

CLAIRE A. TESSIER

Department of Chemistry
University of Akron
Akron, OH 44325-3601
Phone: (330)972-5304
Fax: (330)972-7370
E-mail: tessier@uakron.edu

I. Education

1/81 - 8/82, Postdoctoral Fellow in Inorganic Chemistry, Northwestern University (D. F. Shriver, advisor)
2/82, Ph. D. in Chemistry (Inorganic), State University of New York at Buffalo (O. T. Beachley, Jr., advisor)
5/75, B. S. in Chemistry, University of Vermont, Burlington, Vermont

II. Experience

Department of Chemistry, University of Akron, Akron, Ohio
4/01- present, Full Professor
8/99 - 8/02, Assistant Chair
4/96 - 4/01, Associate Professor (with tenure)
6/96 - present, Faculty Research Associate, Maurice Morton Institute of Polymer Science
8/90 - 4/96, Assistant Professor

Departments of Organic and Inorganic Chemistry, Eidgenössische Technische Hochschule (ETH), Zürich, Switzerland
8/98 - 4/99, Guest Professor (sabbatical leave)

Department of Chemistry, University of Wisconsin, Madison, Wisconsin
1/90 - 4/90, Visiting Professor

Department of Chemistry, Case Western Reserve University, Cleveland, Ohio
5/90 - 5/92, Adjunct Professor
6/86 - 4/90, Senior Research Associate
8/83 - 5/86, Visiting Assistant Professor

Department of Chemistry, University of Rhode Island, Kingston, Rhode Island
8/82 - 7/83, Visiting Assistant Professor

III. Research Publications

1. O. T. Beachley, Jr. and C. Tessier-Youngs, "Kinetics and Mechanism for the Elimination of Hydrogen Between Dimethylaluminum Hydride and N-Methylaniline", *Inorg. Chem.*, **1979**, *18*, 3188.
2. O. T. Beachley, Jr., C. Tessier-Youngs, R. G. Simmons and R. B. Hallock, "The Attempted Syntheses of Low Oxidation State, Organometallic Derivatives of Aluminum, Gallium and Indium; A New Synthesis of $\text{Al}(\text{CH}_2\text{SiMe}_3)_3$ ", *Inorg. Chem.* **1982**, *21*, 1970.
3. C. Tessier-Youngs, C. Bueno, O. T. Beachley, Jr. and M. R. Churchill, "Transition Metal Complexes of Organoaluminum Phosphides. The Synthesis, Characterization, and Molecular Structure of $\text{Cr}(\text{CO})_5[\text{PPh}_2\text{Al}(\text{CH}_2\text{SiMe}_3)_2\text{NMe}_3]$ ", *Inorg. Chem.* **1983**, *22*, 1054.
4. O. T. Beachley, Jr. and C. Tessier-Youngs, "Synthesis and Characterization of Organoaluminum Compounds Containing the Trimethylsilylmethyl Substituent, $\text{Al}(\text{CH}_2\text{SiMe}_3)_2\text{Br}$, $\text{Al}(\text{CH}_2\text{SiMe}_3)_2\text{H}$, and $(\text{Me}_3\text{SiCH}_2)_2\text{AIPPh}_2$, and a Reinvestigation of the Chemistry of $\text{Me}_2\text{AIPPh}_2$ and $\text{Et}_2\text{AIPPh}_2$ ", *Organometallics*, **1983**, *2*, 796.
5. C. Tessier-Youngs, F. Correa, D. Pioch, R. L. Burwell, Jr. and D. F. Shriver, "Chemistry of the Interaction of Some Metal Carbonyl Clusters with Metal Oxide Surfaces, $[\text{CpFe}(\text{CO})_4]$, $\text{Cp}_3\text{Ni}_3(\text{CO})_2$ and $[\text{CpNi}(\text{CO})_2]$ on Alumina", *Organometallics*, **1983**, *2*, 898.
6. C. Tessier-Youngs, W. J. Youngs, O. T. Beachley, Jr. and M. R. Churchill, "The Reaction Chemistry of Transition Metal Diphenylphosphorus Complexes with Organoaluminum Compounds. The Synthesis,

