

CURRICULUM VITAE
DAVID FRANKLIN MARTEN
Professor of Chemistry

(3/2011)

I. PERSONAL

Address:

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Santa Barbara, CA 93109

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Department of Chemistry
Westmont College
Santa Barbara, CA 93108
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II. EDUCATION

Ph.D. in Organic Chemistry, University of Wisconsin, Madison (9/70 to 8/74). Degree received December, 1974.

Research mentor: Professor Charles P. Casey.

Dissertation title: "The Reaction of Organocopper (I) Reagents with Enol Esters Derived from 1,3-Dicarbonyl Compounds."

B.S. in Chemistry, Western Illinois University, Macomb (9/66 to 8/70).

Degree Received August, 1970.

Research mentor: Professor Garrit P. Bean

III. TEACHING AND RESEARCH EXPERIENCES

Teaching:

Westmont:

Recent courses taught: general, organic, advanced organic, advanced inorganic plus introductory and advanced analytical chemistry. Laboratory courses in organic, advanced organic plus introductory and advanced analytical chemistry.

University of Oklahoma:

Courses taught in organic and advanced organic chemistry for undergraduate and graduate students

University of Iowa:

Courses taught in organic and biochemistry.

Research:

Ph.D.: Organocopper reagents in organic synthesis. New procedures were developed for the synthesis of prostaglandins and isoprenoids. A substitution reaction using organocopper compounds was discovered and used in the selective stereospecific synthesis of trisubstituted alkenes.

Postdoctoral: Transition metal organometallics in organic synthesis. New synthetic procedures using organotransition metal complexes were developed and applied to the synthesis of hydroazulene and β -lactam natural products.

Current: Transition metal complexes as reagents and catalysts in organic synthesis. New procedures have been developed, some catalytic, to prepare important organic functional groups: lactones, furans, benzofurans.

Recent: Projects include a new synthesis of optically active β -lactams using new chiral iron complexes and the development of a metal promoted formal S_N2' substitution reaction. A sabbatical leave in 1990 was spent in Germany working on new applications of phase transfer catalysis to organic synthesis. All current projects have undergraduates as

collaborators. Summer Research Associate positions (2002 and 2007) at U. California, Santa Barbara have resulted in a new research area of phosphorus chemistry applied to chiral organic synthesis.

Positions held:

Professor of Chemistry, Westmont College, Santa Barbara, California, 5/98 to present.

Research Associate, University of California, Santa Barbara. Funded summer research position through the Petroleum Research Fund with Dan Little, 5/02-7/02 and 5/07-12/07

Visiting Scientist, University of Bielefeld, Germany. Sabbatical with Eckehard Dehmlow, 6/90-12/90.

Associate Professor of Chemistry, Westmont College, Santa Barbara, California, 9/83 to 4/98.

Assistant Professor of Organic Chemistry, University of Oklahoma, Norman, 9/77 to 8/83

Temporary Assistant Professor of Organic Chemistry, University of Iowa, Iowa City, 9/76 to 8/77.

Postdoctoral Research Associate with Myron Rosenblum at Brandeis University, Waltham, Massachusetts, 9/74 to 8/76.

Research Assistant, University of Wisconsin, Madison, 6/72 to 8/74.

Teaching Assistant, University of Wisconsin, Madison, 9/70 to 5/72.

IV. ADMINISTRATIVE EXPERIENCE

Served on Task force on Experiential Education (10-11); Program Review Committee (07-09); Academic Senate (04-07) (10-12); Science Advisory Council (04-06); WASC Steering Committee (02-06); Faculty Salary Budget Committee (94-97), (99-02), (06-10); Faculty Personnel Committee (91-93), Faculty Council (84-86,86-88, 03-05), secretary of Faculty Council (85-86, 03-04); member Computer Committee (85-89); chair of Computer Committee (89-90); member Academic Planning Committee (88-90); member *ad hoc* Housing Committee (86-88, 05-06). Chemistry faculty liaison on construction of new science building (84-85).

V. PUBLICATIONS IN PRINT

ARTICLES

Casey, C.P.; Boggs, R.A.; Marten, D.F.; Calabrese, J.C. "Preparation and Molecular Structure of (3-Acetyl-4,5-dihydrofuran-2-yl)tetracarbonylmanganese(I)." *J. Chem. Soc. Ch.* **1973**, 243-4.

