

Dr. Benny Ervin Arney, Jr. Curricula Vitae

**Education:**

**B.A.**, Chemistry and Mathematics, University of Saint Thomas, Houston, Texas, 1982.

**Ph. D.**, Organic Chemistry, William Marsh Rice University, Houston, Texas, 1986;

Post-Doctoral Research under A.P. Marchand, North Texas State University, Denton, Texas, Aug. 1986-87.

**Research and Professional Experience:**

Full Professor, Dept. of Chemistry, Sam Houston State University, Huntsville, Texas, Sept. 2001- Present.

Associate Professor, Dept. of Chemistry, Sam Houston State University, Sept. 1995 - 2001

Assistant Professor, Dept. of Chemistry, Sam Houston State University, Texas, Sept. 1988 - 1995.

Instructor, Dept of Science, Louisiana School of Math-Science & the Arts, Natchitoches, Louisiana, Aug. 1987 - May 1988.

Visiting Research Assistant Professor, Department of Chemistry, North Texas State University, Denton, Texas, Aug. 1986 - Aug. 1987.

NSF Predoctoral Fellow, Department of Chemistry, William Marsh Rice University, Houston, Texas, June 1982 - May 86.

**Past Funded Research Grants (non SHSU):**

1. "Computational and Mechanistic Studies of Strained Molecular Systems", Robert A. Welch Foundation, 6/97-5/2000, \$121,00.
2. "Center for Excellence in the Chemistry of Energetic Materials", with Drs. T. Barber, R.S. Varma, M. Warnock, [A. P. Marchand, and P. R. Dave], Strategic Environmental Recovery and Development Program (SERDP), \$780,00.
3. "Preparative and Theoretical Investigation of Reactive Cyclopropenes", Robert A. Welch Foundation, 6/94-5/97, \$100,000
4. "Preparative Studies of Synthetically Useful Cyclopropenes", Petroleum Research Fund, administered by the American Chemical Society, 1/89-12/90, \$18,000.

**Publications:**

1. Arney, B.E.; Ihmels, H.; and White, R. C.; "Photochemistry of Styrene Oxide: A Triplet Pathway in the Singlet Excitation of a Monoaryl Oxirane", *International Journal of Organic Chemistry*, **2017**, *7*, 263-268.
2. Arney, Jr., B. E.; Perry, Jacob; Thompson, Nathan; and White, R.C.; "Photolysis of a Cyclic Carbonate Ester and a Cyclic Sulfite: Radical Intermediates and Ionic Intermediates in an Advanced Laboratory Experiment", *Chem. Educator*, **2014**, *19*, 330-332.
3. White, R.C.; Arney, Jr., B. E.; and Ihmels, H.; "Photochemistry of Cyclic Sulfite Esters: Evidence for Diradical Intermediates", *Beilstein J. Org. Chem.*, **2012**, *8*, 1208-1212.
4. White, R.C. and Arney, Jr., B. E., "NMR Studies of Closely Related Heterocyclic Molecules: An Introduction to the Preparation and NMR Spectroscopy of Similar Molecules in the Advanced Laboratory", *Chem. Educator*, **2011**, *16*, 220.
5. White, R.C. and Arney, Jr., B. E., "Dehydration of an Alcohol: An Undergraduate Laboratory Exercise in which Regioisomers Give Different Products", *Chem. Educator*, **2010**, *15*, 185.
6. White, R. C.; Arney, Jr., B. E. and Leggett, D. J., "Preparation, Conformational Analysis and Photochemistry of 1,2-Benzenedimethanol Sulfite: An Integrated Experiment for the Undergraduate Laboratory", *Chem. Educator*, **2010**, *15*, 325.
7. Arney, Jr., B. E.; White, R. C.; White-Stanfield, K. M., "Photochemistry of 1,2-Dihydronaphthalene Oxide: Concurrent Triplet and Singlet Processes via Singlet Excitation", *J. Org. Chem.*, **2006**, *71*, 8173.
8. Arney, Jr., B. E.; White, R. C.; Ramanathan, A.; Barham, L.; Sherrod, S.; McCall, P.; Livanec, P.; Mangus, K.; White, K., "Photochemistry of Aryloxiranes: Free Radical 1,2-Alkyl Migrations in a Constrained System", *Photochemical and Photobiological Sciences*, **2004**, 851.
9. Linder, S.; White, K.; Palmer, M.; Arney, B.; White, R., "Geometric Requirements for the Photolysis of Aryloxiranes and Cyclic Carbonate Esters." *Tetrahedron Lett.* **2002**, *43*, 1169.
10. Arney, Jr., B. E. and Billups, W. E., "Uses of the Vacuum Gas-Solid Reaction Procedure in Synthesis", edited by B. Halton in *Advances in Strain in Organic Chemistry*, JAI Press, London, vol 6, pp 25-65, **1997**.
11. Arney, Jr., B. E., and Banta, M. C., "Half-Cells", in *The Encyclopedia of Chemistry*, edited by Scott Kurtz, MacMillan and Company, **1997**.
12. Arney, Jr., B.E., and Banta, M. C., "Electrolytes", in *The Encyclopedia of Chemistry*, edited by Scott Kurtz, MacMillan and Company, **1997**.