- Characterization and Crystal and Molecular Structure of $\text{Cr}(\text{CO})_5[\text{PPh}_2(\text{CH}_2)_4\text{OAl}(\text{CH}_2\text{SiMe}_3)_2]$, An Example of THF Cleavage", *Organometallics*, **1983**, 2, 1128.
7. M. A. Drezdson, C. Tessier-Youngs, R. L. Burwell, Jr. and D. F. Shriver, "Carbon Monoxide Reduction by Metal Cluster Compounds in Solution and on Metal Oxide Surfaces", *Preprint of the Division of Petroleum Chemistry*, **1984**, 29(2), 582-585.
 8. M. A. Drezdson, C. Tessier-Youngs, C. Woodcock, P. M. Blonsky, O. Leal, B.-K. Teo, R. L. Burwell, Jr., and D. F. Shriver, "A Chemical, FT-IR and EXAFS Study of the Interaction Between $\text{HFe}(\text{CH})(\text{CO})_{12}$ and Partially Dehydroxylated Alumina", *Inorg. Chem.* **1985**, 24, 2349.
 9. J. D. Ferrara, C. Tessier-Youngs, and W. J. Youngs, "Synthesis and Structural Characterization of Nickel(0)(1,5,9-tridehydrotri- benzo[12]annulene)", *J. Am. Chem. Soc.*, **1985**, 107, 6719.
 10. O. T. Beachley, Jr. and C. Tessier-Youngs, "Synthesis of Tris(trimethylsilyl)-methylaluminum", *Inorg. Synth.* **1986**, 24, 92.
 11. O. T. Beachley, Jr. and C. Tessier-Youngs, "Synthesis of Bromobis(trimethylsilylmethyl)-aluminum", *Inorg. Synth.* **1986**, 24, 94.
 12. O. T. Beachley, Jr. and C. Tessier-Youngs, "Synthesis of Trimethylsilylmethyl lithium", *Inorg. Synth.* **1986**, 24, 95.
 13. J. D. Ferrara, C. Tessier-Youngs, and W. J. Youngs, "Synthesis and Characterization of a Copper(I) Triflate Complex of 1:2,5:6,9:10-Tribenzocyclododeca-1,5,9-triene-3,7,11-triylne", *Organometallics*, **1987**, 6, 676.
 14. A. Djebli, J. D. Ferrara, C. Tessier-Youngs, W. J. Youngs, "Synthesis and Characterization of a Silver Triflate Sandwich Complex of 1,2:5,6:9,10- Tribenzocyclododeca-1,5,9-triene-3,7,11-triylne. The First Example of a 12 Membered Macrocyclic Sandwich Complex." *J. Am. Chem. Soc.*, **1988**, 110, 647.
 15. E. A. Zarate, C. Tessier-Youngs, W. J. Youngs, "Synthesis and Structural Characterization of Pt-Si Dimers with Unusually Short Cross-Ring Silicon-Silicon Interactions", *J. Am. Chem. Soc.*, **1988**, 110, 4068.
 16. J. D. Ferrara, C. Tessier-Youngs, and W. J. Youngs, "Synthesis and Molecular Structure of a Trinuclear Cu(I) Cofacial Bimacrocyclic", *Inorg. Chem.* **1988**, 27, 2201.
 17. J. D. Ferrara, C. Tessier-Youngs, W. J. Youngs, "A Novel n-Doped Metallomacrocyclic Conductor", *J. Am. Chem. Soc.*, **1988**, 110, 3326.
 18. A. Djebli, J. D. Ferrara, C. Tessier-Youngs, W. J. Youngs, "Synthesis and Crystallographic Characterization of a Tetracobalt Cluster of Tribenzocycliylne", *J. Chem. Soc., Chem. Commun.*, **1988**, 548.
 19. J. D. Ferrara, C. Tessier-Youngs, W. J. Youngs, "The Crystal and Molecular Structure of 3,4-Benzobiphenylene", *Acta. Cryst. C*, **1988**, 45, 57.
 20. J. D. Ferrara, A. A. Tanaka, C. Fiero, C. A. Tessier-Youngs, W. J. Youngs, "Synthesis and Theoretical Characterization of a Ni(0) Complex of Tribenzocycliylne (TBC) and the Preparation of a Novel Organometallic Conductor." *Organometallics*, **1989**, 8, 2089.
 21. E. A. Zarate, C. Tessier-Youngs, W. J. Youngs, "The Synthesis and X-ray Structural Characterization of Two Isomers $[\text{Pt}(\text{P}(\text{C}_2\text{H}_5)_3)_2\text{SiH}(\text{C}_6\text{H}_{11})_2]$; Dimers with Unusually Short Cross-Ring Silicon-Silicon Distances." *J. Chem. Soc., Chem. Commun.*, **1989**, 577.
 22. T. Royster, O. T. Beachley, Jr., E. A. Zarate, C. Tessier-Youngs, W. J. Youngs, "Synthesis and Structural Characterization of $[\text{Mo}(\text{CO})_3]\text{Ga}(\text{Mesityl})_3$ and $[\text{Mo}(\text{CO})_3]_2\text{Ga}(\text{Mesityl})_3$." *Organometallics*, **1989**, 8, 1679.
 23. A. B. Anderson, P. Shiller, E. A. Zarate, C. A. Tessier-Youngs, W. J. Youngs, "Bonding in Transition Metal Silyl Dimers, Molecular Orbital Theory", *Organometallics*, **1989**, 8, 2320.
 24. D. Solooki, V. O. Kennedy, C. A. Tessier, W. J. Youngs, "Synthesis of a Trithienocyclotriylne," *Synlett*. **1990**, 427.
 25. R. C. Dunbar, D. Solooki, C. A. Tessier, W. J. Youngs, B. Asamoto "Gas- Phase Synthesis of Metallocyclotriylnes," *Organometallics*, **1991**, 10, 52.
 26. W. Youngs, A. Djebli, C. Tessier, "Lithium-Induced Cyclization of Tribenzo Cyclotriylnes," *Organometallics*, **1991**, 10, 2089.
 27. C. A. Tessier, V. O. Kennedy, E. A. Zarate, "Silane Dehydrocoupling Reactions Catalyzed by the Late Transition-Metals" in the book *Inorganic and Organometallic Oligomers and Polymers*, J. F. Harrod and R. Laine (eds.) Kluwer; Dordrecht, Netherlands, 1991; pp 13-22.