Casey, C.P.; Marten, D.F.; Boggs, R.A. "Reaction of Lithium Dialkylcuprates with β -Acetoxy- α,β -unsaturated Carbonyl Compounds --- A New Syntheses of Substituted α,β -Unsaturated Carbonyl Compounds." *Tetrahedron Lett.* **1973**, 2071-4.

Casey, C.P.; Marten, D.F. "A New General Synthesis of Isoprenoid Chains Employing the Reaction of Dialkylcuprates with β -Acetoxy- α,β -unsaturated Esters." *Synth. Commun.* **1973**, 321-4.

Casey, C.P.; Marten, D.F. "Stereoselective Synthesis of Both *Z*- and *E*- β -Acyloxy- α,β -unsaturated Esters and Their Stereospecific Conversion to β -Alkyl- α,β -unsaturated Esters." *Tetrahedron Lett.* **1974**, 925-8.

Casey, C.P.; Cyr, C.R.; Anderson, R.L.; Marten, D.F. "Reactions of Metal Carbonyl Anions with Methyl Organometallic Compounds." *J. Am. Chem. Soc.* **1975**, 97, 3053-9.

Cutler, A.; Ehntholt, D.; Lennon, P.; Nicholas, K.; Marten, D.; Madhavarao, M.; Raghu, S.; Rosan, A.; Rosenblum, M. "Chemistry of Dicarboxyl η^5 -Cyclopentadienyliron Complexes. General syntheses of Monosubstituted η^2 -Olefin Complexes and of 1-Substituted η^1 -Allyl Complexes. Conformational Effects on the Course of Deprotonation of (η^2 -Olefin)Cations." *J. Am. Chem. Soc.* **1975**, 97, 3149-57.