13. Billups, W. E.; Luo, W.; Lee, G.-A.; Chee, J.; Arney, Jr., B.; Wiberg, K. B.; and Artis, D. R., Synthesis and Chemistry of Bicyclo[4.1.0.]hept-1,6-ene, *J. Org. Chem.*, **1996**, *61*, 764.
14. Boese, R.; Bläser, D.; Billups, W. E.; Haley, M. M.; Luo, W.; and Arney, Jr., B. E., X-ray Crystal Structure of 3-Vinylcyclopropene. Gas Phase Synthesis of Simple Cyclopropenes, *J. Org. Chem.*, **1994**, *59*, 8125.
15. Arney, Jr., B.E.; Wilcox, K.; Campbell, E.; Gutierrez, M. O., Methyl 1-cyclopropene Carboxylate, *J. Org. Chem.*, **1993**, *58*, 6126.
16. Arney, Jr., B. E.; Banta, M.C.; Prouty, P., An Economical and Efficient Photochemical Box, *J. Chem. Ed.*, **1994**.
17. Marchand, A. P.; Annapurna, P.; Arney, Jr., B. E.; Gadgil, V. R.; Rajapaksa, D.; Sharma, G. V. M.; Sharma, R.; Zope, U. R., Synthesis and Explosive Performance Characteristics of Polynitropolycyclic Cage Explosives, in *Advances in Analysis and Detection of Explosives*, Kluwers Academic Publishers, the Netherlands, **1993**.
18. Billups, W. E.; Lee, G. A.; Arney, Jr., B. E.; Whitmire, K. H., 1,3-Bridged Cyclopropenes, *J. Am. Chem. Soc.*, **1991**, *113*, 7980.
19. Garret, D. D.; Banta, M. C.; and Arney, Jr., B. E., Inexpensive gas Law Apparatus, *J. Chem. Ed.*, **1991**, *68*, 667.
20. Flippen-Anderson, J. L.; George, C.; Gilardi, R.; Zajac, W. W., Jr.; Walters, T. R.; Marchand, A. P.; Dave, P. R.; and Arney, Jr., B. E., Five 8,11-Substituted Pentacyclo[5.4.0.0<sup>2,6</sup>.0<sup>3,10</sup>.0<sup>5,9</sup>]undecanes, *Acta. Crystallogr., Sect. C: Cryst. Struct. Commun.* *c47*, **1991**, 813-17.
21. Marchand, A. P. ; Arney, Jr., B. E; Dave, P. R.; Rajapaksa, D.; Flippen-Anderson, J. L.; Gilardi, R.; and George, C., Synthesis of 4,4,8,8,11,11-Hexanitropentacyclo[5.4.0.0<sup>2,6</sup>.0<sup>3,10</sup>.0<sup>5,9</sup>]undecane, *J. Org. Chem.*, **1989**, *54*, 1769.
22. Marchand, A. P. ; Arney, Jr., B. E; and Dave, P. R., Transannular Cyclizations in the Pentacyclo[5.4.0.0<sup>2,6</sup>.0<sup>3,10</sup>.0<sup>5,9</sup>]undecan-8,11-dione System: A Reinvestigation, *J. Org. Chem.*, **1988**, *53*, 2644.
23. Marchand, A. P. ; Arney, Jr., B. E; Satayanarayana, N.; and Dave, P. R., Reductive Amination of Pentacyclo[5.4.0.0<sup>2,6</sup>.0<sup>3,10</sup>.0<sup>5,9</sup>]undecan-8,11-dione, *J. Org. Chem.*, **1988**, *53*, 1088.
24. Marchand, A. P. ; Arney, Jr., B. E; and Dave, P. R., Synthesis of 8,8,11,11-Tetranitropentacyclo[5.4.0.0<sup>2,6</sup>.0<sup>3,10</sup>.0<sup>5,9</sup>]undecane, *J. Org. Chem.*, **1988**, *53*, 443.
25. Marchand, A. P. ; Arney, Jr., B. E; Gilardi, R.; Flippen-Anderson, J. L., Lewis Acid-Promoted Reaction Pentacyclo[5.4.0.0<sup>2,6</sup>.0<sup>3,10</sup>.0<sup>5,9</sup>]undecan-8,11-dione With Ethyl Diazoacetate, *J. Org. Chem.*, **1987**, *52*, 3455.