28. D. Malaba, L. Chen, C. A. Tessier, W. J. Youngs, "Synthesis and Crystal Structure of the dimer $\{\text{Li}_2(\text{THF})_2\text{C}_{24}\text{H}_{24}(\text{SiMe}_3)_2\}_2$: An example of a Li-Cp-Li-Cp Supersandwich," *Organometallics*, **1992**, *11*, 1007.
29. C. Tessier "Filtration of Very Fine Particles from Air-Sensitive Reaction Mixtures," *J. Chem. Ed.* **1992**, *56*, 684.
30. J. D. Kinder, C. A. Tessier, W. J. Youngs, "Synthesis of a Para-Methoxy Substituted Tribenzocyclyne," *Synlett*, **1993**, 149-50.
31. D. Malaba, A. Djebli, L. Chen, E. A. Zarate, C. A. Tessier, W. J. Youngs, "Lithium-Induced Cyclization of Tribenzocyclyne: Synthesis and Structural Characterization of a Novel Helicene Dianion, its Protonated Form, Silylated Isomers of a Substituted Fulvalene Ligand, and a Novel Dimeric Lithium Complex," *Organometallics*, **1993**, *12*, 1266-76.
32. W. J. Youngs, J. D. Kinder, J. D. Bradshaw, C. A. Tessier, "Synthesis of a Nickel(0) Complex of a Methoxy Substituted Tribenzocyclotriene. X-ray Crystallographic Evidence for an Intermolecular C-H-Ni Agostic Interaction," *Organometallics*, **1993**, *12*, 2406-7.
33. J. L. Shibley, R. West, C. A. Tessier, R. K. Hayashi, "The Synthesis of an Azadisilacyclopropane and Two Cyclodisilazanes from 1,1,2,2,-Tetrachloro-1,2-dimesityldisilane," *Organometallics*, **1993**, *12*, 3480-4.
34. R. C. Dunbar, G. Y. Uechi, D. Solooki, C. A. Tessier, W. Youngs, B. Asamoto, "Reactions of Gas-Phase Atomic Metal Ions with the Macrocyclic Ligand Tribenzocyclyne," *J. Am. Chem. Soc.* **1993**, *115*, 12477-82.
35. K. P. Baldwin, J. D. Bradshaw, C. A. Tessier, W. J. Youngs, "Synthesis of 1,2:5,6:9,10;13,14:17,18:21,22:25,26:29,30:33,34:37,38-Decabenzo-3,7,11,15,19,23,27,31,35,39-decadehydro[40]annulene," *Synlett*, **1993**, 853-6.
36. D. Solooki, J. D. Bradshaw, C. Tessier, W. J. Youngs "Synthesis and Characterization of Trithienocyclotriene (TTC) and its Tetracobalt Complex. The First Example of a Dehydroannulene Containing Thiophene Rings" *Organometallics* **1994**, *13*, 451-5.
37. J. D. Bradshaw, D. Solooki, C. Tessier, W. J. Youngs "Lithium-Induced Cyclization of Tetrabenzenocyclyne. A Novel Zipper Reaction of Cyclic α -Ethynylbenzenes" *J. Am. Chem. Soc.* **1994**, *116*, 3177-9.
38. D. Solooki, J. D. Bradshaw, C. A. Tessier, W. J. Youngs, R. F. See, M. R. Churchill, J. D. Ferrara, "Syntheses and Crystal Structures of 1,2:5,6:9,10;13,14:17,18:21,22-Hexabenzo-3,7,11,15,19,23-hexadehydro[24]annulene (HBC), 1,2:5,6:9,10;13,14-Tetrabenzo-3,7,11,15-tetradehydro[16]annulene (QBC), and a Tetracobalt Complex of QBC. The First Example of a Transition Metal Complex of QBC." *J. Organomet. Chem.* **1994**, 231-6.
39. L. Guo, J. D. Bradshaw, C. A. Tessier, W. J. Youngs, "Synthesis and Crystal Structure of 1,2:7,8:13,14:19,20-tetrabenzenocyclohexadeca-1,7,13,19-tetrane-3,5,9,11,15,17,21,23-octayne" *J. Chem. Soc., Chem. Commun.* **1994**, 243-4.
40. K. P. Baldwin, R. S. Simons, J. Rose, P. Zimmerman, D. M. Hercules, C. A. Tessier, W. J. Youngs "Crystal Structure of 1,2:5,6:9,10;13,14:17,18:21,22:25,26:29,30:33,34:37,38-Decabenzo-3,7,11,15,19,23,27,31,35,39-decadehydro[40]annulene ($\text{C}_{80}\text{H}_{40}$), a 40-membered Macrocyclic Ring and the Synthesis and Characterization of its 80- ($\text{C}_{160}\text{H}_{80}$), 120- ($\text{C}_{240}\text{H}_{120}$), 160- ($\text{C}_{320}\text{H}_{160}$), 200- ($\text{C}_{400}\text{H}_{200}$) Membered Ring Homologues" *J. Chem. Soc., Chem. Commun.* **1994**, 1257-8.
41. K. Baldwin, C. Tessier, W. Youngs, "Solid State Polymerization of a Strained Cyclic Diacetylene," *Polym. Preprints* **1994**, *35*(2), 546-547.
42. G. Ouyang, R. Simons, and C. Tessier "Reaction of $(\text{Me}_3\text{SiCH}_2)\text{SiHCl}_2$ and $(\text{Me}_3\text{SiCH}_2)\text{SiCl}_3$ with Alkali Metals; Syntheses of Polysilanes and Polycarbosilanes," *Polymer Materials: Science and Engineering*, **1994**, *71*, 318-319.
43. J. L. Shibley, R. West, D. R. Powell, C. A. Tessier, "Studies of Silicon-Nitrogen Ring Formation from Tetrachlorodisilanes," *Heteroatom Chem.* **1994**, *5*, 205-14.
44. G. Ouyang, R. Simons, C. Tessier, "Preparation of Polycarbosilanes and Polysilanes from (Trimethylsilylmethyl)chlorosilanes," *J. Inorg. Organomet. Polym.* **1995**, *5*, 87-93.
45. L. Guo, J. D. Bradshaw, C. A. Tessier, W. J. Youngs, "A Planar Skeleton Heterocyclyne 3,4:7,8-Dibenzocyclo-3,7-diene-1,5,9-tri-ene-diphenylsilane and its Ni(0) Complex," *Organometallics*, **1995**, *14*, 586-8.

