

CURRICULUM VITAE

James Wallace Herndon, Jr.

Department of Chemistry and Biochemistry

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II. PERSONAL INFORMATION

EMPLOYMENT:

Professor	6/03 – present	
		<i>Department of Chemistry and Biochemistry, New Mexico State University, Las Cruces, NM</i>
Associate Professor	8/98 – 5/03	
		<i>Department of Chemistry and Biochemistry, New Mexico State University, Las Cruces, NM</i>
Assistant Professor	8/97 - 9/98	
		<i>Department of Chemistry and Biochemistry, New Mexico State University, Las Cruces, NM</i>
Associate Professor	8/91 - 8/98	
		<i>Department of Chemistry and Biochemistry, University of Maryland, College Park, MD</i>
Assistant Professor	7/85-7/91	
		<i>Department of Chemistry and Biochemistry, University of Maryland, College Park, MD</i>
National Institutes of Health Postdoctoral Fellow	10/83-6/85	
		<i>Department of Chemistry, University of Wisconsin, Madison, WI</i>

EDUCATION:

Ph.D.	Chemistry	10/83	<i>Princeton University, Princeton, NJ</i>	
				<i>Thesis: Coupling of Carbon Anions with (1,3-Diene)-tricarbonyliron(0) Complexes: Applications to Organic Synthesis.</i>
M.A.	Chemistry	10/80	<i>Princeton University, Princeton, NJ</i>	
B.S.	Chemistry	5/79	<i>University of North Carolina-Greensboro</i>	

PROFESSIONAL HONORS:

Postdoctoral Fellow	<i>National Institutes of Health</i>	11/83 - 6/85
Invited Participant	<i>NSF Organometallic Workshop</i>	6/89
Invited Participant	<i>NSF Workshop for Organic Synthesis and Natural Products Chemistry</i>	7/89
Junior Faculty Achievement Award	<i>University of Maryland</i>	5/90
Invited Participant	<i>NSF-SERC Joint Workshop for Organometallics in Organic Synthesis</i>	8/92
URC Senior Faculty Creative and Scholarly Activity Award	<i>New Mexico State University</i>	4/03
Recipient of the Westhafer Research Award (NMSU's highest award for Research)		4/08

II. ACADEMIC ACTIVITIES

A. Publications

(all publications are primary refereed articles unless indicated by an asterisk; James W. Herndon is the principal author in every case except publications 1-7, 126)

- *131. Herndon, J. W. "Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 2005." *Coord. Chem. Rev.* **2009**, 253, In Press
- *130. Herndon, J. W. Article entitled "Pentacarbonyl(methoxymethylcarbene)-chromium" for *Encyclopedia of Reagents for Organic Synthesis*. In Press
129. Zhang, Y.; Irshaidat, T.; Wang, H.; Waynant, K. V.; Wang, H.; Herndon, J. W. "Coupling of Fischer carbene complexes with conjugated enediyne featuring radical traps; Novel structure and reactivity features of chromium complexed arene diradical species." *Journal of Organometallic Chemistry* **2008**, 693, 3337-3345.
128. Duan, S.; Sinha-Mahapatra, D. K.; Herndon, J. W. "Synthesis of naphthalenes through three-component coupling of alkynes, Fischer carbene complexes, and benzaldehyde hydrazones via isoindole intermediates." *Org. Lett.* **2008**, 10, 1541-1544.
- *127. Herndon, J.W. "Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 2005." *Coord. Chem. Rev.* **2009**, 253, 86-179
126. Chen, Y.; Ye, S.; Jiao, L.; Liang, Y.; Sinha-Mahapatra, D. K.; Herndon, J. W.; Yu, Z. X.*, "Mechanistic Twist of the [8+2] Cycloadditions of Dienylisobenzofurans and Dimethyl Acetylenedicarboxylate: Stepwise [8+2] vs. [4+2]/[1,5]-Vinyl Shift Mechanisms Revealed Through a Theoretical and Experimental Study." *J. Am. Chem. Soc.* **2007**, 129, 10773-10784.
125. Menon, S.; Sinha-Mahapatra, D.; Herndon, J. W. "Synthesis of phenanthrene derivatives through the net [5+5]-cycloaddition of prenylated carbene complexes with 2-alkynylbenzaldehyde derivatives." *Tetrahedron*, **2007**, 63, 8788-8793.
- *124. Herndon, J.W. "Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 2005." *Coord. Chem. Rev.* **2007**, 251, 1158-1258.
123. Duan, S.; Cress, K.; Waynant, K.; Ramos-Miranda, E.; Herndon, J. W. "Synthesis of alkylidenephthalans through fluoride-induced cyclization of electron-deficient 2-siloxymethylphenylacetylene derivatives." *Tetrahedron* **2007**, 63, 2959-2965.
- *122. Herndon, J.W. "Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 2004."

Coord. Chem. Rev. **2006**, *250*, 1889-1964.

121. Ghorai, B. K.; Duan, S.; Jiang, D.; Herndon, J. W. "Coupling of β -cyanocarbene-chromium complexes with 2-alkynylbenzoyl derivatives: A new synthesis of isoquinolines." *Synthesis* **2006**, 3661-3669.
120. Camacho-Davila, A.; Herndon, J. W. "Total synthesis of antofine using the net [5+5]-cycloaddition of γ,δ -unsaturated carbene complexes and 2-alkynylphenylketones as a key step." *J. Org. Chem.* **2006**, *71*, 6682-6685.
119. Zhang, Y.; Herndon, J. W. "Synthesis of Polynuclear Aromatic Compounds through Net [5+5]-cycloaddition of 2-alkynylarylcarbene Complexes and Enyne-aldehyde Derivatives." *Tetrahedron Lett.* **2006**, *47*, 5303-5306.
118. Zhang, J.; Zhang, Y.; Schnatter, W. F. K.; Herndon, J. W. "Coupling of N-heterocycle-fused enyne aldehydes with γ,δ -unsaturated Fischer carbene complexes." *Organometallics* **2006**, *25*, 1279-1284.
117. Zhang, L.; Herndon, J.W. "Coupling of Fischer Carbene Complexes with Alkynylstyrene Oxides: Synthesis of Benzoxepinones in Competition with Internal Oxygen Atom Transfer." *Heterocycles* **2006**, *67*, 233-246.
- *116. Herndon, J.W. "Reaction Types and Mechanisms: Metathesis Reactions." In *Comprehensive Organometallic Chemistry*, 3rd Edition, Eaborn, C. Ed. Elsevier: Oxford, 2006, Vol. I, pp 167-196.
115. Reid, M.D.; Tirado, L.; Zhang, J.; Nwamara, D.; Herndon, J.W. "Reaction of Cyclopropylcarbene-Metal Complexes with Nucleophiles, Halogens and HX." *J. Organomet. Chem.* **2005**, *690*, 5759-5776.
114. Li, R.; Zhang, L.; Camacho-Davila, A.; Herndon, J.W. "Synthesis of hydrophenanthrenes through a "green" Fischer carbene-alkyne coupling process." *Tetrahedron Lett.* **2005**, *46*, 5117-5120.
113. Luo, Y.; Herndon, J. W. "Tandem Isobenzofuran Formation-Diels Alder Reactions in the Coupling of Carbene Complexes with 2-Alkynylbenzaldehyde Derivatives Featuring an Alkyne-Dienophile Tether." *Organometallics* **2005**, *24*, 3099-3103.
- *112. Herndon, J.W. "Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 2003." *Coord. Chem. Rev.* **2005**, *249*, 999-1083.
111. Zhang, L.; Wang, Y.; Buckingham, C.; Herndon, J.W. "Synthesis of furan-bridged 10-membered rings through [8+2]-cycloaddition of dienyfurans and acetylenic esters." *Org. Lett.* **2005**, *7*, 1665-1667.
110. Zhang, Y.; Candelaria, D.; Herndon, J.W. "Benzannulation of heterocyclic ring systems through coupling of Fischer carbene complexes and heterocycle-bridged enynes." *Tetrahedron Lett.* **2005**, *46*, 2211-2214.
109. Patel, P.; Zhu, Y.; Zhang, L.; Herndon, J.W. "Coupling of Propargylsilanes with Fischer Carbene Chromium Complexes: A New Synthesis of Conjugated Dienes." *J. Organomet. Chem.* **2004**, *689*, 3379-3387.
108. Zhang, L.; Herndon, J.W. "Synthesis of Indanes through Coupling of Ethynylstyrene Derivatives with Carbene