26. Arney, Jr., B. E., Preparation of a New Cycloproparene Synthon: 1-Bromo-2-chlorocyclopropene, and Studies on the Synthesis and Properties of Bicyclo[4.1.0]hept-1,6-ene and Bicyclo[4.1.0]hept-1,7-ene, Ph.D. Dissertation, William Marsh Rice University, **1986**.
27. Billups, W. E.; Casserly, E. W.; Arney, Jr., B. E., 1H-Cycloprop[b]anthracene, *J. Am. Chem. Soc.*, **1984**, *106*, 440.
28. Billups, W. E.; Arney, Jr., B. E., Synthesis of Tris-Annulated Benzenes Incorporating a Three-Membered Ring, *J. Org. Chem.*, **1984**, *49*, 3436.
29. Billups, W. E.; Lin, L.-J.; Arney, Jr., B. E.; Rodin, W. R.; Casserly, E. W., 1-Bromo-2-chlorocyclopropene - A New Cycloproparene Synthon: Synthesis of 1H-Cyclopropa[b]phenanthrene, *Tetrahedron Lett.*, **1984**, *23*, 3935.

**Papers Presented at Professional Meetings:**

1. Arney, Jr., B. E., White, R. C., PHOTOLYTIC STUDY OF STYRENE GLYCOL SULFITE: EXPERIMENTAL AND COMPUTATIONAL COMPARISON TO STYRENE GLYCOL CARBONATE AND STYRENE OXIDE PHOTOCHEMISTRY, submitted for presentation at the 245<sup>th</sup> American Chemical Society National meeting in New Orleans, LA, April 2013.
2. Arney, B. E., Jr.; White, R.C.; Day, J.; Sladeczek, H. D., “ACID CATALYZED CONVERSION OF PHENYLCYCLOALKENE OXIDES TO 2-PHENYLCYCLOALK-2-ENOLS”, submitted for presentation at the 245<sup>th</sup> American Chemical Society National meeting in New Orleans, LA, April 2013
3. Arney, Jr., B. E.; White, R. C., “ROLE OF CONICAL INTERSECTION STRUCTURE IN THE DETERMINATION OF THE PHOTOPRODUCTS OF ARYLOXIRANES AND THE CORRESPONDING CYCLIC GLYCOL ESTERS”, presented at the 2013 American Chemical Society Southwest Regional meeting in Waco, TX, November, 2013.
4. Arney, Jr., B. E.; White, R. C.; Day, J., “ACID CATALYZED RING OPENING OF CYCLIC OXIRANES”, presented at the 2013 American Chemical Society Southwest Regional meeting in Waco, TX, November, 2013.
5. Arney, Jr., B. E.; White, R. C.; Day, J.; Thompson, N; Perry, J., “IONIC PATHWAYS IN THE PHOTOCHEMISTRY OF CYCLIC SULFITE ESTERS”, presented at the 2013 American Chemical Society Southwest Regional meeting in Waco, TX, November, 2013.
6. Benny E. Arney, Jr., DETERMINANTIAL SOLUTION OF COVARIANCE MATRIX: MULTIVARIATE LINEAR LEAST SQUARES EQUIVALENCE, given at the 115<sup>th</sup>

Annual Meeting of the Texas Academy of Science, Sul Ross State University, Alpine, TX, March 1-3, 2012.