46. E. A. Zarate, V. O. Kennedy, J. McCune, R. S. Simons, C. A. Tessier, "The Synthesis and Characterization of (*fac*)Tris-trimethylphosphino-iridium(III) Silane Complexes," *Organometallics* **1995**, *14*, 1802-9.
47. M. D. Senskey, J. D. Bradshaw, C. A. Tessier, W. J. Youngs "Aryl Nitro Group Substitution by Primary and Secondary Amines," *Tet. Lett.* **1995**, *36*, 6217-6220.
48. R. S. Simons, and C. A. Tessier, "Structure of [(OC)₃Fe]₂(μ-SiMe₂)₂(μ-SiMeCl)," *Acta Cryst.* **1995**, *51C*, 1997-8.
49. K. P. Baldwin, A. J. Matzger, D. A. Scheiman, C. A. Tessier, K. P. C. Vollhardt, W. J. Youngs "Synthesis, Crystal Structure, and Polymerization of 1,2:5,6:9,10-Tribenzo-3,7,11,13-tetrahydro[14]annulene," *Synlett.* **1995**, *36*, 1215-1218.
50. A. M. Chaka, R. Zaniewski, W. Youngs, C. Tessier, G. Klopman "Predicting the Crystal Structure of Organic Molecular Materials," *Acta Cryst* **1996**, *B52*, 165-183.
51. R. S. Simons and C. A. Tessier "The Structure of an Ionic Compound with Iron-Silicon Bonds in both the Anion and Cation," *Acta Cryst C.* **1996**, *B52*, 840-842.
52. J. D. Bradshaw, L. Guo, C. A. Tessier, W. J. Youngs "Planar Platinum Metallacyclines Containing One and Two Trialkyne Pockets" *Organometallics* **1996**, *15*, 2582-2584.
53. R. S. Simons, C. A. Tessier "The Reactions of Arylsilanes with Iron Nonacarbonyl," *Organometallics* **1996**, *15*, 2604-2610.
54. D. Malaba, C. A. Tessier, W. J. Youngs "Metal Promoted Oxidative π-Conjugation and Coupling of Substituted-Fulvalene-Type Ligands: Synthesis and Crystal Structures of π-Conjugated C₂₄H₁₂(SiMe₃)₂ and the Dimer [C₂₄H₁₃(SiMe₃)₂]₂," *Organometallics* **1996**, *15*, 2918-2922.
55. G. Ouyang, R. S. Simons, C. Tessier, "Reaction of Trimethylsilylmethyl Substituted Silanes with Alkali Metals: Syntheses of Polycarbosilanes and Polysilanes" in the book *Metal Containing Polymeric Materials*, C. Pittman, Ed.; Plenum: New York, 1996; 189-197.
56. K. P. Baldwin, C. A. Tessier, W. J. Youngs, "Cyclic Ortho Substituted Benzo-Alkynes," in *The Polymeric Materials Encyclopedia*, J. C. Salamone, Ed., CRC Press: Boca Raton, FL, 1996.
57. D. Solooki, J. D. Ferrara, D. Malaba, J. D. Bradshaw, C. A. Tessier, W. J. Youngs "Tribenzocyclyne (TBC) and Tetrabenzocyclyne (QBC)," *Inorg. Synth.* **1997**, *31*, 122-8.
