

REGER, DANIEL L.

Department of Chemistry and Biochemistry
University of South Carolina
Columbia, South Carolina 29208

EDUCATIONAL BACKGROUND:

<u>College</u>	<u>Major</u>	<u>Date</u>	<u>Degree</u>
Dickinson College	Chemistry	6/67	B.S. (with honors)
Mass. Inst. of Technology	Inorganic Chemistry	5/72	Ph.D.

EMPLOYMENT HISTORY:

2016-present	Carolina Distinguished Professor Emeritus
2001-2008	Chair, Department of Chemistry and Biochemistry
1998-2016	Carolina Distinguished Professor
1984-2016	Professor, University of South Carolina
1997-1999	Associate Dean, College of Science and Mathematics
1977-1984	Associate Professor, University of South Carolina
1972-1977	Assistant Professor, University of South Carolina
1967-1972	Teaching and Research Assistant, MIT
1979	Visiting Professor, Sussex University, England
1985	Visiting Fellow, Australian National University
1994	Visiting Fellow, Australian National University
2001	Visiting Professor, Bristol University, University of Arizona
2009	Visiting Professor, University of Camerino, Italy; UC San Diego

HONORS

Phi Beta Kappa, Dickinson College 1967
Resident Life Outstanding Faculty Member, 1993
University of South Carolina Educational Foundation Research Award for Science, Mathematics and Engineering, 1995
University of South Carolina Michael J. Mungo Award for Excellence in Undergraduate Teaching, 1995
Who's Who Among America's Teachers
Amoco Outstanding Teacher Award, 1996
Carolina Distinguished Professor, 1998-2016, University Chair.
Carolina Trustee Professorship Award, 2000
University of South Carolina Michael J. Mungo Award for Excellence in Graduate Teaching, 2003
Nominated for the Herty Award, Georgia section outstanding Chemists in the Southeast
2007 South Carolina Governor's Award for Excellence in Scientific Research.
2008 University of South Carolina Educational Foundation Outstanding Service Award
2008 American Chemical Society Outstanding South Carolina Chemist of the Year

2011 Elected Fellow of the American Association for the Advancement of Science

2011 Charles H. Stone Award, Charlotte/Piedmont Section of the American Chemical Society, given to the most outstanding chemist in the southeastern United States.

2013 Southern Chemist Award, Memphis Section of the American Chemical Society, given to a chemist who has advanced chemistry in the southeastern United States.

2015 USC Breakthrough Leadership in Research Award

Ph.D. STUDENTS AND POSTDOCTORALS:

Graduate Students Receiving Ph. D. Degrees

- | | |
|----------------------------|-----------------------------|
| 1. Edwin Culbertson, 1976 | 18. Yan Ding, 1993 |
| 2. Mike Dukes, 1977 | 19. Scott Mason, 1994 |
| 3. Dave Fauth, 1978 | 20. Jim Collins, 1996 |
| 4. Mo Habib, 1978 | 21. Sheila Myers, 1996 |
| 5. Alan Gabrielli, 1978 | 22. Christian Gratton, 2000 |
| 6. Charles Coleman, 1978 | 23. Terri Wright, 2001 |
| 7. Paul McElligott, 1981 | 24. Christine Little, 2001 |
| 8. Mike Tarquini, 1983 | 25. Ken Brown, 2003 |
| 9. Neil Swift, 1983 | 26. Radu Semeniuc, 2004 |
| 10. Ken Belmore, 1984 | 27. Russell Watson, 2006 |
| 11. Edward Mintz, 1985 | 28. Derek Elgin, 2007 |
| 12. Stephen Klaeren, 1987 | 29. Elizabeth Foley, 2009 |
| 13. Jeffrey Lindeman, 1988 | 30. Jacob Horger, 2010 |
| 14. Janet Baxter, 1988 | 31. Agota Debreczeni, 2012 |
| 15. Steve Knox, 1990 | 32. Andrea Pascui, 2013 |
| 16. Mark Huff, 1991 | 33. Andrew Leitner, 2015 |
| 17. Dave Garza, 1992 | |

Graduate Students Receiving M. S. Degrees

Bryn Reinecke, 2007

Postdoctoral Associates

1. Charles Coleman, 1979
2. Rahina Mahtab, 1983-84
3. Mike Pompeo, 1992
4. Paul Coan, 1992-1994
5. Yan Ding, 1994
6. Scott Mason, 1994
7. Dave Garza, 1994-1995
8. Jim Collins, 1996-1997
9. Jay Lamba, 1997 – 1999
10. Jim Gardinier, 2001 – 2004
11. Delia Ciurtin, 2002 – 2003

12. Radu Semeniuc, 2004 – 2007

Recent Undergraduate Students

1. Dana Caulder (2 Summers and 3 academic years of research)
2. Lance Reger (3 Summers of research)
3. Mark Pender (1 Summer and 1 academic year of research)
4. Monica Smith (1 Summer)
5. Eric Sirianni (1 Summer and 2 academic years of research)

PUBLICATIONS:

1. "The Chemistry of the Group V Metal Carbonyls," The Preparation of Some Derivatives of Tricarbonyl-mesitylenevanadium(0)," *J. Organometal. Chem.* **1970**, 23, 491, A. Davison, D. L. Reger.
2. "The Stereochemistry of Four-Coordinate Bis(methinodiphosphate) metal (II) Chelate Complexes," *Inorg. Chem.* **1971**, 10, 1967, A. Davison, D. L. Reger.
3. "Reactions of $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{PPh}_3)\{\text{C}(\text{OEt})\text{CH}_3\}]\text{BF}_4$ with Nucleophiles. Evidence for Carboxonium Rather than Carbenoid Behavior," *J. Am. Chem. Soc.* **1972**, 94, 9237, A. Davison, D. L. Reger.
4. "Cyanide, Isocyanide, and Nitrile Derivatives of Cyclopentadienyl Iron. The Interaction of Chiral Metal Complexes with an Optically Active Shift Reagent," *Inorg. Chem.* **1975**, 14, 660, D. L. Reger.
5. "Addition of Methylene to Uncoordinated Double Bonds in Polyolefin Transition Metal π Complexes," *J. Am. Chem. Soc.* **1975**, 97, 4421, D. L. Reger, Alan Gabrielli.
6. "Direct Preparation of $(\eta^5\text{-cyclopentadienyl})\text{carbonyl}$ (triphenylphosphine)Iron Alkyl Derivatives," *Syn. React. Inorg. Metal-Org. Chem.* **1976**, 6, 1, D. L. Reger, E. C. Culbertson.
7. "Mechanism of the Thermal Decomposition of $(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{PPh}_3)(\text{alkyl})$ Derivatives into $(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{PPh}_3)\text{H}$ and Olefin," *J. Am. Chem. Soc.* **1976**, 98, 2789, D. L. Reger, E. C. Culbertson.
8. "Preparation and Characterization of Cyclic Polyolefin Copper(I) Trifluoroacetate Complexes," *J. Organometal. Chem.* **1976**, 113, 173, D. L. Reger, M. D. Dukes.
9. "Convenient Preparation of $[\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})_2]$ Anion Using Sodium Dispersion," *Syn. React. Inorg. Metal-Org. Chem.* **1977**, 7, 151, D. L. Reger, M. D. Dukes and D. J. Fauth.
10. "Preparation and Reactions of the (Dicarbonyl) $(\eta^5\text{-cyclopentadienyl})(\text{tetrahydrofuran})\text{Iron Cation}$. A Convenient Route to (Dicarbonyl) $(\eta^5\text{-cyclopentadienyl})$ ($\eta^2\text{-olefin})\text{Iron Cations}$ and Related

- Complexes," *J. Organometal. Chem.* **1977**, 131, 153, D. L. Reger, C. J. Coleman.
11. Reaction of Ylides with Cationic Transition Metal Olefin and Tetrahydrofuran Complexes," *J. Organometal. Chem.* **1977**, 131, 297, D. L. Reger, E. C. Culbertson.
 12. "Induced Intense Circular Dichroism Spectra," *Inorg. and Nuc. Chem.* **1977**, 39, 1096, D. L. Reger.
 13. "Isomerization of the Alkyl Group in $(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{PPh}_3)(\text{alkyl})$ Complexes," *Inorg. Chem.* **1977**, 16, 3104, D. L. Reger, E. C. Culbertson.
 14. "Effect of Micelles on the $\text{K}_3[\text{Co}(\text{CN})_5\text{H}]$ Catalyzed Hydrogenation of 2-Methylbutadiene, 1,3-Pentadiene and 2,3-Dimethylbutadiene," *J. Mol. Catalysis* **1978**, 4, 315, D. L. Reger, M. M. Habib.
 15. "Molybdenum Perfluorocarbene Complexes," *J. Organomet. Chem.* **1978**, 153, 67, D. L. Reger, M. D. Dukes.
 16. " $(\eta^5\text{-Cyclopentadienyl})\text{Cobalt}(\text{I})$ Olefin Complexes," *Syn. React. Inorg. Metal-Org. Chem.* **1978**, 8, 5, D. L. Reger, M. D. Dukes.
 17. "Catalytic Homogeneous Hydrogenations Using Micellar and Phase Transfer Reaction Conditions," *Adv. Chem. Series* **1979**, 173, 43, D. L. Reger, M. M. Habib.
 18. Preparation of New $[(\eta^5\text{-C}_5\text{H}_4\text{Me})\text{MnNO}(\text{PPh}_3)]$ and $[(\eta^7\text{-C}_7\text{H}_7)\text{Mo}(\text{CO})(\text{PPh}_3)]$ Complexes," *J. Organometal. Chem.* **1979**, 170, 217, D. L. Reger, D. J. Fauth and M. D. Dukes.
 19. "Hydrogenation of Conjugated Carbon-Carbon Double Bonds Using the $\text{K}_3[\text{Co}(\text{CN})_5\text{H}]$ Catalyst Under Phase Transfer Reaction Conditions," *Tet. Lett.* **1979**, 115, D. L. Reger, M. M. Habib and D. J. Fauth.
 20. "A New Synthetic Method for the Preparation of $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{L})(\text{un})]\text{BF}_4$ (L = CO, PPh_3 ; un = unsaturated hydrocarbon) Complexes and Reduction of the η^2 -Acetylene Complexes," *J. Organometal. Chem.* **1979**, 171, 73, D. L. Reger, C. J. Coleman and P. J. McElligott.
 21. "Preparation of Cationic η^2 -Alkene and η^2 -Alkyne Complexes of the $(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})[\text{P}(\text{OPh})_3]$ System and Reduction of These Complexes to σ -Alkyl and Vinyl Derivatives," *Inorg. Chem.* **1979**, 18, 3155, D. L. Reger, C. J. Coleman.
 22. "Determination of the Barrier to Rotation about the Iron-Ligand Bond in Cationic $(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{L})$ (L = PPh_3 , $\text{P}(\text{OPh})_3$) π -Alkyne and π -Alkene Complexes," *Inorg. Chem.* **1979**, 18, 3270, D. L. Reger, C. J. Coleman.
 23. "Effects of Micelles and Phase Transfer Solutions on the $\text{K}_3[\text{Co}(\text{CN})_5\text{H}]$ Catalyzed Hydrogenation of Sodium Sorbate and Methyl Sorbate," *J. Mol. Catalysis* **1980**, 7, 365, D. L. Reger, M. M. Habib.