7. Benny E. Arney, Jr., Irisa D. Arney, ELLIPTIC FOURIER ANALYSIS OF CLOSED CONTOURS: IMPLEMENTATION AND APPLICATION, given at the 115<sup>th</sup> Annual Meeting of the Texas Academy of Science, Sul Ross State University, Alpine, TX, March 1-23, 2012.
8. Benny E. Arney, Jr., Sara Townsend, and Charli Baker, THE MOORE-PENROSE PSEUDO-INVERSE MATRIX FOR QUANTITATION OF MIXTURES, given at the 114<sup>th</sup> Annual Meeting of the Texas Academy of Science, St. Edward's University, Austin, TX, March 4, 2011.
9. Benny E. Arney, Jr., Rick C. White, MECHANISM OF THE PHOTOCHEMISTRY OF STYRENE OXIDE, given at the 46<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, November 10<sup>th</sup>, 2011.
10. Benny E. Arney, Jr., Jiamin Cao, Weidong Hu, Crystal Szemenei, HYDROXIDE-INDUCED DEMESYLOXYACETYLATION OF N-ACETYL-3-MESYLOXYAXETIDINE, given at the 46<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, November 10<sup>th</sup>, 2011.
11. Benny E. Arney, Jr., Rick C. White, Gideon Gilzow, PHOTOREARRANGEMENT OF 1,4-DIHYDRO-1,4-EPOXYNAPHTHALENE, given at the 46<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, November 10<sup>th</sup>, 2011.
12. Benny E. Arney, Jr., Rick C. White, DUAL PATHWAYS IN THE PHOTOCHEMISTRY OF CYCLIC SULFITE ESTERS, given at the 46<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, November 10<sup>th</sup>, 2011.
13. Benny E. Arney, Jr., Sara Townsend, and Charli Baker, THE MOORE-PENROSE PSEUDO-INVERSE MATRIX FOR QUANTITATION OF MIXTURES, given at the 114<sup>th</sup> Annual Meeting of the Texas Academy of Science, St. Edward's University, Austin, TX, March 4, 2011.
14. Benny E. Arney, Jr., COMPUTATIONAL QUANTUM CHEMISTRY: APPLYING NUMERICAL METHODS TO THE HYDROGEN ATOM AS A SYSTEM SUFFICIENTLY SIMPLE FOR AN UNDERGRADUATE SPREADSHEET EXPERIMENT, given at the 114<sup>th</sup> Annual Meeting of the Texas Academy of Science, St. Edwards University, Austin, TX, March 4, 2011.
15. Arney, Jr., B. E., COMPLETE ACTIVE SPACE SELF-CONSISTENT FIELD (CASSCF) CALCULATIONS: SET-UP AND EXAMPLES OF APPLICATIONS, given at the 113<sup>th</sup> Annual Meeting of the Texas Academy of Science, Tarleton State University, Stephenville, TX, March 5, 2010.

16. Arney, Jr., B. E., White, R. C., and Rascher, E., DEUTERIUM LABELING RESULTS IN THE PHOTOCHEMISTRY OF STYRENE OXIDE, given at the 113<sup>th</sup> Annual Meeting of the Texas Academy of Science, Tarleton State University, Stephenville, TX, March 5, 2010.
17. Arney, Jr., B. E., RESONANCE CONTRIBUTION DETERMINATION VIA HUCKEL MO METHODS, given at the 113<sup>th</sup> Annual Meeting of the Texas Academy of Science, Tarleton State University, Stephenville, TX, March 5, 2010.
18. Benny E. Arney, Jr., USE OF LEAST SQUARES FOR SINGLE SPECTRA QUANTITATION OF MULTI-COMPONENT MIXTURES, given at the 44<sup>th</sup> Annual Midwest Regional Meeting of The American Chemical Society, Iowa City, IA, Oct 22, 2009.
19. Benny E. Arney, Jr., and Rick C. White, DEHYDRATION OF REGIOISOMERIC ALCOHOLS TO ILLUSTRATE THE GEOMETRIC REQUIREMENTS OF MIGRATION AND DEPROTONATION IN CARBOCATIONS, given at the 44<sup>th</sup> Annual Midwest Regional Meeting of The American Chemical Society, Iowa City, IA, Oct 23, 2009.
20. Benny E. Arney, Jr., Rick C. White, and Milos Trajkovics, NEW INSIGHTS TO ARYLOXIRANE PHOTOCHEMISTRY, given at the 44<sup>th</sup> Annual Midwest Regional Meeting of The American Chemical Society, Iowa City, IA, Oct 22, 2009.
21. Benny E. Arney, Jr., Rick C. White, and Emilie Rascher, INVESTIGATION OF A TRIPLET PATHWAY IN THE PHOTOCHEMISTRY OF MONOARYLOXIRANES, given at the 44<sup>th</sup> Annual Midwest Regional Meeting of The American Chemical Society, Iowa City, IA, Oct 22, 2009.
22. Benny E. Arney, Jr., Rick C. White, POTENTIAL SURFACE BEHAVIOR IN THE PHOTOCHEMISTRY OF STYRENE OXIDE, given at the 112<sup>th</sup> Annual Meeting of the Texas Academy of Science, Llano Field Station, Texas Tech University, Junction TX, March 1, 2009.
23. Benny E. Arney, Jr., LEAST SQUARES OPTIMIZATION OF LINEAR SPECTRAL SUPERPOSITION FOR QUANTITATION OF MIXTURES, given at the 112<sup>th</sup> Annual Meeting of the Texas Academy of Science, Llano Field Station, Texas Tech University, Junction TX, March 1, 2009.
24. Benny E. Arney, Jr., Rick C. White, Gina Nadone, Michael C. Towler, UNDERGRADUATE EXPERIMENT TO ILLUSTRATE ORBITAL CONTROL IN DEHYDRATION REACTIONS, given at the 64<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, Oct. 1-4, 2008.
25. Benny E. Arney, Rick C. White, Francisco Quiroz, PHOTOCHEMISTRY OF 1-MONO- AND 1,1-DISUBSTITUTED INDENE OXIDES, given at the 64<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, Oct. 1-4, 2008.