58. M. Chai, T. Saito, Z. Pi, C. Tessier, P. L. Rinaldi, "Characterization of Poly(1-phenyl-1-silabutane) Tacticity via ¹H/¹³C/²⁹Si Triple Resonance 3D-NMR," *Macromolecules* **1997**, *30*, 1240-2.
59. D. Zhang, D. B. McConville, C. A. Tessier, W. J. Youngs "The Synthesis and Crystallographic Characterization of a Planar Tetraethynyl Platinum Complex (NBu₄)₂[Pt(OBET)₂] and its Double Tweezer Mercurydichloride Complex (NBu₄)₂[Pt(OBET)₂](HgCl₂)₂," *Organometallics*, **1997**, *16*, 824-5.
60. L. Guo, J. B. Bradshaw, D. B. McConville, C. A. Tessier, W. J. Youngs "Planar Heterocyclynes and their Isomorphous Nickel(0) Complexes," *Organometallics* **1997**, *16*, 1685-92.
61. M. Chakraborty, D. B. McConville, G. F. Koser, C. A. Tessier, T. Saito, P. L. Rinaldi, W. J. Youngs "A Novel High Yield Synthesis of Substituted Isoindolequinones," *J. Org. Chem.* **1997**, *62*, 8193-7.
62. D. Zhang, D. B. McConville, J. M. Hrabusa III, C. A. Tessier, W. J. Youngs "The Synthesis of Titanium Cyclynes Cp₂Ti(OBET) and (Cp*)₂Ti(OBET) and the Unprecedented Stability of the Bi-metallic Complex Ni[Cp₂Ti(OBET)] to CO and O₂," *J. Am. Chem. Soc.* **1998**, *120*, 3506-7.
63. M. Chakraborty, D. B. McConville, T. Saito, H. Meng, P. L. Rinaldi, C. A. Tessier and W. J. Youngs, "A Novel Tandem Bicyclization to Form an Indenopyran Ring System", *Tetrahedron Lett.* **1998**, *39/45*, 8237-8240.
64. M. Chakraborty, D. B. McConville, Y. Niu, C. A. Tessier, W. J. Youngs, "Reactions of Primary and Secondary Amines with Substituted Hydroquinones: Nuclear Amination, Side-chain Amination and Indolequinone Formation", *J. Org. Chem.* **1998**, *63*, 7563-7567.
65. K. P. Baldwin, R. Simons, D. Scheiman, R. Lattimer, C. A. Tessier, W. J. Youngs, "Synthesis, Characterization and Crystal Structures of Two Strained Cyclic Diacetylenes and Their Precursors," *J. Chem. Cryst.* **1998**, *28*, 353-60.
66. M. Chai, Z. Pi, C. A. Tessier, P. L. Rinaldi, "Use of Triple Resonance 3D-NMR for Characterization of Carbosilane Dendrimers" *Polym. Preprints* **1998**, *39(2)*, 625-6.
67. Y. Niu, M. Chai, P. L. Rinaldi, C. A. Tessier, W. J. Youngs "Supramolecular Assemblies Based on Silane Covered DAB Dendrimers," *Polym. Preprints* **1998**, *39(2)*, 629-630.
68. S. Al-Qaisi, K. J. Galat, M. Chai, D. G. Ray III, P. L. Rinaldi, C. A. Tessier and W. J. Youngs, "Synthesis of Tetranuclear and Octanuclear Macrocyclic Platinum-Butadiyne Heterocyclynes," *J. Am. Chem. Soc.* **1998**, *120*, 12149-12150.

