

Dr. David A. Carter

Assistant Professor of Chemistry

Angelo State University
Member – Texas Tech University System
ASU Station #10892
San Angelo, TX 76909-0892
Tel: 325/486-6626
david.carter@angelo.edu



Education:

- 1986 – 1996 University of Arizona, Tucson, AZ, Ph.D. (Analytical Chemistry)
- 1980 – 1986 University of New Mexico, Albuquerque, NM, (Misc. Course work)
- 1980 – 1981 Southern Illinois University, Carbondale, IL (graduate work in Zoology)
- 1976 – 1980 Wayland Baptist University, Plainview, TX, B.S. (Biology, Chemistry, Math)

Professional Employment:

- 2000-present Assistant Professor of Chemistry (tenured), Dept of Chemistry & Biochemistry, ASU, San Angelo, TX
- 1994-2000 Assistant Professor of Chemistry (tenured), Div. of Natural Sciences and Mathematics, Oklahoma Baptist University, Shawnee, OK
- 1992-1994 Assistant Professor of Chemistry, Dept. of Chemistry, Calvin College, Grand Rapids, MI
- 1992 Chemistry Instructor, Pima Community College, Tucson, AZ
- 1986-1981 Graduate Assistant in Teaching, Dept. of Chemistry, Univ. of Arizona, 1986-91.
- 2002-2005 Graduate Research Assistant, Los Alamos National Laboratory, Los Alamos, NM (also 1978-1982)

Courses Taught:

- General Chemistry I & II and labs
- Quantitative Analysis
- Physical Chemistry I & II and labs
- Environmental Chemistry

Publications

- Plants—The Energy-Capturing Machines. Article in “Plants—The Green Machines!” American Chemical Society, Chemists Celebrate Earth Day publication, 2010.
- Companion Website for Chemistry: A Molecular Approach, First Edition, Tro, Pearson Education, Inc., 2008. Companion Website Contributing Authors: Jason Kautz, David Carter, Roy Kennedy Jr.
- Orientation of 1 and 2 Methylimidazole on Silver Electrodes Determined with Surface Enhanced Raman Scattering, Carter, D. A., Pemberton, J. E., Woelfel, K. J., The Journal of Physical Chemistry B; 1998; 102(49), 9870.
- Raman Spectroscopy and Vibrational Assignments of 1- and 2-methylimidazole, Carter, D. A.; Pemberton, J. E., J. Raman Spectrosc., 1997, 28 (12), 939.
- Frequency/Wavelength Calibration of Multipurpose Multichannel Raman Spectrometers Part II: Calibration Fit Considerations and Calibration Standards, Carter, D.A., Thompson, W.R., Taylor, C. E. and Pemberton, J. E., Appl. Spectrosc., 1995, 49, 1561.
- Frequency/Wavelength Calibration of Multipurpose Multichannel Raman Spectrometers. Part I: Instrumental Factors Affecting Precision, Carter, D.A. and Pemberton, J. E., Appl. Spectrosc., 1995, 49, 1550.
- Surface-Enhanced Raman Scattering of the Acid-Base Forms of Imidazole, Carter, D. A. and Pemberton, J. E., Langmuir, 1992, 8, 1218.
- Raman Spectroscopy Using Charge Coupled Device Detection, Pemberton, J. E., Sobocinski, R. L., Bryant, Mark A., Carter, D. A., Spectroscopy, 1990, 5(2), 26.