- Complexes.” *Organometallics* **2004**, *23*, 1231-1235.
107. Herndon, J.W. “Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 2002.” *Coord. Chem. Rev.* **2004**, *248*, 3-79.
106. Luo, Y.; Herndon, J.W.; Cervantes-Lee, F. “Synthesis of furanophane derivatives through [8+2]-cycloaddition of dienyliisobenzofurans and alkynes.” *J. Am. Chem. Soc.* **2003**, *125*, 12720-12721.
105. Ghorai, B.K.; Herndon, J.W. “Coupling of Fischer carbene complexes with *o*-alkynylbenzamides.” *Organometallics* **2003**, *22*, 3951-3957.
104. Ghorai, B.K.; Jiang, D.; Herndon, J.W. “Novel synthesis of isoquinolines using isobenzofuran-nitrile Diels-Alder reactions.” *Org. Lett.* **2003**, *5*, 4261-4263.
103. Zhang, Y.; Herndon, J.W. “Synthesis of Pyrroles through Coupling of Enyne Hydrazones with Fischer Carbene Complexes.” *Org. Lett.* **2003**, *5*, 2043-2045.
102. Zhang, J.; Zhang, Y.; Zhang, Y.; Herndon, J.W. “Synthesis of Benzofurans through Coupling of Dienylacetylenes with Carbene Complexes: Total Synthesis of Egonol.” *Tetrahedron* **2003**, *59*, 5609-5616.
- *101. Herndon, J.W. “Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 2001.” *Coord. Chem. Rev.* **2003**, *243*, 3-81.
- *100. Herndon, J.W. “Design of New Reaction Processes based on Cyclopropylcarbene Complexes.” *Current Organic Chemistry*, **2003**, *7*, 329-352.
99. Zhang, L.; Herndon, J.W. “Cross Metathesis Reactions using γ,δ -unsaturated Chromium Carbene Complexes.” *Tetrahedron Lett.* **2002**, *43*, 4471-4473.
98. Ghorai, B.K.; Menon, S.; Johnson, D.L.; Herndon, J.W. “Inversion of the direction of stereoinduction in the coupling of chiral γ,δ -unsaturated Fischer carbene complexes with *o*-ethynylbenzaldehyde.” *Org. Lett.* **2002**, *4*, 2121-2124.
97. Zhang, Y.; Herndon, J.W. “Synthesis of Furano[2,3-*c*]-pyran-3-one and Thieno[2,3-*c*]-pyran-3-one Derivatives through the Coupling of 3-Alkynyl-2-heteroaromatic Carboxaldehydes with Fischer Carbene Complexes; Total Synthesis of a *Baccharis*-derived Cadinene Derivative.” *J. Org. Chem.* **2002**, *67*, 4177-4185.
- *96. Herndon, J.W. “Annual Survey of Carbon-Transition Metal Double and Triple Bond for the Year 2000” *Coord. Chem. Rev.* **2002**, *227*, 1-58.
95. Ghorai, B.K.; Herndon, J.W., Lam, Y.F. “One-Step Convergent Synthesis of the Steroid Ring System via the Coupling of γ,δ -unsaturated Fischer Carbene Complexes with *o*-ethynylbenzaldehyde.” *Org. Lett.* **2001**, *3*, 3535-3538.
94. Herndon, J.W.; Zhang, Y.; Wang, K. “Palladium-catalyzed aminobenzannulation during Sonogashira couplings using

o-bromoacetophenone." *J. Organometal. Chem.* **2001**, *634*, 1-4.

- 93.** Zora, M.; Herndon, J.W.; Li, Y.; Rossi, J. "Ring Expansion in the Coupling of Fischer-Carbene Complexes with 1-Alkynyl-1-Hydroxy Cyclic Compounds." *Tetrahedron* **2001**, *57*, 5097-5107.
- 92.** Jackson, T.J.; Herndon, J.W. "Annulation Selectivity in the Coupling of Fischer Carbene Complexes with *o*-Alkylbiphenyl and *o*-Alkynylstyrene Derivatives." *Tetrahedron* **2001**, *57*, 3859-3868.
- *91.** Herndon, J.W. "Annual Survey of Carbon-Transition Metal Double and Triple Bond for the Year 1999" *Coord. Chem. Rev.* **2001**, *214*, 215-285.
- 90.** Zhang, Y.; Herndon, J.W. "Synthesis of Furanopyrone and Thiophenopyrone Derivatives through the Coupling of 3-Alkynyl-2-heteroaromatic Carboxaldehydes with Fischer Carbene Complexes." *Tetrahedron Lett.* **2001**, *42*, 777-779.
- 89.** Herndon, J.W.; Zhang, Y.; Wang, H.; Wang, K. "Synthesis of Benzofuran Derivatives through the Coupling of Conjugated Dienynes with Fischer Carbene Complexes." *Tetrahedron Lett.* **2000**, *41*, 8687-8690.
- 88.** Jiang, D.; Herndon, J.W. "Generation and Trapping of Isobenzofuran Intermediates formed in the Coupling of Fischer Carbene Complexes and ortho-Alkynylbenzoyl Derivatives." *Organic Letters* **2000**, *2*, 1267-1269.
- 87.** Herndon, J.W., Zhu, J.; Sampedro, D. "Synthesis of Alkylidenecyclopentenones and Dialkylidenecyclopentenones via the Coupling of Propargylic Alcohol and 2-Alkyne-1,4-diol Derivatives with Cyclopropylcarbene-Chromium Complexes." *Tetrahedron* **2000**, *56*, 4985-4993.
- 86.** Zhang, Y., Herndon, J.W. "Selective Remote Functionalization of Alkyl Side Chains in the Coupling of Fischer Carbene Complexes with Conjugated Enediynes" *Tetrahedron* **2000**, *56*, 2175-2184.
- *85.** Herndon, J.W. Book Review for: "Advances in Strained and Interesting Organic Molecules. Volume 8." *J. Am. Chem. Soc.* **2000**, *122*, 11570.
- *84.** Herndon, J.W. Introduction to a Special Edition of *Tetrahedron* entitled: "Carbene Complexes in Organic Chemistry." *Tetrahedron* **2000**, *60*, R9-R9.
- 83.** Herndon, J.W. "The Use of Fischer Carbene Complexes for the Preparation of Five-Membered Carbocyclic Rings." *Tetrahedron* **2000**, *60*, 1257-1280.
- *82.** Herndon, J.W. "Annual Survey of Carbon-Transition Metal Double and Triple Bond for the Year 1998" *Coord. Chem. Rev.* **2000**, *209*, 387-451.
- 81.** Herndon, J.W. "Applications of Carbene Complexes Directed Toward Organic Synthesis" *Coord. Chem. Rev.* **2000**, *206-207*, 237-262.

80. Zora, M.; Li, Y.; Herndon, J.W. "Coupling of Cyclobutenediones with Fischer Carbene Complexes; A One-Step Synthesis of Cyclopentenediones and/or 5-Alkylidenefuranones via Net Insertion of the Carbene Unit into a C-C Bond." *Organometallics* **1999**, *18*, 4429-4436.
79. Matasi, J.J.; Yan, J.; Herndon, J.W. "Intramolecular Coupling of Conjugated Enynes with Cyclopropylcarbene-Chromium Complexes; a Complex Reaction Pathway" *Inorg. Chim. Acta* **1999**, *296*, 273-277.
78. Herndon, J.W.; Zhu, J. "Synthesis of Alkylidene-cyclopentenones via the Coupling of Propargyl Alcohol Derivatives with Cyclopropylcarbene-Chromium Complexes." *Organic Letters* **1999**, *1*, 15-18.
77. Yan, J.; Zhu, J.; Matasi, J.J.; Herndon, J.W. "Relative Asymmetric Induction in the Intramolecular Reaction between Alkynes and Cyclopropylcarbene-Chromium Complexes: Stereocontrolled Synthesis of Five-Membered Rings Fused to Oxygen Heterocycles." *J. Org. Chem.* **1999**, *64*, 1291-1301.
- *76. Herndon, J.W. "Annual Survey of the Carbon-Transition Metal Double and Triple Bond for the Year 1997" *Coord. Chem. Rev.* **1999**, *181*, 177-242.
75. Herndon, J.W.; Zhu, Y. "Coupling of Propargylsilanes with α,β -unsaturated Fischer Carbene Complexes: A New Synthesis of 1,3,5-Trienes." *Tetrahedron Lett.* **1998**, *39*, 7443-7446.
74. Herndon, J.W.; Wang, H. "Coupling of Fischer Carbene Complexes with Conjugated Enyne-Carbonyl Compounds: A Novel Synthesis of Furan Derivatives." *J. Org. Chem.* **1998**, *63*, 4564-4565.
73. Herndon, J.W.; Wang, H. "Coupling of Fischer Carbene Complexes with Conjugated Ene-dienes: Generation of Chromium-Complexed Diradicals via the Moore Cyclization and Subsequent Trapping Reactions." *J. Org. Chem.* **1998**, *63*, 4562-4563.
72. Herndon, J.W.; Yan, J. "Stereoselective Preparation of Vitamin D Precursors using the Intramolecular Coupling of Alkynes and Cyclopropylcarbene-Chromium Complexes: A Formal Total Synthesis of (\pm)-Vitamin D₃." *J. Org. Chem.* **1998**, *63*, 2325-2331.
71. Herndon, J.W.; Patel, P.P. "Effect of Solvent Polarity Extremes on the Coupling Of Cyclopropylcarbene-Chromium Complexes and Alkynes: Synthesis of β -Alkoxy-cyclopentadienones, 2-Cyclopentene-1,3-diones, and cis 4,5-Disubstituted Cyclopentenones." *Tetrahedron Lett.* **1997**, *38*, 59-62.
70. Herndon, J.W.; Patel, P.P. "Reaction of Propargylsilanes with Chromium Carbene Complexes: Synthesis of Conjugated Diene Enol Ethers through a Tandem Alkyne Insertion-1,2-Silicon Shift Process." *J. Org. Chem.* **1996**, *61*, 4500-4501.
69. Hill, D.K.; Herndon, J.W. "Conformational Requirements of a Stereospecific Three- to Five-Carbon Ring Expansion Reaction." *Tetrahedron Lett.*, **1996**, *37*, 1359-1362.