- Fish, R.W.; Giering, W.P.; Marten, D.; Rosenblum, M. "Thermal and Photochemical Interconversions of Isomeric Monocarbonyl(η^5 -Cyclopentadienyl)(η^3 -allyl)iron Complexes." *J. Organomet. Chem.* **1976**, *105*, 101-18.
- Genco, N.; Marten, D.; Raghu, S.; Rosenblum, M. "Metal Assisted C-C Bond Formation. A New Hydroazulene Synthesis." *J. Am. Chem. Soc.* **1976**, *98*, 848-9.
- Foxman, B.; Marten, D.; Rosan, A.; Raghu, S.; Rosenblum, M. "Synthesis, Stereoisomerism and Fluxional Behavior of Cationic Alleneiron Complexes." *J. Am. Chem. Soc.* **1977**, *99*, 2160-5.
- Wong, P.K.; Madhavarao, M.; Marten, D.; Rosenblum, M. "A New Synthesis of *beta*-Lactams." *J. Am. Chem. Soc.* **1977**, *99*, 2823-4.
- Marten, D.F. "Competitive Pathways in the Reaction of Acetylenic Alcohols with η^5 -Cyclopentadienyl(dicarbonyl)-(η^2 -2-methylpropene)iron(II)Cation." *J. Chem. Soc., Chem. Commun.* **1980**, 341-342.
- Marten, D.F.; Dehmlow, E.V.; Hossain, M.B.; Hanlon, D.J.; van der Helm, D. "Synthesis of Bridging Vinylidene Iron Dimers Using 1,1-Dichlorocyclopropanes. Cyclopropenes as Intermediates." *J. Am. Chem. Soc.* **1981**, *103*, 4940-4941.
- Marten, D.F. "Dihydrofurans from Hydroxyallenes and Dicarbonyl- η^5 -cyclopentadienyl (η^2 -isobutylene)iron Cation." *J. Org. Chem.* **1981**, *46*, 5422-5425.
- Hossain, M.B.; Hanlon, D.J.; Marten, D.F.; van der Helm, E.V.; Dehmlow, E.V. "The Structure of the Ether Solvate of *cis*- μ -[Benzyl(phenyl)-vinylidene]- μ -carbonylbis[carbonyl-(η^5 -cyclopentadienyl)iron(O)](Fe-Fe), *cis*-Fe₂(CO)₂(η^5 -C₅H₅)₂(μ -CO)-[μ -C=C(C₆H₅)CH₂(C₆H₅)]·C₄H₁₀O." *Acta Cryst.* **1982**, *B38*, 1457-1461.
- Marten, D.F.; Wilburn, S.M. "Iron-Silicon Bond Cleavage in Dicarbonyl- (η^5 -cyclopentadienyl)(trimethylsilyl)iron Using Tetrabutylammonium Fluoride." *J. Organomet. Chem.* **1983**, *251*, 71-78.
- Chan, S.M.; Basmadjian, G.P.; Marten, D.F.; Sadek, S.A.; Magarian, R.A.; Grunder, J.R.; Ice, R.D. "Synthesis and Biodistribution of Radioiodinated-5-iodonicotine." *J. Label. Compd. Radiopharm.* **1983**, *20*, 1017-1025.
- Chan, S.M.; Basmadjian G.P.; Marten, D.F.; Sadek, S.A.; Magarian, R.A.; Grunder, J.R. "Synthesis and Biodistribution of Radioiodinated Nicotine Analogs." *J. Label. Compd. Radiopharm.* **1986**, *23*, 647-656.
- Tro, N.J.; Tro, J.J.; Marten, D.F.; Nishimura, A.N. "Intramolecular External Heavy-Atom Effects on the Phosphorescent Triplet State of Several Cycloalkanones." *J. Photochem.* **1986**, *36(2)*, 141-148.
- Marten, D.F.; Akbari, M.N. "Carbanion Addition to a Metalated Acetaldehyde. A New Regiospecific Alkene Synthesis." *J. Organomet. Chem.* **1987**, *322*, 99-102.
- Riley, S.A.; Fifield, L.S.; Brubaker, K.; Rosbrugh, I.; Marten, D.F.; Martin, K.A.; Nishimura, A.N. "Detection of Multiple Trap Sites in α -deuterated 2-indanone using Optically Detected Magnetic Resonance." *J. Luminescence* **1998**, *78*, 179-186.
- Lazar, K.L.; Greene, B.E.; Stein, C.S.; Johnson, W.P.; Choi, P.J.; Marten, D.F.; Nishimura, A.M.; Tinti, D.S. "Optically Detected Magnetic Resonance of α - deuterated 2-indanone." *J. Luminescence* **2006**, *118(1)*, 21-32.
- Burdett, J. J.; Marten, D. F.; Martin, K. A.; Nishimura, A. M.. "Determination of spin-spin relaxation in 2-indanone by differential saturation of the ODMR line." *J. Undergraduate Chemistry Research* **2007**, *6(1)*, 1.1-1.6
- Anderson, Stanley E.; Somogyi, Arpad; Haddad, Timothy S.; Coughlin, E. Bryan; Gadodia, Gunjan; Marten, David F.; Ray, Julie; Bowers, Michael T. "ESI and MALDI mass spectrometry of large POSS oligomers." *International Journal of Mass Spectrometry* **2010**, *292(1-3)*, 38-47.

BOOK REVIEW

Marten, D.F. Review of "Inorganic and Organometallic Reaction Mechanisms." by Jim D. Atwood. J. Am. Chem. Soc. 1986, 108, 6448.

PAPERS PRESENTED AT MEETINGS

Casey, C.P.; Marten, D.F.* "Reaction of Lithium Dialkylcuprates with β -Acetoxy- α,β -unsaturated Carbonyl Compounds - - - a New Synthesis of Substituted α,β -Unsaturated Carbonyl Compounds," 7th Great Lakes ACS Regional Meeting in Kalamazoo, Michigan, June 6, 1973.

Foxman, B.; Marten, D.F.*; Rosan, A.; Raghu, S.; Rosenblum, M. "Synthesis, Stereochemistry and Fluxional Behavior of Cationic Alleneiron Complexes." 173rd ACS National Meeting in New Orleans, Louisiana, March 23, 1977.

Marten, D.F.* "Novel Isomerization of 2,3-Butadiene-1-ol to 4,5-Dihydrofuran via a Transition Metal Complex." 33rd ACS Southwest Regional Meeting in Little Rock, Arkansas, December 6, 1977.

Marten, D.F.* "Transition Metal Promoted Unsaturated Lactone Synthesis." Rocky Mountain Regional ACS Meeting, Boulder, Colorado, June 5, 1978.

Marten, D.F.* "Novel Reactions of Alkynes and Allenes Containing Hydroxyl Groups." Oklahoma Pentasectional ACS Meeting, Oklahoma State University, March 24, 1980, abst. #ORGN-45.

