas as Selective and Orally Active Inhibitors of 5-Lip-oxygenase. M. S. Malamas, R. P. Carlson, D. Grimes, R. Howell, K. Glaser, I. Gunawan, J. A. Nelson, M. Kanzelberger, U. Shah, and D. A. Hartman. *J. Med. Chem.* 1996, *39*(1), 237-245.

Presentations (presenter underlined)

Epibatidine 7-Azabicyclo[2.2.1]heptane Core Synthesis by 3+2 Cycloaddition and Enantioselective Proposal, Reece Hoyer, Mira Kanzelberger, Aaron Bloomfield, Jeffrey Rohde, Jeffrey Evanseck. Poster 31. Duquesne Summer REU Internship Symposium, Pittsburgh, PA, July 2018.

Evidence for formyl and α -hydrogen bonding in asymmetric organic reactions from single crystal X-ray diffraction and density functional theory, Jan-Louis Cosme-Silva, Brandon T. Vernier, Michael A. Novak, Jeffrey J. Rohde, Mira Kanzelberger, and Jeffrey D. Evanseck, Poster 44, Duquesne Summer REU Internship Symposium, Pittsburgh, PA, July 2016.

Selective addition of aryl C—H bonds. Unanticipated kinetic and thermodynamic roles of ortho functional groups. X. Zhang, P. Achord, M. Kanzelberger, T. Emge, A. S. Goldman. Paper INOR-766. 228th ACS National Meeting, Philadelphia, PA, August 2004.

Oxidations of C—H bonds by isolated transition metal complexes. J. Mayer, A. DiPasquale, T. Matsuo, A. Dehestani, A. Larsen, B. Bales, T. McBride, J. Bryant, M. Kanzelberger. Paper IEC-086. 227th ACS National Meeting, Anaheim, CA, March 2004.

Synthesis and structural characterization of iridium parent amido hydrides and directly-observed reductive elimination of ammonia. J. Hartwig, J. Zhao, A. S. Goldman, M. Kanzelberger. Paper INOR-087. 226th ACS National Meeting, New York, NY, September 2003.

N—H addition to pincer-ligated iridium complexes. Synthesis and thermodynamic studies. X. Zhang, M. Kanzelberger, T. Emge, J. Hartwig, K. Krogh-Jesprsen, A. S. Goldman. Paper INOR-088. 226th ACS National Meeting, New York, NY, September 2003.

Stable products of C—H addition to an iridium-based alkane-dehydrogenation catalyst. M. Kanzelberger, B. Singh, M. Czerw, K. Krogh-Jespersen, A. S. Goldman. Paper INOR-023, 220th ACS National Meeting, Washington, D.C., August 2000.

Alkane dehydrogenation by pincer-ligated iridium complexes. Stable C—H addition products. M. Kanzelberger, B. Singh, K. Zhu, A. S. Goldman. Paper INOR-366, 219th ACS National Meeting, San Francisco, CA, March 2000.

Industrial Experience

WYETH-AYERST RESEARCH, Princeton, New Jersey
Associate Chemist, Medicinal Chemistry
1992 – 1996

More than a hundred novel compounds submitted for biological testing, mostly in half-gram or gram quantities. Hundreds of additional intermediates synthesized, isolated, and characterized.

WYETH-AYERST RESEARCH, Princeton, New Jersey
Staff Chemist, Analytical Department
1991 – 1992

Developed, maintained, and ran an in-house version of a spectrophotometric enzymatic binding assay for rapamycin analogs. Elemental analysis, IR, Karl Fisher.

Patents

Preparation of 4-amino(ethylamino)oxindoles as dopamine autoreceptor agonists.

J. A. Nelson, M. A. Kanzelberger, and R. E. Mewshaw.
United States Patent No. 6228880, issued May 2001.

Preparation of 4-(2-aminoethylamino)oxindole dopamine autoreceptor agonists.

J. A. Nelson, M. A. Kanzelberger, and R. E. Mewshaw.
World Patent No. 9952870, issued October 1999.

Preparation and serotonin 5-HT_{1A} receptor affinity of thiophen-2-ylpiperidinyl- or thiophen-2-yltetrahydropyridinyl-substituted azabicyclohexanecarboxamides.

R. B. Baudy, J. A. Nelson, and M. A. Kanzelberger.
United States Patent No. 5610164, issued March 1997.

Preparation of N-[4-(thienylpiperidino)-2-phenylbutyryl]nortropanes and analogs as 5-HT_{1A} receptor ligands.

R. B. Baudy, J. A. Nelson, and M. A. Kanzelberger.
European Patent No. 755932, issued January 1997.

Preparation of piperazine-containing bicyclic carboxamides as 5-HT_{1A} receptor antagonists.

I. A. Cliffe, H. L. Mansell, T. J. Ward, J. A. Nelson, U. S. Shah, and M. A. Kanzelberger.
World Patent No. 9609302, issued March 1996.

Other Experience

UNIVERSITY OF WASHINGTON, Seattle, Washington
Postdoctoral Research Associate, Spring 2003 – Spring 2005
Instructor in Inorganic Chemistry (upper division), Summer 2005
Instructor in General/Organic Chemistry (for non-majors), Winter 2004

RUTGERS UNIVERSITY, Piscataway, New Jersey
Lab Teaching Assistant, Organic Lab for non-majors, Spring 2001, Spring 2002
Recitation Instructor, General Chemistry, Spring 2000, Fall 2001

UNIVERSITY OF CALIFORNIA, BERKELEY, Berkeley, California
Graduate Student, Department of Chemistry, Fall 1987 – Spring 1988
Graduate Student Instructor, Physical Chemistry Lab, Fall 1987

Honors

J. R. L. Morgan Fellowship, 1997-2000
Graduate School Fellowship, 1998-99
University Excellence Fellowship, 1997-98
Caltech Kodak Scholar, 1984-86
Tau Beta Pi, 1984
Caltech Summer Undergraduate Research Fellowship, 1983

Affiliations

American Chemical Society