- *68. Herndon, J.W. Review of the book *Palladium Reagents and Catalysis* for the *Journal of Medicinal Chemistry*, **1996**, 38, 5288.
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66. Herndon, J.W.; Hayford, A. "Reaction of Z-Phenylvinylacetylenes and Z-Cyclopropylvinylacetylenes with Fischer Carbene-Chromium Complexes; An Alternative Approach to Benzannulation and Cyclopentannulation." *Organometallics* **1995**, 14, 1556-1558.
- *65. Herndon, J.W. Review of the book *Organometallics In Synthesis: A Manual* for the *Journal of Medicinal Chemistry*, **1995**, 38, 2270.
- *64. Herndon, J.W. Article about Tungsten (VI) oxide / Chlorosulfonic Acid for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, p 5468.
- *63. Herndon, J.W. Article about Tungsten (VI) fluoride for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, p 5467.
- *62. Herndon, J.W. Article about Tungsten (VI) chloride / Tetramethyltin for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, pp 5466-5467.
- *61. Herndon, J.W. Article about Tungsten (VI) chloride / Butyllithium for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, p 5466.
- *60. Herndon, J.W. Article about Tungsten (VI) chloride for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, p 5465.
- *59. Herndon, J.W. Article about Tungsten Hexacarbonyl for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 4, pp 2641-2642.
- *58. Herndon, J.W. Article about Tris(triphenylsilyl)vanadate for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, pp 5463-5464.
- *57. Herndon, J.W. Article about Tris(2,2-dimethylpropyl)(2,2-dimethylpropylidene)tantalum for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, p 5441.
- *56. Herndon, J.W. Article about Tripotassium Nonachloroditungstate (III) for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, pp 5419-5420.

- *55. Herndon, J.W. Article about Potassium Decacarbonyl(hydrido)chromate for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 6, pp 4212-4214.
- *54. Herndon, J.W. Article about Potassium Hexachlorotungstate (IV) for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 6, p 4231.
- *53. Herndon, J.W. Article about Potassium Hexachloroosmate (VI) / Zinc for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 6, p 5231.
- *52. Herndon, J.W. Article about Trans-Bromotetracarbonyl(methylmethylidyne)tungsten for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Pearson, A.J. Eds.; Wiley-Interscience: New York, 1995, Vol. 1, p 780.
- *51. Herndon, J.W. Article about Tris(acetonitrile)tricarbonyltungsten for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Liebeskind, L.S. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, p 5422.
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- *49. Herndon, J.W. Article about Tris(acetonitrile)tricarbonylchromium for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Liebeskind, L.S. Eds.; Wiley-Interscience: New York, 1995, Vol. 8, pp 5421-5422.
- *48. Herndon, J.W. Article about Tetracarbonyl(cyclopentadienyl)vanadium for the *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L.A.; Liebeskind, L.S. Eds.; Wiley-Interscience: New York, 1995, Vol. 7, pp 4741-4742.
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- *40. Herndon, J.W.; Tumer, S.U.; McMullen, L.A.; Matasi, J.J.; Schnatter, W.F.K. "Cyclopropylcarbene-Chromium Complexes: Versatile Reagents for the Synthesis of Five-Membered Rings." In *Advances in Metal-Organic Chemistry*; Liebeskind, L.S. Ed.; JAI Press: Greenwich, CT, 1994; Vol. III, pp 51-95.
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34. Herndon, J.W.; Harp, J.J. "Cyclization of Alkene-Containing Tetraalkylstannanes" *Tetrahedron Lett.* **1992**, *33*, 6243-6246.
33. Herndon, J.W.; Matasi, J.J. "Hydrogenation of Vinylogous Esters" *Tetrahedron Lett.* **1992**, *33*, 5725-5728.
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C. Contracts and Grants*i. Successful Grant Applications at New Mexico State University*

6/08-5/12 National Institutes of Health (1SC1GM083693-01)	
“Novel furan cycloaddition for preparation of medicinally important compounds”	\$902,400
7/06-8/08 National Institutes of Health (1U54MH74425-01) (L. Sklar at U. New Mexico PI)	\$111,950*
“New Mexico Molecular Libraries Screening Center”	
*Direct Costs Only	
2/06-12/31/06 (NMSU VPR Minigrant)	\$12,500
“Design of Novel Microtubule Anticancer Agents”	
6/04-5/08 National Institutes of Health (S06 GM 08136-29-#6)	\$517,459*
“Novel Syntheses of Heterocyclic and Aromatic Compounds”	
*Direct Costs Only	
9/03-8/05 Petroleum Research Fund (40240-AC1)	\$80,000
“Synthesis of Isoquinolines based on Isobenzofuran/Nitrile Diels-Alder Reactions”	
3/00-2/04 National Institutes of Health (S06 GM 08136-25-#7)	\$510,040*
“Novel Multicomponent Coupling Approach to Steroids and Etoposide Derivatives”	
*Direct Costs Only	
3/99-2/02 National Institutes of Health (R15 GM 59042)	\$102,000
“Formation of Aromatics and Heterocyclic Aromatics from Carbene Complexes and Conjugated Acetylenes”	<i>Priority</i>
<i>Score was 104 (100 is perfect) but this proposal was not funded due to its relationship with the NSF proposal below.</i>	
2/99-2/03 National Science Foundation NMSU Account #01-4-21910	\$270,000
“Formation of Aromatics and Heterocyclic Aromatics from Carbene Complexes and Conjugated Acetylenes”	
6/99-8/99 Petroleum Research Fund NMSU Account #01-4-21277	\$6,500
“Summer Faculty Supplement to Support Prof. Wayne F.K. Schnatter of Yeshiva University for the Summer”	
3/99-8/99 New Mexico State A & S Minigrant NMSU Account #01-3-43899	\$1,800
“Development of a Novel Chemical Reaction for Steroid Synthesis”	
9/97-8/99 Petroleum Research Fund NMSU Account #01-4-21277	\$50,000
“Design of New Annulation Processes Based on the Coupling of Highly Conjugated Alkynes and Carbene Complexes”	

ii. Unsuccessful Grant Applications at New Mexico State University

7/08-6/12 National Institutes of Health	
“Design & synthesis of anticancer agents through [8+2]-cycloaddition”	\$800,000*
*Direct Costs Only	
6/08-6/11 National Science Foundation	
“Novel cascade reactions for hydrophenanthrene synthesis”	\$540,955
2/05-1/09 National Institutes of Health (Not Funded)	\$700,000*
“New Cycloaddition Reactions for Eleutheside Synthesis”	
*Direct Costs Only	
6/04-5/08 National Institutes of Health (Not Funded)	\$600,000*
“Use of Organometallics for Heterocycle Synthesis”	
*Direct Costs Only	
1/99-8/99 New Mexico State A & S Minigrant (Not Funded)	\$2,940

"Development of a Novel Chemical Reaction for Steroid Synthesis"	
4/98-4/00 Dupont Education Grants (Not Funded)	\$44,000
"Use of Cyclopentadienone-Imines as Novel π -Acceptor Ligands"	
<i>iii. Successful Grant Applications at University of Maryland</i>	
9/94-8/97 Petroleum Research Fund	\$50,000
"Development of New Annulation Reactions using Z-Vinylacetylenes and Carbene Complexes"	
9/92-8/94 Petroleum Research Fund	\$40,000
"Homo-Michael Addition Reactions Using Organometallics"	
7/92-6/93 General Research Board-University of Maryland	\$2,500
"Metal-Carbenes and Cyclobutenediones; a Novel Five-Membered Ring-Forming Reaction"	
9/90-8/92 Petroleum Research Fund, American Chemical Society	\$40,000
"Reactivity of Strained Ring-Substituted Metal-Carbene Complexes."	
8/90 National Institutes of Health-Small Instrumentation Division	\$13,500
Purchase of a Polarimeter on behalf of the Department of Chemistry & Biochemistry	
7/88-6/92 National Institutes of Health	\$327,745
"Organometallic Approaches to Five-Membered Rings."	
9/88-5/89 General Research Board, University of Maryland	\$3,000
"Selective Cleavage of Tetraalkyltin Compounds."	
9/87-3/88 National Institutes of Health	\$3,000
"Synthetic Studies of Cephalotaxine and Other Medicinally-Active Cyclopentanoids."	
9/86-8/88 Petroleum Research Fund, American Chemical Society	\$18,000
"[4+3] Cycloaddition Reactions Employing Vinylcarbene-Metal Complexes."	