24. "Carbon-13 NMR Investigation into the Interaction of Sodium Sorbate and Sorbic Acid with Various Micelle Forming Surfactants," *J Phys. Chem.* **1980**, *84*, 77, D. L. Reger, M. M. Habib.
25. "Addition Reactions to Cyclopolyolefin Transition Metal π Complexes," *J. Organometal. Chem.* **1980**, *17*, 243, D. L. Reger, A. Gabrielli.
26. "Versatile Preparation of Highly Functionalized σ -Alkenyl Complexes of Cyclopentadienyliron. A New Route to Substituted Alkenes," *J. Am. Chem. Soc.* **1980**, *102*, 5923, D. L. Reger, P. J. McElligott.
27. "Use of Phase Transfer Reaction Conditions for the Hydrogenation of Conjugated Dienes and α,β -Unsaturated Ketones with a Homogeneous Metal-Hydride Catalyst," *J. Org. Chem.* **1980**, *45*, 3860, D. L. Reger, M. M. Habib and D. J. Fauth.
28. "The Influence of a Cyano-Substituent on an Alkyliron Isomerization Reactions," *J. Organometal. Chem.* **1981**, *216*, C12, D. L. Reger, P. J. McElligott.
29. "Hydrogenation of Conjugated Dienes with Diamine Substituted Cobalt Cyanide Catalysts in Two Phase Systems," *J. Mol. Cat.* **1981**, *12*, 178, D. L. Reger, A. Gabrielli.
30. "Iron, Ruthenium, and Osmium Annual Reviews for 1979," *J. Organometal. Chem.* **1981**, *223*, 273, D. L. Reger.
31. "Polypyrazolylborate Complexes of Zirconium(IV)," *Inorg. Chem.* **1982**, *21*, 840, D. L. Reger, M. E. Tarquini.
32. "Regiochemistry of Nucleophilic Addition to $\text{MeC}\equiv\text{CCO}_2\text{Et}$ π -coordinated to Iron. Synthesis and Structural Characterization of $(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{PPh}_3)(\eta^1\text{-C}(\text{CO}_2\text{Et})=\text{CMe}_2)$," *Organometallics* **1982**, *1*, 443, D. L. Reger, P. J. McElligott, N. G. Charles, E. A. H. Griffith, and E. L. Amma.
33. "Trans-Addition of Nucleophiles to η^2 -Alkyne Complexes of Iron: Crystal and Molecular Structure of $\text{CpFeCO}[\text{P}(\text{OPh})_3][\text{Z-C}(\text{Me})=\text{C}(\text{Ph})\text{Me}]$. Use of Higher Order Organocuprate Reagents," *Organometallics* **1983**, *2*, 101, D. L. Reger, K. A. Belmore, E. Mintz, N. G. Charles, E. A. H. Griffith and E. A. Amma.
34. "Polypyrazolylborate Zirconium(IV) *Tert*-butoxide Derivatives. Stereochemically Non-rigid Six Coordinate Molecules," *Inorg. Chem.* **1983**, *22*, 1064, D. L. Reger, M. E. Tarquini.
35. "Synthesis, X-ray Crystal Structure, and Study of Dynamic Behavior of [Dihydrobis(3,5-dimethyl-1-pyrazolyl)borato] chlorotrimethyltantalum(V). A Molecule with a Strong 3-Center, 2-electron Bond," *J. Am. Chem. Soc.* **1983**, *105*, 5343, D. L. Reger, C. A. Swift and Lukasz Lebiada.
36. "Cis Addition of Hydride to η^2 -Alkyne Complexes by Initial Reaction at an $\eta^5\text{-C}_5\text{H}_5$ Ring. Crystal and Molecular Structure of $(\eta^5\text{-C}_5\text{H}_5)\text{FeCO}(\text{PPh}_3)\text{-}$ (

- η^1 -E-C(CO₂Et)=C(H)Me)," *J. Am. Chem. Soc.* **1983**, *105*, 5710, D. L. Reger, K. A. Belmore, J. L. Atwood and W. E. Hunter.
37. "Synthesis and Investigation of a New Family of Alkylzirconium Complexes. Crystal and Molecular Structure of Hydrotris[3,5-dimethylpyrazolyl]borato-*tert*-butoxy(η^2 -1-*tert*-butyliminoethyl)-methylzirconium(IV)," *Organometallics* **1983**, *2*, 1763, D. L. Reger, M. E. Tarquini and L. Lebioda.
 38. "Nucleophilic Addition Reactions with Iron η^2 -Alkyne Derivatives. Synthesis and Investigation of CpFeCO(L)(η^1 -alkenyl) (L = PPh₃, P(OPh)₃) Complexes," *Organometallics* **1984**, *3*, 134, D. L. Reger, K. A. Belmore, E. Mintz and P. J. McElligott.
 39. "Polypyrazolylborate Derivatives of Chlorotrimethyltantalum(V). Stereochemically Non-rigid Seven Coordinate Molecules," *Inorg. Chem.* **1984**, *23*, 349, D. L. Reger, C. A. Swift and L. Lebioda.
 40. "Preparation of Alkenyliron Complexes from the Addition of Anionic Nucleophiles to Cationic Vinylidene Complexes," *Organometallics* **1984**, *3*, 876, D. L. Reger, C. A. Swift.
 41. "Oxidatively Catalyzed CO Insertion Reactions with CpFeCO[P(OPh)₃](η^1 -alkenyl) Complexes," *Organometallics* **1984**, *3*, 1759, D. L. Reger, E. Mintz.
 42. "Synthesis and Investigation of Isomerization Reactions of Terminal Iron-Alkenyl Complexes," *Organometallics* **1985**, *4*, 305, D. L. Reger, K. A. Belmore.
 43. "Reactions of Alkylolithium Reagents and Nitrogen and Oxygen Based Nucleophiles with Cyclopentadienyliron- η^2 -Alkyne Complexes. Crystal and Molecular Structure of a Diastereomeric Mixture of CpFeCO[P(OPh)₃](η^1 -CH(Me)COMe)," *Organometallics* **1986**, *5*, 1072, D. L. Reger, S. A. Klaeren and L. Lebioda.
 44. "Oxidatively Induced Insertion and Cleavage Reactions of Alkenyliron Complexes. New Routes to Highly Functionalized Alkenes," *J. Am. Chem. Soc.* **1986**, *108*, 1940, D. L. Reger, E. Mintz and L. Lebioda.
 45. "Mixed Polypyrazolylborate-Cyclopentadienyl Zirconium (IV) Complexes. Crystal and Molecular Structure of Dihydrobis(1-pyrazolyl)boratodichlorocyclopentadienylzirconium (IV)," *Inorg. Chem.* **1986**, *25*, 2046, D. L. Reger, R. Mahtab, J. C. Baxter and L. Lebioda.
 46. "Polypyrazolylborate Complexes of Yttrium and Lanthanum," *Inorg. Chim. Acta* **1987**, *139*, 71, D. L. Reger, J. A. Lindeman and L. Lebioda.
 47. "New CpFeCO[P(OPh)₃](η^1 -alkenyl) and CpFeCO[P(OPh)₃](η^1 -alkenylacyl) Complexes. Crystal and Molecular Structures of CpFeCO[P(OPh)₃](η^1 -(E)-COC(CH₂OMe)=C(Me)Ph) and an NMR Method to Assign Alkenyl Ligand Structure," *Organometallics* **1988**, *7*, 181, D. L. Reger, S. A. Klaeren, J. E. Babin and R. D. Adams.