26. Benny E. Arney, PHOTOCHEMISTRY OF 3(2H)-FURANONES, given at the 64<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, Oct. 1-4, 2008.
27. Benny E. Arney, Jr., Rick C. White, Michael C. Towler, PHOTOCHEMISTRY OF A DECAHYDROANTHRACENE OXIDE: STEREOCHEMICAL OUTCOMES, given at the 64<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, Oct. 1-4, 2008.
28. Benny E. Arney, Rick C. White, Milos Trajkovic, Heiko Ihmels, PHOTOCHEMISTRY OF STYRENE OXIDE: DIVERGENT PATHWAYS FOR A 1,3-DIRADICAL, given at the 64<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, Oct. 1-4, 2008.
29. Benny E. Arney, Jr., Rick White, Heiko Ihmels, Milos Trajkovic, PHOTOCHEMISTRY OF ARYLOXIRANES: EVIDENCE FOR DIVERGENT PATHWAYS IN AN INITIALLY FORMED 1,3-DIRADICAL, given at the 111<sup>th</sup> Annual meeting of Texas Academy of Science, Corpus Christi, TX, March 7, 2008.
30. Benny E. Arney, Jr., EXAMINATION OF PHOTO-INDUCED RING-OPENINGS OF ARYLOXIRANES AND SUBSEQUENT BETA-SCISSION IN THE RESULTING 1,3-DIRADICAL, given at the 111<sup>th</sup> Annual meeting of Texas Academy of Science, Corpus Christi, TX, March 7, 2008.
31. Benny E. Arney, Jr., Rick C. White, Michael Towler, Amy Massenburg, H-ATOM TRANSFERS AND MIGRATIONS IN PHOTOCHEMICAL SYSTEMS., given at the 111<sup>th</sup> Annual meeting of Texas Academy of Science, Corpus Christi, TX, March 7, 2008.
32. Benny E. Arney, Jr, Michael Towler, and Amy Massenburg, , PRELIMINARY EXAMINATION OF THE CONICAL INTERSECTION APPROACH TO THE LUMIKETONE LIKE REARRANGEMENT IN CYCLOHEXENONES, given at the 63<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, Nov 4-7, 2007.
33. Rick C. White, Benny E. Arney, Jr, Milos Trajkovic, Laura Fisher, Emily McCurdy, and Heiko Ihmels, DUAL PATHWAYS FOR 1,3-DIRADICALS FORMED IN THE PHOTOLYSIS OF MONOARYLOXIRANES, given at the 63<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, Nov 4-7, 2007.
34. (Invited) Benny E. Arney, Jr, Rick C. White, Michael Towler, Amy Massenburg, and Irisa Danielle Arney, A COMMON CONICAL INTERSECTION FOR THE INDENE OXIDE-ISOCHROMENE AND THE ISOCHROMENE-INDENE OXIDE REARRANGEMENTS, given at the 63<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, Nov 4-7, 2007.