69. M. Chai, Z. Pi, C. Tessier, P. L. Rinaldi, "Preparation of Carbosilane Dendrimers and Their Characterization Using $^1\text{H}/^{13}\text{C}/^{29}\text{Si}$ Triple Resonance 3D-NMR Methods," *J. Am. Chem. Soc.* **1999**, *121*, 273-279.
70. L. Guo, J. M. Hrabusa III, M. D. Senskey, D. B. McConville, C. A. Tessier, W. J. Youngs, "Cobalt Complexes of Planar Skeleton Heterocyclines with One or Two Cyclyne Pockets," *Organometallics* **1999**, *18*, 1767-1773.
71. M. Chakraborty, C. A. Tessier, W. J. Youngs "Unusual Formation of a Cyclyne Dimer and an Indenoindene Derivative," *J. Org. Chem.* **1999**, *64*, 2947-2949.
72. L. Guo, J. M. Hrabusa III, M. D. Senskey, D. B. McConville, C. A. Tessier, W. J. Youngs, "Syntheses and Crystal Structures of Strained Planar Silacyclines Containing a Diacetylene Unit," *J. Organomet. Chem.* **1999**, *578*, 43-54.
73. W. J. Youngs, C. A. Tessier and J. D. Bradshaw "ortho-Arene Cyclynes, Related Heterocyclines and Their Metal Chemistry", *Chem. Rev.* **1999**, *99*, 3153-3180.
74. D. Zhang, D. B. McConville, C. A. Tessier, W. J. Youngs, "The Synthesis of Tri(2,5-dialkynylthieno)cyclotriynes, Tri(4,5-dialkoxyphenyl)cyclotriynes, and Tetra(4,5-dialkoxyphenyl)cyclotetraynes with long chain alkyl substituents, and the Nickel and Cobalt Complexes of Tri(4,5-didodecyloxyphenyl)cyclotriyne", *Chem. Mater.* **1999**, *11*, 3050-3057.
75. L. M. Sanow, M. Chai, D. B. McConville, K. J. Galat, R. S. Simons, P. L. Rinaldi, W. J. Youngs, and C. A. Tessier, "Platinum-Silicon Four-Membered Rings of Two Different Structural Types," *Organometallics* **2000**, *19*, 192-205.
76. R. S. Simons, L. M. Sanow, K. J. Galat, C. A. Tessier, and W. J. Youngs "Synthesis and Structural Characterization of the Mono-Silyl Platinum(II) Complex: *cis*-(2,6-Mes₂C₆H₃(H)₂Si)Pt(H)(PPr₃)₂", *Organometallics* **2000**, *19*, 3994-3996.
77. R. S. Simons, K. J. Galat, B. Rapp, C. A. Tessier, W. J. Youngs "Synthesis and Structural Characterization of an Aryl-Hydrido-Silanediol: 2,6-Mes₂C₆H₃(H)Si(OH)₂", *Organometallics* **2000**, *19*, 5799-5801.
78. R. S. Simons, K. J. Galat, J. D. Bradshaw, W. J. Youngs, C. A. Tessier, G. Aullón and S. Alvarez, "Reaction Chemistry, NMR Spectroscopy, and X-ray Crystallography of [Fe₂(μ-SiMe₂)₂(CO)₄] and [Fe₂(μ-SiMeCl)₂(CO)₄]. Electronic Structure and Bonding in Fe₂E₂ rings of [Fe₂(μ-ER₂)₂(CO)₄] Binuclear Complexes (E = C, Si, Ge, Sn, Pb)." *J. Organomet. Chem.* **2001**, *628*, 241-254.
79. J. C. Garrison, R. S. Simons, J. M. Talley, C. Wesdemiotis, C. A. Tessier, W. J. Youngs "Synthesis and Structural Characterization of an Imidazolium-Linked Cyclophane and the Silver Complex of an N-Heterocyclic Carbene-Linked Cyclophane," *Organometallics*, **2001**, *20*, 1276-1278.
80. J. C. Garrison; R. S. Simons; W. G. Kofron; C. A. Tessier; W. J. Youngs, "Synthesis and structural characterization of a silver complex of a mixed-donor N-heterocyclic carbene linked cyclophane" *Chem. Commun.* **2001**, 1780-1781.
81. R. S. Simons, J. C. Garrison, W. G. Kofron, C. A. Tessier, W. J. Youngs "Synthesis and structural characterization of two bis-imidazolium-linked cyclophanes: precursors toward "carbeneporphyrinoid" ligands", *Tet. Lett.* **2002**, *43*, 3423-3425.
82. R. S. Simons; J. C. Gallucci; C. A. Tessier; W. J. Youngs, "Synthesis and characterization of the sterically hindered iridium(III)-silyl complex: (Et₃P)₃(H)₂Ir[Si(H)Cl(C₆H₃-Mes₂-2,6)] and the generation of the cationic iridium(III)-silylene complex: [(Et₃P)₃(H)₂Ir=Si(H)(C₆H₃-Mes₂-2,6)][B(C₆F₅)₄]" *J. Organomet. Chem.* **2002**, *654*, 224-228.
83. Quezada, C. A.; Garrison, J. C.; Tessier, C. A.; Youngs, W. J. "Synthesis and structural characterization of two bis(imidazol-2-ylidene) complexes of Pt(II)," *J. Organomet. Chem.* **2003**, *671*, 183-186.
84. Simons, R. S.; Custer, P.; Tessier, C. A.; Youngs, W. J. "Formation of N-Heterocyclic Complexes of Rhodium and Palladium from a Pincer Silver(I) Carbene Complex," *Organometallics* **2003**, *22*, 1979-1982.
85. J. C. Garrison; R. S. Simons; C. A. Tessier; W. J. Youngs, "Synthesis and Structural Characterization of a [Ag₄]⁴⁺ Cluster Stabilized by a Mixed-Donor N-Heterocyclic Carbene Linked Cyclophane and the Synthesis of a N-Heterocyclic Carbene Complex in Water", *J. Organomet. Chem.* **2003**, *673*, 1-4.
86. Simons; R. S.; Panzner, M. J.; Tessier, C. A.; Youngs, W. J. "Formation of a sterically crowded iridium(III)-silyl complex from the bulky terphenyl silane H₃Si(C₆H₃-Mes₂-2,6)" *J. Organomet. Chem.* **2003**, *681*, 1-4.