Recent Presentations

- PAH Detection, utilizing LDPE with Fluorescence Detection, Baxter Krug and Dr. David Carter presented at Great Plains Honors Council Conference, March 23, 2018, Stillwater, OK.
- PAHs in Candles. Alondra Salazar, Dr. David Carter, Dorian Herrick and Baxter Krug. Presented at 2018 Undergraduate Symposium, April 20, 2018, Angelo State University.
- Enhanced Reproducibility for the Analysis of Polycyclic Aromatic Hydrocarbons in Water Samples. Dorian Herrick, Dr. David Carter and Alondra Salazar. 253rd ACS National Meeting, April 2-6, 2017, San Francisco, CA
- Methodology for Qualitative and Quantitative Analysis of Polycyclic Aromatic Hydrocarbons (PAHs). David Goggin, Dr. David Carter. 2016 Undergraduate Research/Creative Endeavor Symposium, April 29, 2016, Angelo State University San Angelo, TX.
- UV-Vis Spectrophotometer Comparison. Widdess, Kelcee, Herrick, Dorian, Wolf, Seraiah, Goggin, David, Pedra Neme, Barbara, Barros, Wellington, Carter, David. 2014 Undergraduate Research/Creative Endeavor Symposium, May 27, 2015, Angelo State University San Angelo, TX.
- Biomolecular application for the correlation consistent composite approach: Noncovalent interactions for HF, NH₃, H₂O clusters. Amanda G Riojas, Ritwick Mynam, Tania E Bustillos, David A Carter, Angela K Wilson. 247th ACS National Meeting, March 16-20, 2014, Dallas, TX.
- Interaction Energy Calculations using the G2MP2 Method for the Analysis of the S66 Data Set. Tania Estrada, Advisor: Dr. David A. Carter, Collaborators: Dr. Angela K. Wilson, Amanda G. Riojas, Ritwick Mynam. Undergraduate Research Symposium, Angelo State University, April 19, 2013.
- ChemPRIME/ChemPaths: Using an online resource for chemistry teaching. Professor John W. Moore, Justin M. Shorb, Donald Storer, David Carter, Lisa Smith, Jeffrey Schwehm. 244th ACS National Meeting & Exposition, August 19-23, 2012, Philadelphia, Pennsylvania.
- With the Right Toolbox, Dimensional Analysis is Just Fun and Games. David Carter & Christine Purkiss. Supporting Success in College Science: CCRS and Scientific Applications of Mathematics. (symposium), November 3-4, 2011, Grapevine, TX.
- Extraction of ivermectin from aqueous solution with fluorescence detection. Adam Graham* and David A. Carter. Texas Academy of Science, Austin, TX, March 3-4, 2011.
- Instrumental analysis, environmental research and course management software. David Carter. The 237th ACS National Meeting, Salt Lake City, UT, March 22-26, 2009.
- Sustainability – To Boldly Go . . . David Carter. Presented as part of Angelo State University Faculty Luncheon Lecture Series, Jan. 2008 and at Green Chemistry Symposium hosted by American Chemical Society Student Affiliates at Angelo State University, April 18, 2008.
- Brine Ion Baselines For Redhead Ridge Wetlands Restoration Project. Richard Murdoch, Sean Coeckelenbergh, Steven Barraza, Kiran Chawla, Jeff Masters (David A. Carter), 22nd National Conference on Undergraduate Research, Salisbury, MD, April 10-12, 2008.
- Chemiluminescence analysis of bromide in saline wetland samples. Steven D. Barraza and David Carter, The 235th ACS National Meeting, New Orleans, LA, April 6-10, 2008.
- Ion Analyses Of Saline Samples From The Laguna Atascosa National Wildlife Refuge. Richard Murdoch (presenting), Irene Balderas, Steven Barraza, Ashley Brandon, Kiran Chawla, Sean Coeckelenbergh, Caitlin Cozby, Nubia Estrada, Eeshita Dastidar, Kadye Hill, Eric Hobbs, Colleen Kimme, Jared Kinyon, Kandace Kubat, Leah Lawdermilk, Megan Long, Jeff Masters, Tyler Nelson, Brian Terrell, Kristen Truett, Kelly Usrey, Chris Vela, Mark Warrington, Hitisha Zaveri and Carter, D. A., Student Research Showcase, Angelo State University, Nov. 20, 2007.
- Implications of Conformational Phase Space Determined by Molecular Dynamics and Semiempirical Molecular Orbital Theory on ZINDO Predictions of Cyanine Dye Electronic Spectra II. Peak broadening of -2,2'-cyanine dyes. Estrada, N.L., Freeland, E.G., Grottis, J.D., Hobbs, C.E., Hubbell, M. C., Kinyon, J. S., Nelson, T.H., Preas, A.L., Smallwood, L. R., Truett, K.E. and Carter, D. A., Presented at the Spring 2006 MiniMeeting, Permian Basin Section, American Chemical Society, San Angelo, TX, April 14-15, 2006.
- Determination of Arsenic Concentrations in Water Using Anodic Stripping Voltammetry. Esther Njoga and David Carter, Student Research Showcase, Angelo State University, Nov. 23, 2005
- A Comparison of Two Models for Designing Online Homework Assignments. David A. Carter, 60th Southwest Regional Meeting of the American Chemical Society, Fort Worth, TX, Sept. 29-Oct. 2, 2004.
- Objective Evaluation of Model Gaussian 98 ab initio Chemistries for Studying Energies Along a S_N2 Reaction Pathway. Amanda Fuller and David Carter, 225th American Chemical Society National Meeting, New Orleans, LA, March 23-27, 2003.
- Development of a SPME-GC-MS Method For MTBE Biodegradation Studies, Scott E. Hecox (David A. Carter), 16th National Conference on Undergraduate Research, Whitewater, WI, April 25-27, 2002.
- Analysis of Chlorpyrifos and Diazinon in Natural Waters Using EPA Method 8270, David Carter and Stephane Rhein, Society of Environmental Toxicology and Chemistry, Ozark-Prairie Regional Meeting, Leavenworth, KS, 2000.