35. Benny E. Arney, Jr, Rick C. White, Michael Towler, STEREOSPECIFIC STUDIES OF 1,2-ALKYL SHIFTS IN THE PHOTOLYSIS OF ARYL OXIRANES, given at the 63<sup>rd</sup> Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, Nov 4-7, 2007.
36. Benny E. Arney, and Gydeon Gilzow, PHOTOCHEMISTRY OF THE 1,4-DIHYDRO-1,4-EPOXYNAPHTHALENE SYSTEM: SINGLET/TRIPLET CROSSING AND A SERENDIPITOUS CONICAL INTERSECTION, given at the Southwest Theoretical Chemistry Conference, Texas A&M Campus, College Station , TX, Oct 14, 2007.
37. Rick C. White, Benny E. Arney, Jr., Milos Trajkovic, and Heiko Ihmels, "Carbene Intermediates in the Photochemistry of Monoaryl Oxiranes", ICP2007 - XXIII International Conference on Photochemistry 29 July - 3 August 2007, Cologne, Germany
38. Arney, Benny E., Jr., Rick C. White , and Gydeon Gilzow, SURFACE CROSSINGS IN THE PHOTOCHEMISTRY OF 1,4-DIHYDRO-1,4-EPOXYNAPHTHALENE, given at the 82<sup>nd</sup> Annual Meeting of The SouthWest-Rocky Mountain Regional Section of the American Association for the Advancement of Science, Clear Lake, TX, April 19, 2007.
39. Arney, Jr., Benny E.; White, Rick C.; McCurdy, Emily; Fisher, Laura;and Tyrajkovic, Milos, PHOTOCHEMISTRY OF ARYL OXIDES: EVIDENCE FOR BOTH C-C and C-O BOND CLEAVAGE IN THE EXCITED STATE, given at the 82<sup>nd</sup> Annual Meeting of The SouthWest-Rocky Mountain Regional Section of the American Association for the Advancement of Science, Clear Lake, TX, April 19, 2007.
40. Benny E. Arney, Jr.; Tiffany Thompson, William Donaldson, and Irisa D. Arney, Authentic Sample Preparations Associated with the Photolysis of Indene Oxides and Dihydronaphthalene Oxides, 110<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Baylor University Campus, Waco TX, March1-3 2007.
41. Arney, Jr., Benny E.; Thompson, Tiffany; Donaldson, William; and White, Rick C. Photochemistry of 2,2-Dimethyl-1,2-dihydronaphthalene Oxide, 110<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Baylor University Campus, Waco TX, March1-3 2007.
42. Arney, Jr., B. E.; White, R. C.; Arney, I. D., A New Proposed Photochemical Pathway for the Indene Oxide-Isochromene Rearrangement, 62<sup>nd</sup> Southwest Regional Meeting of the American Chemical Society, Houston, Texas (October 2006).
43. White, R. C.; Arney, Jr., B. E.; Trajkovic, M., Dual Reaction Pathways of a 1,3-Diradical in the Photolysis of Styrene Oxide, 62<sup>nd</sup> Southwest Regional Meeting of the American Chemical Society, Houston, Texas (October 2006).
44. Arney, Jr., B. E.; White, R. C.; Gilzow, G., Photochemistry of 1,4-Epoxy-1,4-Dihydronaphthalene: Extension of the Benzonorbornadiene System, 62<sup>nd</sup> Southwest Regional Meeting of the American Chemical Society, Houston, Texas (October 2006).



45. Arney, Jr., B. E.; White, R. C.; and Stanfield, K. M. W., Photochemistry of Aryloxiranes: Convergence of Experimental Results with Theoretical Calculations, April, 2006, Annual Research Symposium Texas Women's University, Denton, Texas.
46. Arney, Jr., B. E.; White, R. C.; and Stanfield, K. M. W., Excited State Chemistry of 3,4-Dihydronaphthalene Oxide., for March, 2006, 109<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Beaumont, Texas.
47. Arney, Jr., B. E.; White, R. C.; Arney, I. D.; Stanfield, K. M. W.; Klima, P., Excited State Chemistry of Indene Oxides., for March, 2006, 109<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Beaumont, Texas.
48. Arney, Jr., B. E.; White, R. C.; Gilzow, G., Wandering The Excited State Surface of Benzonorbornadiene Analogs., for March, 2006, 109<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Beaumont, Texas.
49. Arney, Jr., B. E.; White, R. C.; Black, M.; and Stanfield, K. M. W., Methylated Derivatives of 3,4-Dihydronaphthalene Oxide: Effects of Substituents on Photochemistry., Accepted for March, 2006, 109<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Beaumont, Texas.
50. Arney, Jr., B. E.; Gutierrez, M., Thermal  $2\pi + 2\pi$  Dimerization of 1-Vinylcyclopropenes To *Trans*-1,2-Divinyltricyclo[3.1.0.0<sup>2,4</sup>]hexanes: A Case of Sequential Conical Intersections., presented March 5, 2004, at the 107<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Kerrville, Texas.
51. White, R. C.; White, K. M.; Arney, Jr., B. E., Conformational Effects on the Photochemistry of Bicyclic Oxiranes., presented March 5, 2004, at the 107<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Kerrville, Texas.
52. White, K. M.; Arney, Jr., Benny; Mangus, K.; Livanec, P. W.; White, R. C., 1,2-Alkyl Migrations In 1,3-Diradicals., presented March 5, 2004, at the 107<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Kerrville, Texas.
53. Benny E. Arney, Jr., Katherine M. White, Jiamin Cao, Weidong Hu, and Crystal Szemenei, Kinetics and Computational Examination of the Hydroxide-Induced Generation of 1-Azabicyclobutane from N-Acetyl-mesyloxyazetidine, 60<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Fort Worth, Texas (October, 2004).
54. Rick C. White, Katherine White, Eloisa Perez, , Benny E. Arney, Jr., Photochemistry of Dihydronaphthalene Oxide: C—C vs C—O Bond Cleavage, 60<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Fort Worth, Texas (October 2004) .
55. Benny E. Arney, Jr., Rick C. White, Gydeon A. Gilzow, Photochemistry of 1,4-Dimethyl-1,4-dihydro-1,4-epoxynaphthalene, 60<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Fort Worth, Texas (October, 2004).