87. Heston, A. J.; Panzner, M.; Youngs W. J.; Tessier, C. A. "Acid-base chemistry of $[\text{PCl}_2\text{N}]_3$ " *Phosphorus, Sulfur Silicon Rel. Elem.* **2004**, *179*, 831-837.
88. Quezada, C. A.; Garrison, J. C.; Panzner, M. J.; Tessier, C. A.; Youngs, W. J. "The Potential Use of Rhodium N-Heterocyclic Carbene Complexes as Radiopharmaceuticals: The Transfer of a Carbene from $\text{Ag}(\text{I})$ to $\text{RhCl}_3\cdot 3\text{H}_2\text{O}$," *Organometallics* **2004**, *23*, 4846-4848.
89. Melaiye A.; Simons R. S.; Milsted, A.; Pingitore F.; Wesdemiotis C.; Tessier C. A.; Youngs W. J. "Formation of water-soluble pincer silver(I)-carbene complexes: a novel antimicrobial agent," *J. Med. Chem.* **2004**, *47*, 973-7.
90. Kascatan-Nebioglu, A.; Panzner, M. J.; Garrison, J. C.; Tessier, C. A.; Youngs, W. J. "Synthesis and Structural Characterization of N-Heterocyclic Carbene Complexes of Silver(I) and Rhodium(I) from Caffeine," *Organometallics* **2004**, *23*, 1928-1931.
91. Durmus, S.; Garrison, J. C.; Panzner, M. J.; Tessier, C. A.; Youngs, W. J. "Synthesis of an Imidazolium-Linked Cyclophane from Histamine" *Tetrahedron*, **2004**, *61*, 97-101.
92. Garrison, J. C.; Panzner, M. J.; Tessier, C. A.; Youngs, W. J. "Synthesis and Structural Characterization of Corrole and Sapphyrin Analogs of Imidazolium-Pyridine Cyclophanes" *Synlett*, **2005**, 99-102.
93. Melaiye, A.; Sun, Z.; Hindi, K.; Milsted, A.; Ely, D.; Reneker, D. H.; Tessier, C. A.; Youngs, W. J. "Silver(I)-imidazole Cyclophane Gem-diol Complexes Encapsulated by Electrospun Hydrophilic Nanofibers: Formation of Nanosilver Particles and Antimicrobial Activity" *J. Am. Chem. Soc.* **2005**, *127*, 2285-2291.
94. Heston, A. J.; Panzner, M.; Youngs W. J.; Tessier, C. A. "Lewis acid adducts of $[\text{PCl}_2\text{N}]_3$ " *Inorg. Chem.* **2005**, *44*, 6518-6520.
95. Custer, Paul D.; Garrison, Jered C.; Tessier, Claire A.; Youngs, W. J. "Anion Directed Synthesis of Paddle and Trisilver Tweezer Complexes Based upon Silver Coordination Chemistry", *J. Am. Chem. Soc.* **2005**, *127*, 5738-5739.
96. Garrison, Jered C.; Tessier, Claire A.; Youngs, W. J. "Synthesis and crystallographic characterization of multi-donor N-heterocyclic carbene chelating ligands and their silver complexes: Potential use in pharmaceuticals." *J. Organomet. Chem.* **2005**, *690*, 6008-6020.
97. Durmus, S.; Garrison, J. C.; Panzner, M. J.; Tessier, C. A.; Youngs, W. J. "Synthesis of an Imidazolium-Linked Cyclophane from Histamine" *Tetrahedron*, **2005**, *61*, 97-101.
98. Garrison, J. C.; Panzner, M. J.; Tessier, C. A.; Youngs, W. J. "Synthesis and Structural Characterization of Corrole and Sapphyrin Analogs of Imidazolium-Pyridine Cyclophanes" *Synlett*, **2005**, 99-102.
99. Youngs, W. J.; Tessier, Claire A.; Garrison, Jered C.; Quezada, Carol A.; Melaiye, Abdulkareem; Durmus, Semih; Panzner, Matthew J.; Kascatan-Nebioglu, Aysegul. "Medicinal applications of metal complexes of N-heterocyclic carbenes" *ACS Symposium Series* **2005**, *903* (Medicinal Inorganic Chemistry), 414-427.
100. Gostevskii, Boris; Kalikhman, Inna; Tessier, Claire A.; Panzner, Matthew J.; Youngs, W. J.; Kost, Daniel. "Hexacoordinate Complexes of Silacyclobutane: Spontaneous Ring Opening and Rearrangement," *Organometallics* **2005**, *24*, 5786-5788.
101. Garrison, Jered C.; Tessier, Claire A.; Youngs, W. J. "Synthesis and crystallographic characterization of multi-donor N-heterocyclic carbene chelating ligands and their silver complexes: Potential use in pharmaceuticals," *J. Organomet. Chem.* **2005**, *690*(24-25), 6008-6020.
102. Kalikhman, I.; Gostevskii, B.; Botoshansky, M.; Kaftory, M.; Tessier, C. A.; Panzner, M. J.; Youngs, W. J.; Kost, D. "Octahedral and Bicapped-Tetrahedral Silicon Configurations in the Solid State and Their Dynamic Coexistence in Solution". *Organometallics* **2006**, *25*, 1252-1258.
103. Garrison, J. C.; Panzner, M. J.; Custer, Paul D.; Dudipala V.; Rinaldi P.L.; Tessier, C. A.; Youngs, W. J. "Synthesis and Characterization of a Trigonal Bipyramidal Supramolecular Cage Based Upon Rhodium and Platinum Metal Centers" *Chem. Commun.* **2006**, *44*, 4644-4646.
104. Kascatan-Nebioglu, Aysegul; Melaiye, Abdulkareem; Hindi, Khadijah; Durmus, Semih; Panzner, Matthew J.; Hogue, Lisa A.; Mallett, Rebekah J.; Hovis, Christine E.; Coughenour, Marvin; Crosby, Seth D.; Milsted, Amy; Ely, Daniel L.; Tessier, Claire A.; Cannon, Carolyn L.; Youngs, W. J. "Synthesis from Caffeine of a Mixed N-Heterocyclic Carbene-Silver Acetate Complex Active against Resistant Respiratory Pathogens", *J. Med. Chem.* **2006**, *49*, 6811-6818.
105. Kascatan-Nebioglu, M. J. Panzner, C. A. Tessier, C. L. Cannon, W. J. Youngs "N-Heterocyclic carbene-silver complexes: A new class of antibiotics," *Coord. Chem. Rev.* **2007**, *251*, 884-895.