Marten, D.F.* "Dihydrofurans from Hydroxyallenes and Dicarboxyl(η^5 -cyclopentadienyl)(η^2 -isobutylene)iron Cation." National ACS Meeting, Houston, March 24, 1980, abst. #ORGN-45.

Marten, D.F.*; Akbari, M.N. "Reaction of Carbanions with η^5 -cyclopentadienyl(dicarbonyl)-(η^1 -acetaldehyde)iron(II). A New Olefin Synthesis." Oklahoma Pentasectional ACS Meeting, Cameron University, April 12, 1980.

Marten, D.F.*; Hanlon, D.J.*; van der Helm, D.; Hossain, M.V.; Dehmlow, E.V. "Vinylidene Carbene Complexes Using Phase Transfer Catalysis." Oklahoma Pentasectional ACS Meeting, Cameron University, April 12, 1980.

Marten, D.F.*; Rigler, D.; Akbari, M.N. "Reaction of Carbanions with η^5 -Cyclopentadienyl-(dicarbonyl)(η^1 -acetaldehyde)iron(II). A New Olefin Synthesis." 3rd IUPAC International Conference on Organic Synthesis, Madison, Wisconsin, June 16, 1980.

Marten, D.F.*; Hanlon, D.J.*; van der Helm, D.; Hossain, M.B.; Dehmlow, E.V. "Synthesis of Transition Metal Vinylidene Complexes Using Phase Transfer Catalysis." 181st National ACS Meeting, Atlanta, April 1, 1981, abs. #INOG 135.

Marten, D.F.*; Kim, J.; Cochran, S. "Synthesis of Furans, Hydrofurans and Benzofurans Using Organoiron Complexes." First IUPAC Symposium on Organometallics in Organic Synthesis, Fort Collins, Colorado, August 3, 1981.

Marten, D.F.*; Hanlon, D.J. "Phase Transfer Methods in the Synthesis of Catalysis Model Compounds." 3rd International Symposium on Homogeneous Catalysis, Milan, Italy, September 1, 1982.

Marten, D.F.*; Hanlon, D.J.; van der Helm, D.; Hossain, M.B.; Dehmlow, E.V. "Phase Transfer Catalysis as a Synthetic Route to Bridging Vinylideneiron Dimers," 184th National ACS Meeting, Kansas City, September 17, 1982, abst. #ORGN 200.

Marten, D.F.*; Hanlon, D.J.; van der Helm, D.; Hossain, M.B.; Dehmlow, E.V. "Cyclopropenes as Intermediates in the Synthesis and Chemistry of Several New Organoiron Complexes." 184th National ACS Meeting, Kansas City, September 17, 1982, abst. #ORGN 201.

Marten, D.F.*; Akbari, M.N. "Carbanion Addition to a Metalated Acetaldehyde. A New Regiospecific Olefin Synthesis." 187th National ACS Meeting, St. Louis, April 12, 1984, abst. #ORGN 248.