56. Rick C. White, Benny E. Arney, Jr, Katherine M. White and Eloisa Perez, Photochemistry of Dihydronaphthalene Oxide: Carbon—Carbon versus Oxygen—Oxygen Bond Cleavage, Exhibition of Undergraduate Research in Texas, Texas Women's University, Denton Texas, (April, 2004).
57. Arney, Jr., B. E.; White, R.C.; White, K. M.; Mangus, K.; Livanec, P., 1,2-Rearrangements in Photogenerated 1,3-Diradicals, presented October, 2003, at the 59<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Oklahoma City, Oklahoma.
58. Arney, Jr., B. E.; White, R.C.; White, K. M.; Mangus, K.; McCall, Paula; Livanec, P., Deprotonation versus Migration: Examination of the Acid-Induced Dehydration of Fluorenylcarbinols, presented October, 2003, at the 59<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Oklahoma City, Oklahoma.
59. Arney, Jr., B. E.; White, R. C.; McCall, P.; Ramanathan, A., Orbital Alignment Effects in an E1 Model System: Segregation of PES and Competition Aryl Migration vs Deprotonation., presented March 1, 2003, at the 106<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Nacogdoches, Texas.
60. Arney, Jr., B. E.; White, R. C.; Ramanathan, A.; Barham, L.; Sherrod, S., Observation of a Photochemical 1,2-Alkyl Shift in a 1,3-Diradical System., presented March 1, 2003, at the 106<sup>th</sup> Annual Meeting of the Texas Academy of Sciences, Nacogdoches, Texas.
61. Arney, Jr., B. E.; Barham, L.; Sherrod, S.; McCall, P.; White, R. C.; Ramanathan, A., Photolysis of 9-Isopropenylidene Oxide: An Example of 1,2-Alkyl Migration in a Radical System., presented November 5, 2002, at the 58<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, Austin, Texas.
62. Ramanathan, A.; Kessi, J.; Chasteen, T. G.; Arney, B., Reaction of Selenite and Reduced Glutathione in Various Concentration Ratios., presented November 4, 2002, at the 58<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, Austin, Texas.
63. Linder, S. M.; White, K.; Palmer, M.; Arney, B.; White, R., Control of Photoreactivity via Rotational Nonbonding Interactions as an Alternative to the Usual Resonance and Inductive Effects., presented March 1, 2002, at the 105<sup>th</sup> Annual Meeting of Texas Academy of Sciences, Laredo, Texas
64. Linder, S. M.; White, K. M.; Gloyd, V. M.; Arney, Jr., B. E.; White, R. C., Photolysis of Tri- and Tetrasubstituted Aryloxiranes, presented November, 2001, at the 57<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, San Antonio, Texas.
65. Arney, Jr., B. E.; Chandler, J.; Moore, J.; Cao, H.; and Miao, J., Investigation of the Hydrolytic Dealkylation of Methylselenones in Aqueous Solution by Kinetic and Computational Methods, presented August 23, 1999, at the 218<sup>th</sup> American Chemical Society National Meeting in the Convention Center, New Orleans, Louisiana.