D. Invited Lectures

2008 <i>New Mexico Institute of Mining & Technology, Socorro, NM</i>	September 2008
2007 <i>University of New Mexico</i>	August 2007
<i>Southwest Regional ACS Meeting Lubbock, TX</i>	October 2007
2004 <i>East Carolina University</i>	January 2004
<i>New Mexico Institute of Mining & Technology</i>	February 2004
2002 <i>University of North Carolina at Wilmington</i>	February 2002
<i>Boehringer Ingelheim Pharmaceuticals</i>	March 2002
2001 <i>Texas Tech University, Lubbock, TX</i>	October 2001
<i>Eastern New Mexico University, Portales, NM</i>	October 2001
<i>University of New Mexico, Albuquerque, NM</i>	March 2001
<i>New Mexico Institute of Mining & Technology, Socorro, NM</i>	March 2001
2000 <i>University of Texas – El Paso</i>	October 2000
<i>University of North Carolina-Greensboro</i>	August 2000
1999 <i>University of Arizona, Tucson, AZ</i>	November 1999
<i>Nankai University, Tianjin, China</i>	May 1999

1997 <i>University of New Mexico, Albuquerque, NM</i>	October 1997
<i>Southwest Missouri State University, Springfield, MO</i>	March 1997
<i>Eastern Illinois University, Charleston, IL</i>	February 1997
<i>New Mexico State University, Las Cruces, NM</i>	January 1997
<i>Auburn University, Auburn, AL</i>	January 1997
1996 <i>West Virginia University, Morgantown, WV</i>	September 1996
<i>University of Chicago</i>	February 1996
1994 <i>George Washington University, Washington, DC</i>	November 1994
<i>SmithKline Beecham Pharmaceuticals, Philadelphia, PA</i>	October 1994
<i>University of Maryland - Baltimore County</i>	March 1994
1993 <i>Virginia Commonwealth University, Richmond, VA</i>	February 1993
1992 <i>NSF-SERC Joint Workshop for Organometallics In Organic Synthesis, Strathclyde, Scotland, UK</i>	August 1992
1991 <i>College of Wooster, Wooster, OH</i>	October 1991
<i>Northeastern University, Boston, MA</i>	March 1991
<i>Polytechnic University, Brooklyn, NY</i>	February 1991
1990 <i>University of Delaware, Newark, DE</i>	September 1990
<i>Eli Lilly Pharmaceuticals, Indianapolis, IN</i>	June 1990
<i>Univ. of California-Riverside, Riverside, CA</i>	June 1990
<i>Univ. of California-San Diego, San Diego, CA</i>	May 1990
<i>Univ. of California-Irvine, Irvine, CA</i>	May 1990
<i>Michigan State University, East Lansing, MI</i>	May 1990
<i>UNCG Organometallic Symposium Greensboro, NC</i>	April 1990
<i>Pennsylvania State University, State College, PA</i>	February 1990
<i>Virginia Polytechnic Institute and State University, Blacksburg, VA.</i>	January 1990
1989 <i>University of Alabama, Tuscaloosa, Alabama</i>	December 1989
<i>Kansas State University, Manhattan, Kansas</i>	November 1989
<i>Pharmaceutical Research and Development Division, Bristol-Myers Wallingford, Connecticut</i>	August 1989
1988 <i>Howard University, Washington, D.C.</i>	April 1988
<i>University of North Carolina, Greensboro</i>	October 1988
<i>Wake Forest University, Winston.Salem, North Carolina</i>	October 1988
<i>Connecticut College, New London, Connecticut</i>	October 1988
<i>Catholic University, Washington, D.C.</i>	November 1988
1987 <i>Princeton University</i>	February 1987
<i>U.S. Naval Academy, Annapolis, Maryland</i>	October 1987
<i>ACS Meeting, New Orleans, Louisiana, September, paper ORGN 74</i>	September 1987
1986 <i>National Institutes of Health, Bethesda, Maryland</i>	February 1986
1985 <i>Princeton University</i>	July 1985
1984 <i>Northwestern University</i>	October 1984
<i>University of Alabama</i>	November 1984
<i>University of Maryland</i>	November 1984

University of California at San Diego

December 1984

Clemson University

December 1984

University of Southern California

December 1984

E. Papers Presented

(*papers presented by graduate student or postdoctoral associate)

- 2008** *a. "Novel reaction pathways to highly functionalized bis(alkylidene)phthalan derivatives." Presented at the 235th National Meeting of the American Chemical Society, New Orleans, LA in April 2008, paper *ORGN* 179.
- 2007** a. "Coupling of Highly Unsaturated Fischer Carbene Complexes and Alkynylbenzaldehyde Derivatives." Poster presented at the Gordon Conference on Organometallic Chemistry, Newport, RI, July 2007.
b. "Development of Novel Furan Based Cycloadditions." Presented at the 63rd Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, November 2007, paper *GEN* 148.
- 2006** a. "Synthesis of Complex Ring Systems through [5+5]- and [8+2]-Cycloaddition Processes." Poster presented at the Gordon Conference on Organic Reactions and Processes, Tilton, NH in July 2006.
*b. "One-step synthesis of the kaurene ring system through coupling of gamma,delta-unsaturated Fischer carbene complexes with enynones." Presented at the 232nd National Meeting of the American Chemical Society in San Francisco, CA in September 2006; paper *ORGN* 460.
- 2005** *a. "Total synthesis of Antofine using Fischer carbene complexes." Presented at the 229th National Meeting of the American Chemical Society in San Diego, CA in March 2005; paper *ORGN* 664.
b. "Hydrophenanthrene synthesis via an environmentally friendly chromium carbene-alkyne coupling process." Presented at the 230th National Meeting of the American Chemical Society in Washington, DC in August 2005; paper *ORGN* 358.
c. "Computational investigation of cyclopropylcarbene complex-alkyne couplings." Presented at the 230th National Meeting of the American Chemical Society in Washington, DC in August 2005; paper *ORGN* 399.
- 2004** a. "Synthesis of Oxygen-bridged Ten-membered Rings via [8+2]-cycloaddition." Presented at the Gordon Conference on Organic Reactions and Processes, Bristol, RI in July 2004.
b. "Total Synthesis of Antofine and Related Phenanthrene Derivatives through Coupling of Unsaturated Carbene Complexes with *o*-alkynylbenzaldehyde Derivatives." Presented at the Gordon Conference on Organic Reactions and Processes, Bristol, RI in July 2004.
c. "[8+2]-Cycloaddition of Dienylfurans and Alkynes." Presented at the 228th National Meeting of the American Chemical Society in Philadelphia, PA in August 2004; paper *ORGN* 333.
d. "Synthesis of Hydrophenanthrenes via Chromium Carbene-Generated *p*-quinone Methides." Presented at the 228th National Meeting of the American Chemical Society in Philadelphia, PA in August 2004; paper *ORGN* 664.
- 2003** a. "Synthesis of Indanes through Coupling of Ethynylstyrene Derivatives with Carbene Complexes." Presented at the 225th National Meeting of the American Chemical Society in New Orleans, LA in April 2003; paper *ORGN* 583. *b. "Synthesis of Benzo-fused Nitrogen Heterocycles through Annulation onto Imidazole-, Indole-, and Pyrazolcarboxaldehydes." Presented at the 226th National Meeting of the American Chemical Society in New York, NY in September 2003; paper *ORGN* 447.
c. "Synthesis of Furanophane through [8+2]-Cycloaddition of Dienylisobenzofurans and Alkynes." Presented at the 226th National Meeting of the American Chemical Society in New York, NY in September 2003; paper *ORGN* 655.