- Chan, S.M.; Basmadjian, G.P.*; Marten, D.F.; Sadek, S.; Magarian, R.A.; Grunder, J.R.; Ice, R.D. "Synthesis and Biodistribution of Radioiodated 5-Iodonitine." *J. Nucl. Med.* **1983**, *24*, P116.
- Chan, S.M.; Basmadjian, C.P.*; Marten, D.F.; Sadek, S.; Magarian, R.A.; Grunder, J.R.; Ice, R.D. "Synthesis and Biodistribution of Radioiodinated Nicotine Analogs." *J. Nucl. Med.* **1984**, *25*, P121.
- Chan, S.M.; Basmadjian, C.P.*; Marten, D.F.; Sadek, S.; Magarian, R.A.; Grunder, J.R.; Ice, R.D. "Synthesis and Biodistribution of Radioiodinated Nicotine Analogs." Paper presented at the 31st annual meeting of the Society of Nuclear Medicine, Los Angeles, CA, June, 1984.
- Marten, D.F.*; Park, A.J.; Heise, C.; Kim, J.H.; Hoel, S. "Competitive Pathways in the Reaction of 3-Alkyn-1-ols with an Organoiron Cation." Paper presented at the 192nd ACS national meeting, Anaheim, CA, September, 1986. Abstract # INORG-264.
- Marten, D.F.*; Yoo, M.E.; Johnston, B.; King, K. "Synthesis, Structural Aspects and Reactions of Neutral Chelated Alkene Iron Complexes." Paper presented at the 196th ACS national meeting, Los Angeles, CA, September, 1988. Abstract #INOR 127.
- Marten, D.F.*; Yoo-Kang, M.E.; Sullivan, A.; Stankiewicz, K. "Stereocontrolled Synthesis of *beta*-Lactams Using Organoiron Complexes." Paper presented at the Ninth International Conference on Organic Synthesis, Montreal, Quebec, June, 1992.
- Marten, D.F.*; Wong, S.; Stucky, K.; Grout, A. "Dichlorocarbene Reactions with Metal η^1 -Allyl Complexes - A New Diene Synthesis." Paper presented at the 34th National Organic Symposium of the American Chemical Society, College of William and Mary, June 11-15, 1995. Abstract #231.
- Marten, D.F.*; Lamarche, Brandon J.; Heitkemper, Ann K. "Use of Amino Acids in the Synthesis of Nonracemic Chelated Iron Lactam Complexes." Paper presented at the 36th National Organic Chemistry Symposium of the American Chemical Society, University of Wisconsin, Madison, June 13-17, 1999. Abstract 174.
- Marten, D.F.*; Aldrich, Drew; Berry, Lea; Lamarche, Brandon J.; Tro, Ann K. "Synthesis and Properties of Non-racemic Chelated Iron Lactam and Lactone Complexes." Paper presented at the 224th American Chemical Society National Meeting, Boston, Massachusetts, August 18-22, 2002. Abstract # INOR 293. Invited paper.
- Stein, C.S.; Engle, A.; Marten, D.F. "New approaches in the stereochemical synthesis of iron lactam compounds and their starting materials". Paper presented at the 229th ACS National Meeting, San Diego, California, March 13-17, 2005. Abstract #CHED-448.

INVITED COLOQUIA

- Oklahoma State University, Stillwater, Oklahoma, November 27, 1979; Organometallics in Organic Synthesis: Allene and Alkyne Reactions."
- Wichita Falls-Duncan ACS Section, Duncan, Oklahoma, October 7, 1980; Organometallics in Organic Synthesis."
- Exxon Corporate Research Center, Linden New Jersey, March 19, 1982; Reactions of Functionalized Acetylenes and Allenes with Organo-iron Complexes."
- University of Bielefeld, Bielefeld, West Germany, September 8, 1982; "Synthesis and Chemistry of Metalized Cyclopropenes."
- Technical University of Berlin, West Berlin, September 10, 1982; New Approaches to Iron Dimers Possessing Bridging Hydrocarbon Ligands."
- University of Iowa, Iowa City, September 21, 1982; "Synthesis and Chemistry of Metalated Cyclopropenes,"
- University of Wisconsin, Madison, September 23, 1982; Synthesis and Chemistry of Metalated Cyclopropenes."

- Iowa State University, Ames, September 24, 1982; Synthesis and Chemistry of Metalated Cyclopropenes."
- University of California, Santa Barbara, Nov. 7, 1984; "Synthesis of Organotransition Metal Dimers via Phase Transfer Catalysis."
- University of Bielefeld, Bielefeld, Germany, Oct. 19, 1990; "Metal-Assisted Organic Synthesis: Optically Active *beta*-Lactams."
- University of California, Santa Barbara, Nov. 28, 2007, "The Chemistry of Neutral η^2 -Alkene Organoiron Chelate Complexes."

UNDERGRADUATE STUDENT PAPERS (SINCE 1984)