48. "Iron η^2 -Alkyne Complexes. Crystal and Molecular Structures of $[\text{CpFeCO}[\text{P}(\text{OPh})_3](\eta^2\text{-MeC}\equiv\text{CPh})]\text{SbF}_6$ and $[\text{CpFeCO}[\text{P}(\text{OPh})_3](\eta^2\text{-MeC}\equiv\text{CMe})]\text{SbF}_6$," *Organometallics* **1988**, 7, 189, D. L. Reger, S. A. Klaeren and L. Lebioda.
49. "Synthesis and Reactions of a Chelated Carbene-Olefin Complex of Cyclopentadienyliron," *J. Organometal. Chem.* **1988**, 342, 77, D. L. Reger, S. A. Klaeren.
50. "Nucleophilic Addition Reactions with Cationic Iron π -Alkyne and related Complexes. New Routes to Alkenyliron and Alkenylacyliron Complexes and Highly Functionalized Alkenes," *Acc. Chem. Res.* **1988**, 21, 229, D. L. Reger.
51. "Synthesis, X-Ray Crystal Structure, and Multinuclear NMR Study of the Dynamic Behavior of Tris[dihydro(1-pyrazolyl)borato]yttrium(III), a Molecule with Three, Three-Center, Two-Electron Bonds," *Inorg. Chem.* **1988**, 27, 1890, D. L. Reger, J. A. Lindeman and L. Lebioda.
52. "Trispyrazolylborate Complexes of Yttrium. X-ray Crystal Structure of $[\text{HBpz}_3]_2\text{YCl}(\text{Hpz})$ and $\{[\text{HBpz}_3]\text{Y}(\mu\text{-O}_2\text{CCH}_3)_2\}_2$ (pz = pyrazolyl ring)," *Inorg. Chem.* **1988**, 27, 3923, D. L. Reger, J. A. Lindeman and L. Lebioda.
53. "A Novel Copper (I) Complex with Bridging Alkyne Ligands. The Synthesis and Structural Characterization of $[\text{Cu}_4(\text{O}_2\text{CCF}_3)_4(\mu\text{-EtC}\equiv\text{CEt})_2]$," *Organometallics* **1989**, 8, 848, D. L. Reger, M. F. Huff, T. A. Wolfe, and R. D. Adams.
54. "Bis(pyrazolyl)borate Complexes of Gallium. X-Ray Crystal Structure of $[\text{H}_2\text{B}(\text{pz})_2]_2\text{GaCl}$ (pz = pyrazolyl ring)," *Inorg. Chem.* **1989**, 28, 3092, D. L. Reger, S. J. Knox and L. Lebioda.
55. "Multiple Temperature Electrochemical Studies of the Oxidatively Catalyzed E-Z Isomerization Reaction in Iron Alkenyl Complexes," *Organometallics* **1989**, 8, 1714, R. H. Philp, Jr., D. L. Reger, and A. M. Bond.
56. "Poly(pyrazolyl)borate-Phosphine Complexes of Platinum(II). X-ray Crystal Structure of the Unusual Dimer $\text{Br}(\text{PEt}_3)\text{Pt}\{\mu\text{-}[(\text{pz})_2\text{BH}(\text{pz})]\}\text{Pt}(\text{PEt}_3)\text{Br}_2$," *Inorg. Chim. Acta* **1989**, 165, 201, D. L. Reger, J. C. Baxter and L. Lebioda.
57. "Poly(pyrazolyl)borate Complexes of Terbium, Samarium and Erbium. X-Ray Crystal Structure of $\{[\eta^3\text{-HB}(\text{pz})_3]_2\text{Sm}(\mu\text{-O}_2\text{CPh})\}_2$ (pz = pyrazolyl ring)," *Inorg. Chem.* **1990**, 29, 416, D. L. Reger, S. J. Knox, J. A. Lindeman and L. Lebioda.
58. "Synthesis of Extremely Stable Alkyl and Hydride Complexes of the type $[\text{R}_2\text{NCS}_2]\text{Pt}(\text{PEt}_3)\text{R}$," *Organometallics* **1990**, 9, 16, D. L. Reger, J. C. Baxter and D. G. Garza.
59. "Alkyl Group Isomerization Studies with Unusually Stable Alkylmetal Complexes of Palladium and Platinum Secondary-Primary