- d. "Coupling of Highly Conjugated Alkynes with Carbene Complexes" Presented at the 38th National Organic Symposium in Bloomington, IN; paper C4
- 2002** *a. "Synthesis of Benzofurans through the Coupling of Highly Conjugated Acetylenes and Carbene Complexes." Presented at the 223rd National Meeting of the American Chemical Society in Orlando, FL in April 2002; paper *CHED* 817.
- b. "Synthesis of Aromatic Nitrogen Heterocycles through Coupling of Carbene Complexes with 2-Alkynylbenzoyl Derivatives." Presented at the 223rd National Meeting of the American Chemical Society in Orlando, FL in April 2002; paper *ORGN* 128.**2001** *a. "One-step Convergent Synthesis of the Steroid Ring System via the Coupling of γ,δ -Unsaturated Fischer Carbene Complexes with *o*-Ethynylbenzaldehyde Derivatives." Presented at the 222nd National Meeting of the American Chemical Society, Chicago, IL, August 2001; paper *ORGN* 433.
- *b. "Synthesis of *o*-Quinoidal Furanopyrones from Coupling of 3-Alkynyl-2-furancarboxaldehydes with Fischer Carbene Complexes." Presented at the 221st National Meeting of the American Chemical Society, San Diego, CA, April 2001; paper *ORGN* 270.
- c. "New Synthetic Route to Pyrroles." Presented at the 221st National Meeting of the American Chemical Society, San Diego, CA, April 2001; paper *ORGN* 385.
- 2000** a. "Generation and Trapping of Isobenzofurans from Coupling of Fischer Carbene Complexes and *o*-Alkynylbenzoyl Derivatives." Presented at the 220th National Meeting of the American Chemical Society, Washington, DC, August 2000; paper *ORGN* 573.
- *b. "Synthesis of Multiannulated Compounds via Coupling of Conjugated Ene-diyne with Carbene Complexes." Presented at the 220th National Meeting of the American Chemical Society, Washington, DC, August 2000; paper *ORGN* 574.
- 1999** a. "Remote Functionalization Of Alkyl Side Chains In The Coupling Of Conjugated Ene-diyne With Carbene Complexes." Presented at the 217th National Meeting of the American Chemical Society, Anaheim, CA, March 1999; paper *ORGN* 16.
- b. "Synthesis Of Hydronaphthalenes Via Three-Component Coupling Of Carbenes, Alkenes, And Alkynylbenzaldehydes." Presented at the 217th National Meeting of the American Chemical Society, Anaheim, CA, March 1999; paper *ORGN* 21.
- c. "Generation of Vinylisobenzofurans from Carbene Complexes and *o*-Alkynylbenzoyl Derivatives" Presented at the 36th National Organic Symposium, Madison, WI, June 1999; paper 104.
- 1998** a. "A New Alkylidenecyclopentenone Synthesis." Presented at the 215th National Meeting of the American Chemical Society, Dallas, TX, April 1998; paper *ORGN* 258.
- 1997** a. "Coupling of Fischer Carbene Complexes with *ortho*-Substituted Phenylacetylene Derivatives." Presented at the 214th National Meeting of the American Chemical Society, Las Vegas, NV, September 1997; paper *ORGN* 303.
- b. "Coupling of Fischer Carbene Complexes with Highly Unsaturated Conjugated Enynes." Presented at the 214th National Meeting of the American Chemical Society, Las Vegas, NV, September 1997; paper *ORGN* 357.
- c. "Stereoselective Synthesis of Cyclopentanes through Alkyne-Carbene Complex Coupling: Synthesis of Vitamin D Intermediates and Brefeldin A." Presented at the 214th National Meeting of the American Chemical Society, Las Vegas, NV, September 1997; paper *ORGN* 358.
- 1994** a. "Tandem Alkyne-Insertion-Macomber Rearrangement in the Reaction of Fischer Carbene Complexes with Propargylsilanes: A New and General Synthesis of Conjugated Dienes." Presented at the 208th National Meeting of the American Chemical Society, Washington, DC, August 1994; paper *ORGN* 184.

- b. "Reaction of Z-Phenylvinylacetylenes and Z-Cyclopropylvinylacetylenes with Fischer Carbene Complexes: An Alternative Approach to Benzannulation and Cyclopentannulation." Presented at the 208th National Meeting of the American Chemical Society, Washington, DC, August 1994; paper *ORGN* 185.
- *c. "Relative Asymmetric Induction in the Intramolecular Reaction between Alkynes and Cyclopropylcarbene-Chromium Complexes." Presented at the 208th National Meeting of the American Chemical Society, Washington, DC, August 1994; paper *ORGN* 312.
- *d. "Novel Ring Expansion Reactions using Fischer Carbene Complexes." Presented at the 208th National Meeting of the American Chemical Society, Washington, DC, August 1994; paper *ORGN* 313.
- 1993.** "Cyclopropane C-C Bond vs. γ -C-H Activation in the Reaction of Carbene Complexes and Cyclopropylvinylacetylenes." Presented at the 205th National Meeting of the American Chemical Society, Denver, CO, March 1993, paper *ORGN* 163.
- 1992** *a. "Potentially-Asymmetric Synthesis of cis-4,5-Disubstituted Cyclopentenones from Alkynes and Cyclopropylcarbene-Chromium Complexes." Presented at the 204th National Meeting of the American Chemical Society, Washington, DC, August 1992; paper *ORGN* 46.
- *b. "Ring Expansion of Cyclobutenones by Metal-Carbene Complexes." Presented at the 204th National Meeting of the American Chemical Society, Washington, DC, August 1992; paper *ORGN* 138.
- *c. "1,5-Addition of Halogens to Cyclopropyl-Thiocarbene-Chromium Complexes: Stereocontrolled Synthesis of 1,4-Dihalo-1-alkenes." Presented at the 204th National Meeting of the American Chemical Society, Washington, DC, August 1992; paper *ORGN* 139.
- d. "Competitive Allylic C-H and Cyclopropane C-C Bond Insertion in the Reactions of Enynes with Chromium Carbene Complexes." Presented at the 44th SERMACS-26TH MARM of the American Chemical Society, Arlington, VA, December 1992; paper *ORGN* 139.
- *e. "1,5-Addition of Halogens to Cyclopropyl-Thiocarbene-Chromium Complexes." Presented at the 44th SERMACS-26TH MARM of the American Chemical Society, Arlington, VA, December 1992; paper *ORGN* 208.
- *f. "Stereochemical Fate of C-5 in Conversion of Vinylcyclopropylcarbene-Chromium Complexes to Cyclopentenones." Presented at the 44th SERMACS-26TH MARM of the American Chemical Society, Arlington, VA, December 1992; paper *ORGN* 231.
- *g. "Stereocontrol in the Intramolecular Reaction of Alkynes and Cyclopropylcarbene-Chromium Complexes." Presented at the 44th SERMACS-26TH MARM of the American Chemical Society, Arlington, VA, December 1992; paper *ORGN* 406.
- *h. "Tandem Alkyne Insertion-Pinacol Rearrangement of 1-Alkynyl Cyclic Alcohols: A Novel Ring Expansion Reaction." Presented at the 44th SERMACS-26TH MARM of the American Chemical Society, Arlington, VA, December 1992; paper *ORGN* 407.
- 1991** "Cyclopropylthiocarbene-Metal Complexes: Super-Homo-Michael Acceptors." Presented at the 202nd National Meeting of the American Chemical Society, New York, NY, August 1991; paper *ORGN* 216.
- 1990** *a. "A Synthetic Approach to Cephalotaxine Based on Chromium-Carbene Complexes." Presented at the 200th National Meeting of the American Chemical Society, Washington, DC, August 1990; paper *ORGN* 63.
- *b. "A stereocontrolled Approach to the Total Synthesis of Sterpuric Acid." Presented at the 200th National Meeting of the American Chemical Society, Washington, DC, August 1990; paper *ORGN* 64.
- c. "A [4+2+1] Cycloaddition Route for the Construction of Seven-Membered Rings." Presented at the 200th National Meeting of the American Chemical Society, Washington, DC, August 1990; paper *ORGN* 101.
- *d. "Synthetic Approach to Prostacyclins Using Chromium-Carbene Complexes." Presented at the 200th National

Meeting of the American Chemical Society, Washington, DC, August 1990; paper *ORGN* 102

*e. "Mechanism of the Reaction of Cyclopropylmethoxycarbene-Chromium Complexes with Alkynes." Presented at the 199th National Meeting of the American Chemical Society, Boston, Massachusetts, April 1990; paper *INOR* 63.

f. "Reaction of Cyclopropylcarbene-Chromium Complexes with Alkynes: A New Seven-Membered Ring Synthesis." Presented at the 199th National Meeting of the American Chemical Society, Boston, Massachusetts, April 1990; paper *ORGN* 13.