- Park, A.N.; Marten, D.F. "Synthesis and Reactions of a New Cationic Iron Carbene Complex." Paper presented at Undergraduate Research Conference, Occidental College, May 1984.
- King, K.G.; Marten, D.F. "Preparation of Neutral Chelated Alkene Iron Complexes." Paper presented at Undergraduate Research Conference, Loyola Marymount University, April, 1987.
- Voss, B.E.; Marten, D.F. "Reactions of Neutral Chelated Alkene Iron Complexes with Nucleophiles." Paper presented at Undergraduate Research Conference, Loyola Marymount University, April, 1987.
- Yoo, M.E.; Marten, D.F. "Synthesis, Structural Aspects and Reactions of Neutral Chelated Alkene Iron Complexes." Paper presented at Undergraduate Research Conference, California State University, Fullerton, April, 1988.
- Bani Cesano, L.; Marten, D.F. "Synthesis of New Iron Lactam Complexes." Paper presented at Undergraduate Research Conference, California State University, Fullerton, April, 1988.
- Yoo, M.E.; Marten, D.F. "Chiral Synthesis of New β -Lactams Using Organoiron Complexes." Paper presented at Undergraduate Research Conference, University of California, Los Angeles, April, 1989.
- Parsons, J.L.; Marten, D.F. "A New Cyclization Reaction Involving Regiospecific Reactions of Nucleophiles with 3-Substituted η^2 -Alkene Iron Cationic Complexes." Paper presented at Undergraduate Research Conference, University of California, Los Angeles, April, 1989.
- Stankiewicz, K.T.; Marten, D.F. "Synthesis of New Substituted Chelated Iron Lactam Complexes." Paper presented at Undergraduate Research Conference, California State University, Los Angeles, April, 1990.
- Marroquin, A.L.; Marten, D.F. "Synthesis of N-Acyl Iron Lactam Complexes." Paper presented at Undergraduate Research Conference, Loyola Marymount University, April, 1993.
- Kast, H.R.; Marten, D.F. "Organoiron Complexes in the stereoselective Synthesis of Homoallyl Alcohols." Paper presented at the Southern California Conference on Undergraduate Research, California Institute of Technology, Pasadena, CA., November 19, 1994. Abstract CHM.I.5I.
- Wong, S.; Marten, D.F. "Dichlorocarbene Reactions with Metal Sigma-Allyl Complexes." Paper presented at the Southern California Conference on Undergraduate Research, California Institute of Technology, Pasadena, CA., November 19, 1994. Abstract CHM.I.6I.
- Grout, A.; Wong, S.; Marten, D.F. "Dichlorocarbene reactions with Metal σ -allyl Complexes." Paper presented at the Southern California Conference on Undergraduate Research, University of California, Santa Barbara, CA., April 27, 1996. Abstract O1-1.
- Wong, S.; Grout, A.; Marten, D.F. "Formation of 1,3-Butadienes by 1,4-Fragmentative Elimination of Cyclopropylmethyl-Metal Complexes." Paper presented at the Southern California Conference on Undergraduate Research, University of California, Santa Barbara, CA., April 27, 1996. Abstract O1-2.
- Marshall, H.A.; Marten, D.F. "Metal Catalyzed Claisen Rearrangement of Phenyl Propargyl Ethers - Selective Formation of Benzofurans." Paper presented at the Southern California

- Conference on Undergraduate Research, University of California, Santa Barbara, CA., April 27, 1996. Abstract O1-3.
- Lamarche, B.J.; Heitkemper, A.K.; Marten, D.F. "Use of Amino Acids in the Preparation of Chiral Iron Lactam Complexes." Paper presented at the Southern California Conference on Undergraduate Research, California Polytechnic State University, San Luis Obispo, CA., April, 1998.
- Meador, J.M.; Staake, M.D. "Metal Catalyzed Claisen Rearrangement of Aryl Propargyl Ethers – Synthesis of Benzofurans." Paper presented at the Southern California Conference on Undergraduate Research, California Polytechnic State University, San Luis Obispo, CA., April, 1998.
- Rochford, G.; Marten, D.F. "Synthesis of Chiral Iron Lactone Complexes." Paper presented at the Southern California Conference on Undergraduate Research, California Polytechnic State University, San Luis Obispo, CA., April, 1998.
- Aldrich, D.N.; Lazar, K.L.; Grimm, R.E.; Choi, P.J.; Marten, D.F. "Preparation and Optically Detected Magnetic Resonance Analysis of α -Deuterated 2-Indanone." Paper presented at the 36th National Organic Chemistry Symposium of the American Chemical Society, University of Wisconsin, Madison, June 13-17, 1999. Abstract 2.
- Lazar, K.L.; Marten, D.F. "Synthesis of Benzofurans via an Organoiron Catalyzed Claisen Rearrangement." Paper presented at the 36th National Organic Chemistry Symposium of the American Chemical Society, University of Wisconsin, Madison, June 13-17, 1999. Abstract 152.
- Aldrich, D.N.; Marten, D.F. "A New Synthesis of Carbapenams via a Chelated Iron Lactam Complex." Paper presented at the Southern California Conference on Undergraduate Research, Occidental College, Los Angeles, CA. April 8, 2000. Abstract O-3.
- Lazar, K.L.; Aldrich, D.N.; Grimm, R.E.; Nishimura, A.M.; Marten, D.F. "Preparation and Optically Detected Magnetic Resonance Analysis of α -Deuterated 2-Indanone." Paper presented at the Southern California Conference on Undergraduate Research, Occidental College, Los Angeles, CA. April 8, 2000. Abstract P-9.
- Berry, L.; Marten, D.F. "Use of Amino Acids in the Preparation of Chiral Iron Lactone and Pyrrolidine Complexes." Paper presented at the Southern California Conference on Undergraduate Research, Westmont College, Santa Barbara, CA. April 21, 2001. Abstract P-23.
- Galliher, W.; Marten, D.F. "Synthesis and Stereochemical Studies of Cyclopentadienyl Iron Lactam Complexes." Paper presented at the Southern California ACS Conference on Undergraduate Research, Loyola Marymount University, Los Angeles, CA. April 24, 2004.
- Cannon, Kelsey; Marten, D.F. "Synthesis of a Wittig Reagent Containing Hydroxyl Groups from a Cyclic Carbonate." Paper presented at the Southern California Conference on Undergraduate Research, Pepperdine University, November 20, 2010. Abstract # I-44
- Sievers, Hannah; Marten, D.F. "Wittig Reagents from Amino Acid Derivatives: Preparation of Chiral Auxiliaries" Paper presented at the Southern California Conference on Undergraduate Research, Pepperdine University, November 20, 2010. Abstract # III-40