- Alkyl Isomerization Equilibria in the Absence of Steric Influences from Ancillary Ligands," *Organometallics* **1990**, 9, 873, D. L. Reger, J. C. Baxter and D. G. Garza.
60. "Polyphosphinoylmethanide Complexes of Tin(II). Crystal and Molecular Structure of $\{[(C_6H_5)_2PO]_3C\}_2Sn$," *Inorg. Chim. Acta.* **1990**, 178, 89, D. L. Reger, S. J. Knox and L. Lebioda.
 61. "Organometallic Complexes of Gallium Stabilized by Bis(pyrazolyl) borate Ligands," *Organometallics* **1990**, 9, 2218, D. L. Reger, S. J. Knox and L. Lebioda.
 62. "Synthesis and Characterization of Alkyne Complexes with Copper(I) Trifluoroacetate of the Type $Cu_4(\mu-O_2CCF_3)_4(\mu-alkyne)_2$ and $Cu_2(\mu-O_2CCF_3)_2(alkyne)_2$," *Organometallics* **1990**, 9, 2807, D. L. Reger, M. F. Huff.
 63. "Bis(pyrazolyl)borate Indium(III) Complexes. Crystal and Molecular Structures of $[H_2B(pz)_2]In(CH_3Cl)_2$ and $[H_2B(pz)_2]In(CH_3)_2$," *Organometallics* **1990**, 9, 2581, D. L. Reger, S. J. Knox, A. L. Rheingold and B. S. Haggerty.
 64. "Luminescence Studies of Tris[dihydrobis(1-pyrazolyl)borato]terbium(III)," *Inorg. Chem.* **1991**, 30, 2397, D. L. Reger, P. T. Chou, S. L. Studer, S. J. Knox, M. L. Martinez and W. E. Brewer.
 65. " η^1 -Alkenyl Complexes by Nucleophilic Attack on π -Alkyne and Allene Metal Complexes," *Inorganic Reactions and Methods*, Zuckerman, J. J. and Hagen, A. P. Ed.; VCH Publishers: Florida, **1991**; Vol. 12A, pp 259-264, D. L. Reger.
 66. "Crystal and Molecular Structure of (2,2'-Bipyridine)bis(difluorophosphato)copper(II), $(bipy)Cu(PF_2O_2)_2$," *Acta Cryst. C* **1991**, C47, 1167, D. L. Reger, M. F. Huff and L. Lebioda.
 67. "Synthesis of Extremely Stable Alkylpalladium Complexes of the type $[Me_2NCS_2]Pd(PEt_3)(alkyl)$. Crystal and Molecular Structures of the Isomers $[(CH_2)_4NCS_2]Pd(PEt_3)(n-propyl)$ and $[(CH_2)_4NCS_2]Pd(PEt_3)(isopropyl)$," *Organometallics* **1991**, 10, 902, D. L. Reger, D. G. Garza and L. Lebioda.
 68. "Poly(pyrazolyl)borate Complexes of Tin(II). Crystal and Molecular Structures of $[H_2B(pz)_2]SnCl$ and $[B(pz)_4]_2Sn$ (pz = Pyrazolyl Ring)," *Inorg. Chem.* **1991**, 30, 1754, D. L. Reger, S. J. Knox, M. F. Huff, A. L. Rheingold and B. S. Haggerty.
 69. "Electrochemistry of Copper(II) Bipyridyl Complexes with Alkene, Alkyne and Nitrile Ligands," *Free Rad. Res. Com.* **1991**, 15, 143, P. Kivacic, P. F. Kiser, D. L. Reger, M. F. Huff and B. A. Feinberg.
 70. "Control of Structure in Lead(II) Complexes Using Poly(pyrazolyl)borate Ligands. Stereochemically Inactive Lone Pair in Octahedral $[HB(3,5-Me_2pz)_3]_2Pb$," *J. Am. Chem. Soc.* **1992**, 114, 579, D. L. Reger, M. F. Huff, A. L. Rheingold and B. S. Haggerty.

71. "Alkyne 2,2'-Bipyridine Copper(I) Complexes. Controlled Formation of $[\text{Cu}(\text{bipy})(\text{alkyne})]^+$ and $\{[\text{Cu}(\text{bipy})_2(\text{alkyne})]^{2+}$," *Organometallics* **1992**, *11*, 69, D. L. Reger, M. F. Huff.
72. "Poly(pyrazolyl)borate Complexes of Tin(II) and Lead(II). The Quest for a Coordination Complex with a Stereochemically Inactive Lone Pair," *Synlett* **1992**, 469, D. L. Reger.
73. "Isomerization of the Alkyl Ligand in $(\text{Me}_2\text{NCS}_2)\text{Pd}(\text{PR}_3)(\text{alkyl})$ Complexes. Influences of Heteroatom Substituents in the Alkyl Group on the Alkyl Isomerization Equilibria and Stability of Alkylmetal Complexes," *Organometallics* **1992**, *11*, 4285, D. L. Reger, D. G. Garza and L. Lebioda.
74. "Alkene and Alkyne Insertion Reactions with the Unstable Palladium Hydride Complex $(\text{Me}_2\text{NCS}_2)\text{Pd}(\text{PEt}_3)\text{H}$ and Carbon Monoxide Insertion Reactions with $(\text{Me}_2\text{NCS}_2)\text{Pd}(\text{PEt}_3)(\text{alkyl})$ Complexes," *Organometallics* **1993**, *12*, 554, D. L. Reger, D. G. Garza.
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229. "Syntheses, Structural Correlations, Antiferromagnetic Superexchange Interactions and Electron Paramagnetic Resonance Studies of Dinuclear Metallacycles with Single M-X-M Bridges (X = Cl, Br; M = Fe(II), Co(II), Ni(II), Cu(II), Zn(II), Cd(II))" *Inorg. Chem.* **2017**, *56*, 2884-2901. DOI 10.1021/acs.inorgchem.6b02933, D. L. Reger, A. E. Pascui, E. A. Foley, M. D. Smith, J. Jezierska, A. Wojciechowska, S. A. Stoian and A. Ozarowski.