*g. "Sequential Vinylcyclopropylcarbene and Anionic Oxy-Cope Rearrangements: An Expedient Synthesis of Nine Membered Rings." Presented at the 199th National Meeting of the American Chemical Society, Boston, Massachusetts, April 1990; paper *ORGN* 217.

h. "Intramolecular Cyclization of Tetraalkylstannanes." Presented at the 199th National Meeting of the American Chemical Society, Boston, Massachusetts, April 1990; paper *ORGN* 395.

1989 a. "Mechanistic Studies of the Reaction Between Alkynes and Cyclopropylcarbene-Chromium Complexes." Presented at the 197th National Meeting of the American Chemical Society, Dallas, Texas, April 1989; paper *ORGN* 12.

b. "Intramolecular Cyclization of Tetraalkyltin Compounds." Presented at the 197th National Meeting of the American Chemical Society, Dallas, Texas, April 1989, paper *ORGN* 183.

c. "Rearrangement Reactions of Cyclopropylcarbene-Chromium Complexes." Presented at the 197th National Meeting of the American Chemical Society, Dallas, Texas, April 1989; paper *ORGN* 182.

d. "Synthesis and Alkylation of Isocyanide-Substituted Acyliron Complexes." Presented at the 197th National Meeting of the American Chemical Society, Dallas, Texas, April 1989; paper *ORGN* 11.

e. "Rearrangement Reactions of Cyclopropylcarbene-Chromium Complexes." Presented at the 31st National Organic Symposium, 1989, Ithaca, New York.

f. "Reactivity of Strained Ring-Substituted Carbene-Metal Complexes." Presented at the Gordon Research Conference on Reactions and Processes, New Hampton, New Hampshire, July 1989.

1988 a. "Cyclopentenones from the Reaction of Alkynes with Cyclopropylcarbene-Chromium Complexes." Presented at the 22nd Middle Atlantic Regional Meeting, Millersville, Pennsylvania, May 1988; paper *ORGN* 237.

b. "Effect of Phosphine Substitution on Nucleophilic Addition to α,β -Unsaturated Acyliron Complexes." Presented at the 22nd Middle-Atlantic Regional Meeting, Millersville, Pennsylvania, May 1988; paper *ORGN* 242.

c. "Novel Reactions of Cyclopropylcarbene-Chromium Complexes." Presented at the Gordon Research Conference on Organic Reactions and Processes, New Hampton, New Hampshire, July 1988.

1987 a. "Reaction of Cyclopropyl(methoxy)carbene-chromium(0) Complexes with Alkynes; a [2+2+1] Route to Cyclopentanoids." Presented at the 194th National Meeting of the American Chemical Society, New Orleans, Louisiana, September 1987; paper *ORGN* 33.

*b. "Photochemically-Induced Reductions of Nitroso Compounds by Metal Carbenes and Metal Carbonyls." Presented at the 194th National Meeting of the American Chemical Society, New Orleans, Louisiana, September 1987; paper *ORGN* 285.

1986 "[3+2] and [4+2] Cycloaddition Reactions Using Enoyl-Iron Complexes." Presented at the Gordon Research Conference on Organometallic Chemistry, Andover, New Hampshire, August 1986.

1984 "Chemoselective, Regiospecific Synthesis of Allyltin Compounds." Presented at the 188th National Meeting of the American Chemical Society, Philadelphia, Pennsylvania, August 1984; paper *ORGN* 111.

1983 "Formation of Cyclopentanones by Nucleophile Addition/Carbonylation of Diene-Iron Tricarbonyl Complexes." Presented at the 186th National Meeting of the American Chemical Society, Washington, D.C., August 1983; paper *ORGN* 90.

- 1982 "Selective Coupling of Carbon Nucleophiles with Diene-Iron Tricarbonyl Complexes in the Presence of CO."
Presented at the 184th National Meeting of the American Chemical Society, Kansas City, Missouri, September 1982;
paper *ORGN* 199

F. Special Recognitions and Achievements

- | | |
|--|---------------|
| 10. Winner of the Westhafer Award for Research at NMSU | April 2008 |
| 9. Winner of the URC outstanding Award for Creative and Scholarly Activity at NMSU | April 2003 |
| 8. Nominee: Outstanding Faculty Member - Maryland Association of Parents | February 1996 |
| 7. Invited Participant: NSF/SERC Joint Workshop for Organometallics in Organic Synthesis | August 1992 |
| 6. Junior Faculty Achievement Award, University of Maryland | May 1990 |
| 5. Received a General Research Board Summer Award | Summer 1990 |
| 4. Invited Participant: NSF Workshop on Organic Synthesis and Natural Products Chemistry | July 1989 |
| 3. Invited Participant: NSF Workshop on Organometallic Chemistry | June 1989 |
| 2. Received a General Research Board Summer Award for Summer | 1986 |
| 1. Received a General Research Board Special Summer Award | Summer 1985 |

G. Editorial/Review Activities

1. I serve on the Editorial Advisory board for *Mini Reviews in Organic Chemistry*
2. I have served on the Editorial Advisory Board of *Organometallics* 2003-2006.
3. Frequently served as an *ad hoc* member of the NIH study sections devoted to Medicinal Chemistry and to the SCORE programs.
4. I have served as a guest editor for a special edition of *Tetrahedron* devoted to carbene complexes.
5. I routinely review articles for *Journal of the American Chemical Society*, *Organometallics*, *Journal of Organic Chemistry*, *Tetrahedron Letters*, *Journal of Organometallic Chemistry*, and *Synthesis*, and review about thirty publications/year.
6. I have assisted with the review of proposals from the National Science Foundation, the Petroleum Research Fund, and the Research Corporation; I review about twelve proposals/year.

H. Student Research (Supervised) (NMSU students in Italics)

Doctoral Thesis Research: Chao Wu	Ph.D., September 1989
Leonard McMullen	Ph.D., April 1990
Jill Harp	Ph.D., September 1991
Seniz Tumer	Ph.D., March 1991
Julius Matasi	Ph.D., April 1992
Metin Zora	Ph.D., May 1994
Margaret Reid	Ph.D., June 1994
Anthony Hayford	Ph.D., August 1994
Paren Patel	Ph.D., November 1994

David Hill	Ph.D., September 1996
Jingbo Yan	Ph.D., October 1996
Jin Zhu	Ph.D. December 1998
<i>Yi Zhang</i>	Ph.D. December 2000
<i>Yanshi Zhang</i>	Ph.D. April 2003
<i>Lei Zhang</i>	Ph.D. March 2005
<i>Alejandro Camacho-Davila</i>	Ph.D. March 2006
<i>Tareq Irsheidat</i>	Ph.D. April 2007
<i>Shaofeng Duan</i>	Ph.D. October 2007
<i>Kris Waynanr</i>	Ph. D. October 2008

In Progress: *Paul Wiget, Areen Khattabi, Lalith Ranchigoda, Rajesh-Kumar Patti*

Postdoctoral Research: Wayne Schnatter., *Binay Ghorai, Suyesh Iyer, Jianwei Zhang, Yu-Mei Luo, Dilip Sinha-Mahapatra*

Masters Thesis Research: Gautam Chatterjee M.S., July 1991

Thaddeus Jackson	M.S., July 1998
Yuhui Li	M.A., July 1997
Yixin Zhu	M.S., December 1998
Haxai Wang	M.S., December 1998
<i>Delu Jiang</i>	<i>M.A. September 1999</i>
<i>Suneetha Menon</i>	<i>M.S. November 2001</i>
<i>Rongti Li</i>	<i>M.S. November 2005</i>

In Progress – *Elias Ramos-Miranda, Zhipeng Wang*

Undergraduate: Kristina Kreutzer, Deonna Emerson, Robert Meagley, John Hahm, Sung Ko, Steve Strong, Carina Tan, Charles Daitch, Ming Chen, Faith Shen, Connie Shiau, Jose´ Morales, Nwamara Dike, Tom Nussear, Yun Namkung, Gary Adams, Deepack Bansal, Tanh Hoang, Ali Aliabadi, Tina Khoie, Jessica Williams, Stephanie Springer, *Keith Parsons, Rachel Saavedra, Adrian Rodriguez, Paul Wiget, Daniel Candelaria, Clare Buckingham, Karen Cress, Alejandro Trujillo, Sonia Arroyos, Kenneth Dunn, Gabriel Andrade, Alfreda Nelson*

Other Research: Robert Lane (High school teacher/summer employment)
Cristoph Müller (German Exchange Student).
Diego Sampedro (Spanish Exchange Student)
Wayne Schnatter (Visiting Summer Faculty - PRF Funded)

I. Undergraduate Advising

I served as the departmental undergraduate research coordinator from 1987 - 1989.