UNDERGRADUATE MAJOR HONORS PROJECTS

Eight Major Honors Theses have been directed while at Westmont:

- Park, A.J. "Synthesis and Reactivity of a Cationic Iron Carbene Complex and Applications toward Synthesis of Prostacyclin Derivatives." Completed, May, 1985, with grade of A.
- Yoo, M.E. "Synthesis of *beta*-Lactams Using New Iron Lactam Complexes." Completed, April, 1989, with a grade of A.

Parsons, J.L. "Reactions of Nucleophiles with (3-Substituted- η^2 -alkene)-dicarbonyl(cyclopentadienyl)iron Cations." Completed, April, 1989, with a grade of A.
Aldrich, D.N.; "A New Synthesis of Carbapenams via a Chelated Iron Lactam Complex." Completed, April, 2000, with a grade of A.
Berry, L.N. "Use of Amino Acids in the Preparation of Chiral Iron Lactone and Pyrrolidine Complexes." Completed, April 2001 with a grade of A.
Galliher, W. "Synthesis and Stereochemical Studies of Cyclopentadienyliron Lactam Complexes." Completed, April, 2004 with a grade of A.
Stein, C.S. "New Approaches in the Stereochemical Synthesis of Iron Lactam Compounds and Their Starting Materials." Completed, April, 2005 with a grade of A.
Ray, Julie. "Preparation of Aracemic β -Lactams Using Organoiron Complexes" Completed, April, 2006 with a grade of A.

PEER REVIEWER

Peer reviewer of research proposals for the Research Corporation and the Petroleum Research Fund in the area of organometallic chemistry.
Used recently as a peer reviewer for articles submitted for publication to *Journal of the American Chemical Society*, *Journal of Organometallic Chemistry*, and *Journal of Organic Chemistry*.

VI. PROFESSIONAL SOCIETIES AND POSITIONS HELD

Member of the American Chemical Society with Divisional Membership in Organic and Inorganic (Organometallic Subdivision).
Elected Member (Western Illinois University) of Sigma Zeta, Honorary Science Society. Member of Phi
Lambda Upsilon. Member of the American Scientific Affiliation.
Chair-Elect and Chair, California Los Padres Section of the Am. Chem. Soc. 1998-2000.
Alternate Councilor, California Los Padres Section of the Am. Chem. Soc. 2003-2005; 2006-2008; 2009-2011.

VII. HONORS

Outstanding Teacher Award, Natural and Behavioral Sciences Division, Westmont College, 1997.
Dupont Summer Research Grantee, 1971 and 1972, University of Wisconsin, Madison.
F. H. Currens Award in Chemistry, 1970, Western Illinois University, Macomb.
Elected to Sigma Zeta, Honorary Science Society
Elected to Omicron Delta Kappa, Honorary Leadership Society.