106. Heston, A. J.; Banerjee, D.; Rinaldi, P. L.; Tessier, C. A. "NMR characterization of the higher molecular weight byproducts formed during the synthesis of $[\text{PCl}_2\text{N}]_3$." *J. Inorg. Organomet. Polym. Mat.* **2007**, *17*, 477-481. (Invited paper)
107. Kascatan-Nebioglu, Aysegul; Panzner, Matthew J.; Tessier, Claire A.; Cannon, Carolyn L.; Youngs, Wiley J. "N-Heterocyclic carbene-silver complexes: A new class of antibiotics" *Coord. Chem. Rev.* **2007**, *251*, 884-895.
108. Medvetz, Douglas A.; Stakleff, Kimberly D.; Schreiber, Tara; Custer, Paul D.; Hindi, Khadijah; Panzner, Matthew J.; Blanco, Denise D.; Taschner, Michael J.; Tessier, Claire A.; Youngs, Wiley J. "Ovarian Cancer Activity of Cyclic Amine and Thiaether Metal Complexes," *J. Med. Chem.* **2007**, *50*, 1703-1706.
109. Kalikhman, Inna; Gostevskii, Boris; Kertsnus, Evgenia; Botoshansky, Mark; Tessier, Claire A.; Youngs, Wiley J.; Deuerlein, Stephan; Stalke, Dietmar; Kost, Daniel. "Competitive molecular rearrangements in hexacoordinate cyano-silicon dichelates," *Organometallics* **2007**, *26*, 2652-2658.
110. Panzner, Matthew J., Tessier, Claire A., Youngs, Wiley J. "Pincer complexes of N-heterocyclic carbenes. Potential uses as pharmaceuticals", in *The Chemistry of Pincer Compounds*, Morales-Morales, D.; Jensen, C. M., eds.; Elsevier:New York, 2007; pp 139-150. (reviewed book chapter)
111. Hindi, Khadijah M.; Siciliano, Tammy J.; Durmus, Semih; Panzner, Matthew J.; Medvetz, Doug A.; Reddy, D. Venkat; Hogue, Lisa A.; Hovis, Christine E.; Hilliard, Julia K.; Mallet, Rebekah J.; Tessier, Claire A.; Cannon, Carolyn L.; Youngs, Wiley J. "Synthesis, Stability, and Antimicrobial Studies of Electronically Tuned Silver Acetate N-Heterocyclic Carbenes," *J. Med. Chem.* **2008**, *51*, 1577-1583.
112. Panzner, M. J.; Youngs, W. J.; Tessier, C. A. "A Crystallographically Isolated Dimeric Hydrolyzed Chlorophosphazene Dianion," *Acta. Cryst. E* **2009**, *E65(1)*, m105.
113. Eliseeva, Tatiana; Panzner, Matthew J.; Youngs, Willey J.; Tessier, Claire A. "Synthesis and characterization of imidazole-triphenylsilane complexes" *J. Organomet. Chem.* **2010**, *695*, 1507-1512.
114. Tun, Z.-M.; Panzner, M. J.; Scionti, V.; Medvetz, D. A.; Wesdemiotis, C.; Youngs, W. J.; Tessier, C. A. "Crown ether complexes of HPCl_6 " *J. Am. Chem. Soc.* **2010**, *132*, 17059-17061.
115. Knapp, Amanda R.; Panzner, Matthew J.; Medvetz, Doug A.; Wright, Brian D.; Tessier, Claire A.; Youngs, Wiley J. "Synthesis and antimicrobial studies of silver N-heterocyclic carbene complexes bearing a methyl benzoate substituent." *Inorganica Chimica Acta* **2010**, *364*, 125-131.
116. Deblock, Michael C.; Panzner, Matthew J.; Tessier, Claire A.; Cannon, Carolyn L.; Youngs, Wiley J. "Medicinal applications of metal complexes of N-heterocyclic carbenes" Diez-Gonzalez, S. Ed.; *RSC Catalysis Series* **2011**, *6*(N-Heterocyclic Carbenes From Laboratory Curiosities to Efficient Synthetic Tools), 119-133.