J. Candidacy, Proposal, & PhD Committees (NMSU Students in Italics)**1. Candidacy (2nd-Year Oral) Committees (Does Not Include My Own Students)**

Ginny Ho	Pat Lindley	Eugene Ho	Rafael Navarro-Gonzales
Timothy Hepburn	Beth Owens	Estella Alvarez	Wei Xu
Chung-Lan Tu	Chao-Pin Lee	Michael Amone	Peter Kettler
John Darnow	Jim Landro	Ming Zeng	Gary Anderson
Richard Sidler	Raphael Ominde	John Kennington	Steve Shimshock
Xiaoming Zhang	Anthony Hayford	Guifeng Zhang	Yvonne Class
Chuljin Ahn	Hong Chen	Xiadong Lin	Yung-Sik Jung
David Fennick	Erica Bredlie	Seock-Yu Khim	Anthony Pilcher
Xiadong Zhang	Larry Lee	Maragret McGowan	Rebecca Robbins
Kim Taylor	Susan Hoegy	Dino Ferri	Eddie Oliver
Susan Hanley	Kelley van Houten	Xiadong Wu	Jian Jiang
Rick Moran	Marshall Werner	Margaret Falcone	Joe Su
Marc Brescia	Christine Boggs	Praveen Pande	Eric Soli
Dominic Chiapperino	Animitro Bannerjee	<i>Marc Perry</i>	<i>Tim Lambert</i>
<i>Chungyang Jin</i>	<i>Wenjian Huang</i>	<i>Nora Hernandez</i>	<i>Juan Strauss</i>
<i>Cesar Corona</i>	<i>BJ Bryant</i>	<i>Yuan Liu</i>	<i>Siddath Kumarapperuma</i>
<i>Suddath Huapparachige</i>		<i>Ritwik Burai</i>	<i>Sarah Gibson</i>
<i>Delaney Rodriguez</i>			

2. Proposal Defense Committees (NMSU Students in Italics) (Does Not Include My Own Students)

Ginny Ho	Keith Haddaway	Eugene Ho	Rafael Navarro-Gonzales
Zhi Chao Lin	Clifford King	Estella Alvarez	Robert Kavash
Chung-Lan Tu	Raphael Ominde	Michael Amone	Richard Sidler
John Darnow	Ming Zeng	Martha Brumfeld	Phillip Rybczynski
Chao-Pin Lee	James Landro	Wei Xu	Anthony Hayford
Fatima Abugaderi	Xiaoming Zhang	Gary Anderson	Seock-Yu Khim
Larry Lee	Marshall Werner	Margaret Falcone	Joe Su
Rick Moran	Kelly van Houten	Marc Brescia	Christine Boggs
Xiadong Wu	Dino Ferri	Rong Ling	Animitro Bannerjee
Mike Patterson	Allison Marlowe	Praveen Pande	Dominic Chiapperino
<i>Tim Lambert</i>	<i>Marc Perry</i>	<i>Tim Lambert</i>	

3. Thesis Defense Committees (NMSU Students in Italics) (Does Not Include My Own Students)

Ginny Ho	Keith Haddaway	Eugene Ho	Ruquia Ahmed-Schofield
Martha Brumfeld	Clifford King	Estella Alvarez	Robert Kavash
Saroja Yatawara	Raphael Ominde	Michael Amone	Richard Sidler

David Lin	Ming Zeng	Susan Trawick	Ron Mazumdar
Beth Owens	Chao-Pin Lee	Wei Xu	Peter Kettler
James Landro	Mike McQueney	Phillip Rybczinski	Xiaoming Zhang
Zhi-Chao Lin	Yung-Sik Jung	Gary Anderson	Fatima Abugadieri
Chuljin Ahn	Yung-Sik Jung	Xiadong Lin	Larry Lee
Rebecca Robbins	Erica Cederstrom	Dino Ferri	Jun Yan (MS)
Xiadong Wu	Kelly van Houten	Joe Su	Marc Perry
Tim Lambert	Chungyang Jin	Ranjit Ramdas	Anicele Gonzalez
Zhiqing Zhao	Andrew Hoover	Gaylon Lovelace	Ricardo Moreno
Cesar Corona	BJ Bryant	Nora Hernandez	Juan Strauss
Suddath Huapparachige	Gloria Martinez	Duminda Liyanage	

K. Courses Taught

<i>Year</i>	<i>Semester</i>	<i>Course #</i>	<i>Title</i>	<i>Cr. Hrs.</i>	<i>Students</i>
<i>New Mexico State</i>					
2008	Fall	CHEM 211	Introduction to Organic & Biochemistry	4	41
2008	Summer	CHEM 314	Organic Chemistry II	3	35
2008	Spring	CHEM 514	Spectral Methods in Organic Chemistry	3	8
2007	Fall	CHEM 619	Organometallic Chemistry	3	17
2007	Summer	CHEM 313	Organic Chemistry I	3	35
2007	Spring	CHEM 514	Spectral Methods in Organic Chemistry	3	9
2006	Fall	CHEM 314	Organic Chemistry II	3	28
2006	Summer	CHEM 313	Organic Chemistry I	3	32
2006	Spring	CHEM 514	Spectral Methods in Organic Chemistry	3	9
2005	Fall	CHEM 314	Organic Chemistry II	3	45
2005	Spring	CHEM 515	Spectral Methods in Organic Chemistry	3	13
2004	Fall	CHEM 619	Organometallic Chemistry	3	14
2004	Spring	CHEM 515	Spectral Methods in Organic Chemistry	3	13
2003	Fall	CHEM 466/514	Advanced Organic Chemistry	3	10
2003	Spring	CHEM 313	Organic Chemistry I	3	65
2002	Fall	CHEM 619	Spectral Methods in Organic Chemistry	3	3
2002	Spring	CHEM 619	Organometallic Chemistry	3	8
2001	Fall	CHEM 619	Spectral Methods in Organic Chemistry	3	3
2001	Spring	CHEM 313	Organic Chemistry I	3	76
2000	Fall	CHEM 619	Spectral Methods in Organic Chemistry	3	6
2000	Spring	CHEM 315	Organic Chemistry Laboratory	2	72
2000	Spring	CHEM 619	Organometallic Chemistry	3	13
1999	Fall	CHEM 313	Organic Chemistry I	3	102

1999	Fall	CHEM 619	Spectral Methods in Organic Chemistry	3	7
1999	Spring	CHEM 517	Organic Synthesis	3	7
1999	Spring	CHEM 315	Organic Chemistry Laboratory	2	53
1998	Fall	CHEM 619	Spectral Methods in Organic Chemistry	3	13
1998	Summer	CHEM 313	Organic Chemistry I	3	45
1998	Spring	CHEM 517	Organic Synthesis	3	6
1997	Fall	CHEM 315	Organic Chemistry Laboratory	2	40
1997	Fall	CHEM 314	Organic Chemistry II	3	40

University of Maryland at College Park

1997	Summer	CHEM 243	Organic Chemistry II	4	48
1997	Spring	CHEM 243	Organic Chemistry II	4	250
1996	Fall	CHEM 243	Organic Chemistry II	4	>200
1996	Summer	CHEM 243	Organic Chemistry II	4	64
1996	Spring	CHEM 650	Problem Solving in Organic Synthesis	1	7
1996	Spring	CHEM 647	Organic Synthesis	3	7
1995	Fall	CHEM 243	Organic Chemistry II	4	210
1995	Spring	CHEM 647	Organic Synthesis	3	15
1994	Fall	CHEM 648E	Organometallics In Organic Synthesis	3	6
1994	Summer	CHEM 233	Organic Chemistry I	4	130
1994	Spring	CHEM 647	Organic Synthesis	3	15
1993	Fall	CHEM 233	Organic Chemistry I	4	252
1993	Summer	CHEM 233	Organic Chemistry I	4	48
1993	Spring	CHEM 647	Organic Synthesis	3	12
1993	Spring	CHEM 898D	Organic Seminar	1	3
1992	Fall	CHEM 233	Organic Chemistry I	4	280
1992	Fall	CHEM 898D	Organic Seminar	1	7
1992	Spring	CHEM 647	Organic Synthesis	3	12
1991	Fall	CHEM 233	Organic Chemistry I	4	280
1991	Summer	CHEM 104	Introduction to Organic Chemistry	4	40
1991	Spring	CHEM 647	Organic Synthesis	3	10
1990	Fall	CHEM 640	Problem Solving in Org. Rxn. Mech.	1	14
1990	Fall	CHEM 648	Cycloaddition Chemistry	2	10
1990	Fall	CHEM 898D	Organic Seminar	1	6
1990	Summer II	CHEM 104	Introduction to Organic Chemistry	4	38
1990	Spring	CHEM 648A	Natural Products Chemistry (1/4)	3	10
1990	Spring	CHEM 660	Spectral Methods	2	18