66. Arney, Jr., B. E.; [Chandler, J.; Moore, J. L.; and Cao, H.], Selenone Chemistry: Investigation of the Selenone to Seleninate Rearrangement of Methyl and Benzyl Selenones, presented November 1, 1998, at the 54<sup>th</sup> Southwest Regional Meeting of the American Chemical Society at the Hilton Hotel in Baton Rouge, Louisiana.
67. Arney, Jr., B. E. ; [Cao, J.; and Szemenyei, C. A.] Rate Investigation of the Hydroxide-Induced Transannular Elimination of N-Acetylazetidins, presented November 1, 1998, at the 54<sup>th</sup> Southwest Regional Meeting of the American Chemical Society at the Hilton Hotel in Baton Rouge, Louisiana.
68. Arney, Jr., B. E. ; [Miao, J.; Anderson, C.; and Chaney, P.K.], Investigations in Electrochemical and Zero-Valent Metal Reductions of Geminal and Vicinal Dihalocyclopropanes, presented November 1, 1998, at the 54<sup>th</sup> Southwest Regional Meeting of the American Chemical Society at the Hilton Hotel in Baton Rouge, Louisiana.
69. Arney, Jr., B. E. ; [Moore, J.; Hefley, I.V.; and Banta, M. C.], Continuous-Flow Electrolysis System for the Preparation of Geminal Dinitro Compounds, presented November 1, 1998, at the 54<sup>th</sup> Southwest Regional Meeting of the American Chemical Society at the Hilton Hotel in Baton Rouge, Louisiana.
70. Arney, Jr., B. E.; [Moore, J. L.; Hefley, I. V.; and Banta, M.C.], “Continuous-Flow Electrolysis System for the Preparation of Geminal Dinitro Compounds.”, presented March 30, 1998 at the 215<sup>th</sup> National Meeting of the American Chemical Society in Dallas, Texas.
71. Arney, Jr., B. E.; [Szemenyei, C. A.; and Cao, J.], “ Computational Investigations of Transannular Cyclizations of Azetidines to Yield 1-Azabicyclobutane.”, presented March 30, 1998 at the 215<sup>th</sup> National Meeting of the American Chemical Society in Dallas, Texas.
72. The Chemistry of Conjugated Cyclopropenes, Invited presentation to the Department of Chemistry at the University of North Texas, February 4, 1994.
73. Semi-Empirical and Ab-Initio Investigation of the Dimerization of 1-Vinylcyclopropene, [with K. Wilcox and L. Chapman], Presented to the 49<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, Austin, Texas October, 1993.
74. 1-Vinylcyclopropene Preparation Via Fluoride-Induced Dehalosilylation, [with M. O. Gutierrez, P. Prouty, K. Wilcox, and E. Campbell] Presented at the 48<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, Lubbock, Texas October, 1992.
75. Silyl Allene as an Avenue into Cross-Conjugated Cyclopropenes, [with E. Campbell and K. Wilcox], Presented at the 48<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, Lubbock, Texas October, 1992.
76. Adventures in the Three-Membered Ring Circus, Presented at the 1991 Chemistry/Biochemistry Forum hosted by the Department of Chemistry and Biochemistry, The University of Texas at Austin, Austin, Texas May 31, 1991.

77. Vinyltrimethylsilanes to  $\beta$ -Halocyclopropyltrimethylsilanes, Presented at the 47<sup>th</sup> Annual Southwest Regional Meeting of the American Chemical Society, San Antonio, Texas, October, 1991.

**Theses:**

1. Zhou, Jie (Chou, Chieh), "Thermal Rearrangement of 5,5-Dimethyl-2-diazo-1,3-cyclohexanedione : An Avenue into Diene Precursors Incorporating Geminal Dimethylcyclopentanes.", Master's Thesis, Sam Houston State University, 1991.
2. Dong, Shuyan, "Studies Toward the Preparation of Cyclopropene Carboxylic Acid Esters.", Master's Thesis, Sam Houston State University, 1992.
3. Deng, Fang, "Preparative Studies Toward 2-Methyl-1-Cyclopropene Carboxylate Ester.", Master's Thesis, Sam Houston State University, 1993.
4. Simmerman, Katherine M., "Preparative Studies Towards Mono- and Disubstituted Cyclopropenes.", Master's Thesis, Sam Houston State University, 1994.
5. He, Yuhua, "Preparative Studies Toward Cyclopropene-1,2-dicarboxylate Esters.", Master's Thesis, Sam Houston State University, 1996.
6. Hu, Weidong, "Preparative Studies With N-Substituted 3-Azetidinol Towards 1-Azabicyclobutane.", Master's Thesis, Sam Houston State University, 1997.
7. Shen, Min, "Preparative Studies Toward 1,5-Diazacyclooctane-3,7-diol and 1,5,9-Triazacyclododecane-3,7,11-triol.", Master's Thesis, Sam Houston State University, 1997.
8. Cao, Jiamin, "Kinetic Study of the Hydroxide-Induced Trans-Annular Cyclization of N-Acetyl-3-methanesulfonyloxazetidine to Form 1-Azabicyclobutane.", Master's Thesis, Sam Houston State University, 1998.
9. Cao, Hongling, "Kinetic Study of the Degradation of Dimethyl Selenone", Master's Thesis, Sam Houston State University, 1999.
10. Miao, Jin, "Preparative Studies Towards 4-(Trimethylsilyl)-1,2-butadiene", Master's Thesis, Sam Houston State University, 1999.
11. Moore, Jason L., "Continuous Flow Electrolysis Systems for the Preparation of Paraffinic and Olefinic Nitro Compounds", Master's Thesis, Sam Houston State University, 1999.
12. White-Stanfield, Katherine M., "A Study of the Photochemical Reaction Pathway of Dihydronaphthalene Oxide", Master's Thesis, Sam Houston State University, Fall 2005.
13. Alla, Raghu, "Theoretical Studies on Photochemistry of Styrene Oxide and Its Derivatives", Master's Thesis, Sam Houston State University, Fall 2005.

14. Black, Michelle, "Photochemistry of 1-Methyl-3,4-dihydronaphthalene Oxide: Correlation With The Arney-White Model.", Master's Thesis, Sam Houston State University, Spring 2006.