Published Text Books:

1. "The Laboratory Experience and Powerpoint Slides (1300) for General Chemistry," QAD press, AI, 2014, D. L. Reger, D. L. Freeman, S. R. Goode and A. Taylor-Perry.
2. "Chemistry, Principles and Practice, Third Edition," Brooks/Cole, Cengage Learning, Belmont, CA. 2010, D. L. Reger, S. R. Goode and D. W. Ball. (This text is used for the main-stream Introductory Chemistry course at the University of South Carolina and other Universities and Colleges across the Country.).
3. "General Chemistry Laboratory Experience," qde press, Montgomery AI, 2012, D. L. Reger and D. L. Freeman.
4. "General Chemistry Laboratory Experience," Hayden McNeil, Plymouth, MI, 2005/2006/2009/2011, D. L. Reger and D. L. Freeman.
5. "Chemistry 111/112 Student Lecture Notebook," Cengage Learning, Mason, Ohio, 2009/2011, D. L. Reger and S. R. Goode,
6. "Chemistry 111/112 Student Lecture Notebook," Brooks/Cole, Pacific Grove, CA, 2003/2005/2006, D. L. Reger and S. R. Goode
7. "The Laboratory Experience for General Chemistry," Paladin House, Zenda, Wis, 2000, D. L. Reger and D. Freeman.
8. "Chemistry, Principles and Practice, Second Edition," Saunders College Publishing, Phila. 1997, D. L. Reger, S. R. Goode and E. E. Mercer.
9. "Test Bank to accompany Chemistry, Principles and Practice, Second Edition," Saunders College Publishing, Phila. 1997, D. L. Reger, S. R. Goode and E. E. Mercer.
10. "Instructor's Manual to accompany Chemistry, Principles and Practice, Second Edition," Saunders College Publishing, Phila. 1997, D. L. Reger, S. R. Goode, E. E. Mercer and S. S. Mason.
11. "Chemistry, Principles and Practice," Saunders College Publishing, Phila. 1993, D. L. Reger, S. R. Goode and E. E. Mercer

12. "Laboratory Manual to accompany Chemistry, Principles and Practice," Saunders College Publishing, Phila. 1993, D. L. Reger, R. Weiner and W. E. Gilkerson.
13. "Test Bank to accompany Chemistry, Principles and Practice," Saunders College Publishing, Phila. 1993, D. L. Reger, S. R. Goode and E. E. Mercer.
14. "Instructor's Manual to accompany Chemistry, Principles and Practice," Saunders College Publishing, Phila. 1993, D. L. Reger, S. R. Goode, E. E. Mercer and A. M. Gabrielli.
15. "Experiments in General Chemistry," Paladin House, Geneva, Illinois; 3rd Ed, 1978, 4th Ed, 1983, 5th Ed, 1988, 6th Ed, 1992, 7th Ed, 1996, D. L. Reger, E. E. Mercer and W. E. Gilkerson.
16. "Study Guide to accompany Boikess/Edelson," Harper and Row, New York; 1st Ed, 1978, 2nd Ed, 1980, 3rd Ed 1985, D. L. Reger, E. E. Mercer and R. S. Boikess.
17. "Test Bank to accompany Boikess/Edelson," Harper and Row, New York, 1985, D. L. Reger, T. E. Raidy, E. E. Mercer, S. R. Goode, and R. H. Philp.

Electronic Publications

1. "Powerpoint slides to accompany Chemistry, Principles and Practice, Third Edition," Brooks/Cole, Cengage Learning, Belmont, CA. 2010, D. L. Reger, S. R. Goode and D. W. Ball. (This work consists of 1300 PowerPoint slides used for teaching Introductory Chemistry.)
2. "Powerpoint slides to accompany Chemistry, Principles and Practice," Saunders College Publishing, Phila. 1997, D. L. Reger, E. E. Mercer and A. M. Gabrielli. (This work consists of 1300 PowerPoint slides used for teaching Introductory Chemistry.)

Book Reviews:

1. Syn. React. Inorg. Metal-Org. Chem.
2. J. Organomet. Chem.
3. Organometallics
4. J. Am. Chem. Soc.

Research Support: Over 6 million total

Agencies that have supported Reger's research at University of South Carolina
National Science Foundation

National Institute of Health
Department of Energy
National Science Foundation EPSCoR Program
University of South Carolina Biomedical Research Fund
Petroleum Research Fund
University of South Carolina Instructional Innovation
Research Corporation
South Carolina Research and Productivity
Carolina Venture Fund
South Carolina Research Institute
Collaborative Research Program, State of South Carolina
South Carolina EPSCoR program
Army Research Office

Seminars Presented:

1. Fairleigh-Dickinson
2. Trenton State College
3. Dickinson College (2)
4. Gettysburg College
5. Rider College
6. Widner College
7. St. Josephs College (Phila.)
8. University of South Carolina (7)
9. Newberry College
10. Furman College
11. Tennessee Eastman Corporation
12. Princeton University
13. West Chester College
14. Sussex University, England (3)
15. Imperial College, London
16. Oxford University, England (2)
17. Edinburgh University, Scotland
18. Florida State University
19. Georgia Institute of Technology
20. South Florida University
21. William and Mary (2)
22. University of Chicago
23. Massachusetts Institute of Technology (2)
24. Vanderbilt University
25. Solar Research Institute, Golden, Colorado
26. Central Research, DuPont Corporation
27. Clemson University (2)
28. Ohio State University
29. Australian National University (3)
30. Melbourne University (2)
31. University of Adelaide

32. Monash University
32. University of New South Wales
33. University of Queensland
34. University of North Carolina, Chapel Hill
35. Erskine College
36. United States Patent Office
37. University of Delaware (2)
38. University of Auckland
39. University of Western Australia
40. University of Tasmania
41. Wake Forest University (2)
42. Kyoto University
43. Autonomous National University of Mexico
44. University of Arizona (2)
45. Pacific Northwest Laboratories (2)
46. Francis Marian University
47. Marshall University
48. Claflin College
49. College of New Jersey
50. University of Bristol
51. Cambridge University
52. University of Liege
53. Davidson College
54. University of California at San Diego (2)
55. Universitatea Babeş-Bolyai
56. Winthrop University
57. East Carolina University
58. University of North Carolina at Charlotte
59. Oklahoma State University
60. San Diego State University
61. University of Camerino, Italy (2)
62. Eastern Illinois University

Meeting Presentations: Over 120 talks have been presented at professional meetings. Representative examples are shown below.

1. Invited 55 minute talk "Chiral Iron Complexes," American Chemical Society National Meeting, 1976.
2. Invited 45 minutes talk "Transition Metal Catalyzed Reactions Carried Out Under Phase Transfer Reaction Conditions," First Annual Workshop in Organometallic Chemistry, 1977.
3. Invited 30 minute talk "Synthesis and Characterization of the First Difluorocarbene Complex," at the Organometallic Gordon Conference, 1979
4. Invited 50 minute talk "Addition of Nucleophiles to π -Alkyne Complexes," Northwest American Chemical Society Meeting, 1984.