1990	Spring	CHEM 650	Problem Solving in Organic Synthesis	1	16
1989	Fall	CHEM 898D	Organic Seminar	1	12
1989	Fall	CHEM 640	Problem Solving in Org. Rxn. Mech.	1	15
1989	Spring	CHEM 660	Spectral Methods	2	15
1989	Spring	CHEM 650	Problem Solving in Organic Synthesis	1	13
1988	Fall	CHEM 608	Organometallic Chemistry (1/3)	3	10
1988	Fall	CHEM 233	Organic Chemistry I	4	110
1988	Summer I	CHEM 233	Organic Chemistry I	4	80
1988	Spring	CHEM 898D	Organic Seminar	1	8
1988	Spring	CHEM 648A	Spectral Methods	2	11
1988	Spring	CHEM 648C	Problem Solving in Organic Synthesis	1	10
1987	Fall	CHEM 233	Organic Chemistry	4	260
1987	Summer I	CHEM 233	Organic Chemistry I	4	115
1986	Fall	CHEM 243	Organic Chemistry II	4	100
1986	Fall	CHEM 648B	Problem Solving in Org. Rxn. Mech.	1	22
1986	Spring	CHEM 648E	Organometallics in Org. Synthesis	3	10
1985	Fall	CHEM 648B	Problem Solving in Org. Rxn. Mech.	1	12

L. Service (NMSU Activities in Italics)

a. Committee Work:

i. Departmental Committees

Year Committees

07/08 *Graduate Admissions Committee, Library Liason (head), Faculty Advisory Committee*

06/07 *Graduate Admissions Committee, Library Liason (head), Faculty Advisory Committee*

05/06 *Graduate Admissions Committee (head), Organic Faculty Search Committee (head), Library Liason (head), Faculty Advisory Committee*

04/05 *Graduate Admissions Committee (head), Faculty Advisory Committee*

03/04 *Graduate Admissions Committee (head), Faculty Advisory Committee*

02/03 *Graduate Admissions Committee (head), Inorganic Search Committee, Faculty Advisory Committee*

01/02 *Graduate Admissions Committee (head), Awards Committee, Inorganic Search Committee*

00/01 *Graduate Admissions Committee (head), Awards Committee, Undergraduate Chem-Club Committee*

99/00 *Graduate Admissions Committee (head), Organic Faculty Search Committee, Awards Committee, Undergraduate Chem-Club Committee*

98/99 *Awards Committee, Undergraduate Chem-Club Committee*

97/98 *Search Committee for an NMR technician*

95/96 Library Committee

94/95 Facilities, Space, Resources, Committee (Chairman); Admissions Committee; Analytical Services Committee,

Promotion Committee

- 93/94 Facilities, Space, Resources, Committee (Chairman); Admissions Committee; Analytical Services Committee
92/93 Facilities, Space Resources Committee and Safety Committee, Voluntary Member-Organic Search Committee
91/92 Facilities, Space Resources Committee and Safety Committee
90/91 Facilities, Space, Resources Committee
89/90 Curriculum Revision Committee, Faculty Advisory Committee, Honors/Awards Committee.
88/89 Curriculum Revision Committee, Faculty Advisory Committee (Secretary), Inorganic Search Committee, Honors/Awards Committee.
87/88 Facilities, Space, Resources Committee (Secretary), Majors Committee, Organic Search Committee, Honors/Awards Committee.
86/87 Facilities, Space Resources Committee, Majors Committee, Faculty Elections Committee.
85/86 Organic Search Committee.

ii. University and College Committees

Year Committees

- 07/08 *Promotion and Tenure Committee of the Biology Dept., Conflict of Interest Committee VPr of Res.*
05/06 *University Research Council*
04/05 *University Research Council*
95/96 Deans Advisory Committee of the College of Life Sciences
94/95 Deans Advisory Committee of the College of Life Sciences
93/94 Juror at Two Academic Dishonesty Hearings
92/93 Library Committee, Juror at Two Academic Dishonesty Hearings
91/92 Juror at One Academic Dishonesty Hearing

b. Service

i. service to the profession

- 2008 *a. External Evaluator – Promotion of Prof. Douglas Klumpp to Full Professor at Northern Illinois University*
2007 *a. External Evaluator – Promotion of Prof. Wei Wang to Associate Professor at U. New Mexico*
b. External Evaluator – Promotion of Prof. Jon Chisholm to Associate Professor at Syracuse U.
2006 *a. Ad Hoc Member of NIH Study Section for SCORE Grants*
b. External Evaluator – Promotion of Dr. Luis Martinez to Associate Professor at U. Texas – El Paso
2004 *Ad Hoc Member of a Study Section to Evaluate the Neurosciences Program at Universite de Caribe in Puerto Rico*
2003 *Chair - Rio Grande Valley Local Section of the American Chemical Society*
2002 *a. Session Chair Metal Mediated Reactions 223rd National Meeting of the American Chemical Society*
b. Treasurer – Mesilla Valley Workshop
c. Chair Elect - Rio Grande Valley Local Section of the American Chemical Society
d. Ad Hoc Member of NIH Medicinal ChemistryA Study Section
e. Ad Hoc Member of NIH Study Section for SCORE Grants
e. External Evaluator for the Promotion of Dr. Mahmum Hossain to Full Professor at University of Wisconsin-Milwaukee
f. Member of the Editorial Advisory Board for the journal Organometallics

- 2001 a. Chairman - Rio Grande Valley Local Section of the American Chemical Society
b. Treasurer – Mesilla Valley Workshop
- 2000 a. Chairman Elect- Rio Grande Valley Local Section of the American Chemical Society
b. Ad Hoc Member of NIH Medicinal ChemistryA Study Section
c. External Evaluator for the Promotion of Dr. Wayne Schnatter to Associate Professor at Yeshiva University
d. External Evaluator for the Promotion of Dr. Bjorn Söderberg to Associate Professor at West Virginia University
- 1999 a. Chairman - Rio Grande Valley Local Section of the American Chemical Society
b. Symposium Organizer - Joint Southwest and Rocky Mountain Regional Meeting of the American Chemical Society in El Paso, October 1999
c. Editor - Special Issue of Tetrahedron devoted to Carbene Complexes
d. Special Member - NIH Medicinal Chemistry Study Section, October 1999
e. Ad Hoc Member of NIH Medicinal ChemistryA Study Section
- 1998 Chairman Elect- Rio Grande Valley Local Section of the American Chemical Society

ii. service the the community

- 1999 Organizer for National Chemistry Week Activities at the Las Cruces Museum of Natural History

c. Other Activities

Year Activities

05/06 Treasurer – Mesilla Valley Chemistry Workshop

04/05 Treasurer – Mesilla Valley Chemistry Workshop

04/05 Treasurer – Mesilla Valley Chemistry Workshop

03/04 Treasurer – Mesilla Valley Chemistry Workshop

02/03 Treasurer – Mesilla Valley Chemistry Workshop

01/02 Treasurer – Mesilla Valley Chemistry Workshop

98/99 Advisor - College of Arts & Sciences

95/96 Chairman-Organic Division of the Department of Chemistry & Biochemistry at U. Maryland; Member of the Selection Committee - Ernest Guenther Award for the Chemistry of Essential Oils, distributed by the Division of Organic Chemistry of the American Chemical Society

94/95 Chairman-Organic Division of the Department of Chemistry & Biochemistry at U. Maryland; Member of the Selection Committee - Ernest Guenther Award for the Chemistry of Essential Oils, distributed by the Division of Organic Chemistry of the American Chemical Society

93/94 Chairman-Organic Division of the Department of Chemistry & Biochemistry at U. Maryland; Member of the Selection Committee - Ernest Guenther Award for the Chemistry of Essential Oils, distributed by the Division of Organic Chemistry of the American Chemical Society

92/93 Chairman-Organic Division of the Department of Chemistry & Biochemistry at U. Maryland; Session Chair at the 204th National Meeting of the American Chemical Society, Washington, DC

91/92 External Reviewer - Intramural Grant Program at Howard University; Session Chair at the 44th SERMACS, Arlington, VA; Member - Committee to select the winner of the Junior Faculty Achievement Award of the College of Agriculture and Life Sciences; Chairman-Atlantic Coast Lectureship Committee

90/91 Chairman - Committee to select the winner of the Junior Faculty Achievement Award of the College of Agriculture

and Life Sciences; Session Chair at the 200th National Meeting of the American Chemical Society, Washington, DC

89/90 Principle Investigator on Proposal for a new Polarimeter; Secretary-Organic Division

88/89 Secretary-Organic Division; Laboratory Setup-CHEM 443

87/88 Secretary-Organic Division

86/87 Secretary-Organic Division; Principle Investigator on NSF-REU Proposal