5. Invited 30 minute talk "Poly(pyrazolyl)borate Complexes of the Lanthanides," Second International Conference on f-Transition Elements, Lisbon, Portugal, 1987.
6. Invited 30 minute talk "Isomerization Reactions of Alkyl Ligands in Unusually Stable Platinum and Palladium Complexes," Southwest Regional American Chemical Society Meeting, 1989.
7. Invited 50 minute talk "Synthesis of Highly Substituted Iron-Alkyne Complexes," 73rd Canadian Chemical Conference, Halifax, 1990.
8. Invited 50 minute talk "Poly(pyrazolyl)borate Complexes of the Post Transition Metals," Institute of Nuclear Sciences and Engineering, Lisbon, Portugal, 1993.
9. "Tris(pyrazolyl)methane Complexes: New Opportunities for the Preparation of Cationic Complexes" Organometallic Gordon Conference and 31st ICC Conference, 1996.
10. Invited 45 minute talk "Poly(pyrazolyl)methane Ligands: Similar or Different from Poly(pyrazolyl)borate Ligands." Inorganic Chemistry Gordon Conference, 1997.
11. Invited 40 minute talk "Chemistry Of New Group 1 and 2 Coordination Complexes." International Conference on the Chemistry of Groups 1 and 2, Erlangen, Germany, 1997.
12. Invited 30 minute talk "New Cationic Complexes of Main Group Elements Supported by Tris(pyrazolyl)methane Ligands." International Conference on Organometallic Chemistry in the South Pacific, Auckland, New Zealand, 1998.
13. Invited talk "Tris(pyrazolyl)methane Ligands: Synthesis of Iron(II) Complexes with Unusual Magnetic Properties," Royal Australian Institute Convention, Canberra, Australia, 1999.
14. Invited talk "Comparison of Structures of Metal Complexes containing Tris(pyrazolyl)methane and Tris(pyrazolyl)borate Ligands," American Chemical Society National Meeting, 2000.
15. Invited talk "Supramolecular Structures of Silver(I) Complexes Supported by Multitopic Ligands Containing Tris(pyrazolyl)methane Units," 3rd International Conference of the Chemical Societies of the South-Eastern European Countries, Bucharest Romania, 2002.
16. Organizer and invited talk "Tris(pyrazolyl)methane ligands: Recent Developments in Scorpionate Chemistry," National American Chemical Society Meeting, 2003.
17. Invited talk "Supramolecular Architectures Organized by Multitopic Tris(pyrazolyl)methane Ligands," SERMACS Meeting, 2003.
18. Invited talk "Supramolecular Architectures Organized by Multitopic Poly(pyrazolyl)methane Ligands," McCleverty Symposium, Bristol, England, 2003
19. Invited talk "Supramolecular Structural Variations In Metal Complexes of a Semi-rigid Poly(pyrazolyl)methane Ligand" International Symposium on Macro- and Supramolecular Architectures and Materials University of Montana, 2004.
20. Invited plenary lecture "Supramolecular Structures of Silver(I) and Iron(II)-Spin Crossover Complexes of Multitopic Tris(pyrazolyl)methane and New Types of Tris(pyrazolyl)borate Ligands" III Euchen Conference on Nitrogen Ligands, University of Camerino, Camerino Italy, 2004.

21. Invited talk "Impact of changes in molecular and supramolecular structure on the spin-crossover behavior of tris(pyrazolyl)methane and tris(pyrazolyl)borate complexes of iron(II)" Pacificchem 2005, Hawaii, 2005.
22. Invited talk "Use of tris(pyrazolyl)methane and tris(pyrazolyl)borate complexes of iron(II) to determine the impact of changes in molecular and supramolecular structure on temperature induced spin crossover" National American Chemical Society Meeting, Atlanta, 2006.
23. Invited Keynote lecture "Structure-Function Correlations with Spin-State Crossover Tris(pyrazolyl)methane and Tris(pyrazolyl)borate Complexes of Iron(II)" SUPCHEM-Supramolecular Chemistry, from design to applications, Cluj-Napoca, Romania, 2007.
24. Invited talk "Unusual Structures and Magnetic Properties of Paddlewheel Copper(II) Carboxylate Dimers Containing the Strong π - π Stacking 1,8-Naphthalimide Synthons" SERMACS Meeting, 2009.
25. Invited talk "Monobridged, binuclear metallacycles supported by third generation bis(1-pyrazolyl)methane ligands: Unusual magnetic properties" National American Chemical Society Meeting, Boston, 2010.
26. Invited talk "SYNTHESES AND PROPERTIES OF LINEARLY BRIDGED, BINUCLEAR METALLACYCLES SUPPORTED BY THIRD GENERATION BIS(1-PYRAZOLYL)METHANE LIGANDS" V Euchen Conference on Nitrogen Ligands, Granada, Spain, 2011.
27. Invited talk "Copper(II) Carboxylate Dimers formed from Enantiopure Ligands Containing a Strong π ... π Stacking Supramolecular Synthons: Enantioselective Single-Crystal to Single-Crystal Gas/Solid-Mediated Transformation" Zing Conference on Coordination Chemistry, Cancun, Mexico, 2011.
28. Invited talk "Metal complexes with supramolecular structures designed to support single-crystal to single-crystal transformations" National American Chemical Society Meeting, San Diego, 2012.
29. Invited talk "Dinuclear metallacycles with single anion bridges: Unusual magnetic and NMR properties" SERMAC Columbia, 2016.

Other Professional Activities:

Guest Editor Inorg. Chim. Acta. special issue 2010 dedicated to Arnold Rheingold.

Journals Refereeing

1. J. Organomet. Chem.
2. J. Am. Chem. Soc.
3. Inorg. Chem.
4. Syn. React. Inorg. Metal-Org. Chem.
5. Advances in Chemistry Series
6. Organometallics
7. Canadian J. Chem.

8. J. Mol. Catal.
9. Australian J. Chem.
10. Organometallic Synthesis
11. Inorg. Chim. Acta.
12. Tetrahedron Letters
13. J. Cryst. Spec. Res.
14. J. Cluster Science
15. Chem. Rev.
16. Main Group Chemistry
17. J. Inorg. Bio.
18. J. Solid State Chem.
19. J. Bioinorganic Chem.
20. J. Chem. Soc., Dalton Trans.
21. J. Chem. Soc., Chem. Commun.
22. J. Hazard. Mater.
23. Eur. J. Inorg. Chem.
24. Inorganic Chemical Communications
25. J. Chem. Cryst.
26. Cryst. Growth & Design
27. Angew. Chem. Int. Ed.
28. J. Org. Chem.
29. Eur. J. Org. Chem.

Grant proposals reviewed

1. Research Corporation
2. National Science Foundation
3. Petroleum Research Fund
4. Department of Army
5. Department of Energy
6. National Institute of Health
7. South Carolina EPSCoR Program
8. Research Council of Canada
9. Jeffress Memorial Trust
10. Marsden Fund

Committee Service

1. Library
2. Seminar (Chair)
3. Candidacy and Examinations
4. Graduate Admissions (Chair)
5. Regional Campus
6. Education and Curriculum (Chair)
7. Department Chair Search
8. University Research and Productivity Scholarship (twice)
9. Phi Beta Kappa Admissions

10. Chemistry Executive
11. Organic Faculty Search
12. NMR policies (Chair)
13. College of Science and Math Instructional Effectiveness
14. X-ray Diffraction Policies (Chair)
15. College of Science and Math Academic Standards
16. South Carolina American Chemical Society Tuition Grant
17. College of Science and Math Building Planning
18. Mass Spectrometry Policies
19. University National Institute of Health Biomedical Research
20. College of Science and Math Grievance
21. College of Science and Math Dean's Advisory
22. Faculty Senate
23. Materials Chemist Search
24. Inorganic, Analytical, Physical Teaching (Chair)
25. Provost's Innovation Instructional Grant
26. NMR Services Manager Search (Chair)
27. Chair Chemistry Tenure and Promotions (twice)
28. Ph. D. Advisory (average 5/year)
29. Ad Hoc Education
30. Russell Award for Science and Math (Chair)
31. NMR Services (Chair)
32. Amoco Teaching Award
33. Named and Endowed Professorships
34. Physics Chair Search Committee (Chair)
35. University Research Committee for Materials Science
36. Department Development (Chair)
37. Geological Sciences Chair Search Committee (Chair)
38. Psychology Chair Search Committee (Chair)
39. Associate Dean Chair Search Committee (Chair)
40. Organizing Committee for the Southeastern Regional ACS Meeting, Columbia SC 2016

Major Administrative Service

1. Chair, Department of Chemistry and Biochemistry, 7/1/01 – 6/30/08
2. Associate Dean, College of Science and Mathematics, 9/15/97-5/15/99
3. Leader of EPSCoR NSF Multi-Investigator Proposal from Chemistry, Physics and Chemical Engineering "Material Science at University of South Carolina," partially funded, 1989-1991.
4. PI of Funded EPSCoR NSF Multi-Investigator Proposal shared with Chemical Engineering "Material Science at University of South Carolina," 1991-1994.
5. Chemistry co-PI of a Funded EPSCoR DOE Multi-Investigator Proposal "Battery Diagnosis and Development," 1995- 2001.
6. PI of Funded EPSCoR NSF Multi-Investigator "Surface Science and Nanochemistry," 1998-2002.

Courses Taught at the University of South Carolina (with typical enrollments).

1. Chem. 511 (15-20) Advanced Inorganic Chemistry
2. Chem. 712 (10-15) Transition Metal Chemistry
3. Chem. 111 (150-290) Introductory Chemistry
4. Chem. 112 (150-220) Introductory Chemistry
5. Chem. 190 (40) Majors Laboratory
6. Developed and taught a special course for disadvantaged High School students interested in health related careers (50).
7. Chem. 390 (30) Majors Laboratory
8. Developed and taught an experimental course, Chem 100X, for students with weak backgrounds in chemistry (55).
9. Helped develop and teach in University of South Carolina's Program of Instruction for Teaching Assistants (90-120)
10. Taught in University of South Carolina's Program of Instruction for New Faculty (30)
11. Chem. 499 Undergraduate Research
12. Chem. 701 Seminar-Inorganic Chemistry (10)
13. Chem. 790 Introduction to Research
14. Chem. 791 Introduction to Research II
15. Chem. 798 Research in Chemistry
16. Chem. 799 Thesis Preparation
17. Chem. 898 Research in Chemistry II
18. Chem. 899 Thesis Preparation

Miscellaneous

Invited Representative to NSF/DOE workshop "Building Strong Academic Chemistry Departments Through Gender Equity" 2006.

Organized a symposium, "Scorpionate Ligands – Thirty-Five Years Later" for the Spring 2003 National American Chemical Society meeting.

Reviewed numerous files of faculty for promotion/tenure

Submitted a disclosure on "Multiphase, Thermally Integrated Hydrogen Fuel Sources."

External Evaluator, Ph. D. Committee

The Australian National University

Indian Institute of Technology

University of British Columbia

University of Auckland

University of Western Australia

Indian Institute of Technology, Kanpur

Undergraduate Student Advisor (average 14 students/year)

Director of Undergraduate Research and Honors College Theses

Director of Departmental High Pressure Facility 1972-1983

Invited Representative at the American Chemical Society President's Conference "Membership for the year 2000," 1989.

Awarded an Instructional Innovation Grant to develop videotape introductions to the Chemistry 111-112 laboratories.

Contributed to Numerous Departmental Instrumentation Grants. Principle Investigator on funded NMR Grants for \$240,000 and \$150,000.

Consultant Dow Chemical Corporation

General Chemistry Textbook Reviewer for Harper and Row, Random House and Saunders Publishers

Gulbenkian Foundation Travel Award Grant, Portugal

Host, American Chemical Society Visiting Scholar

Judge, South Carolina Science Projects Awards