

## CURRICULUM VITA

DARREN L. WILLIAMS

Chemistry Department, Sam Houston State University, Huntsville, TX 77341, (936)294-1529

Email: williams@shsu.edu Web: [http://www.shsu.edu/~chm\\_dlw/](http://www.shsu.edu/~chm_dlw/) Blog: <http://pchem4u.wordpress.com>

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## ACADEMIC TRAINING

1997 Ph.D. Physical Chemistry, Oregon State University, Joseph Nibler – Research Advisor

1992 B.S. Chemistry, University of Texas at Austin, Joseph Lagowski – Undergraduate Research Advisor

## SUMMARY OF WORK EXPERIENCE

2010 – present Associate Professor, Chemistry, Sam Houston State University, Huntsville, TX

2004 – 2010 Assistant Professor, Chemistry, Sam Houston State University, Huntsville, TX

2001 – 2004 Section Scientist, BWXT Pantex LLC (US-DoE facility), Amarillo, TX

2001 – 2004 Adjunct Professor, Chemistry, West Texas A&M University, Canyon, TX

1997 – 2001 Assistant Professor, Chemistry, West Texas A&M University, Canyon, TX

1992 – 1997 Graduate Assistant, Physical Chemistry, Oregon State University, Corvallis, OR

1989 – 1992 Undergraduate Researcher for Dr. Joseph Lagowski, University of Texas, Austin, TX

Summer 1992 Student Research Director, Young Scholars Program, University of Texas, Austin, TX

Fall 1991 Undergraduate Teaching Assistant, University of Texas, Austin, TX

## LEADERSHIP EXPERIENCES

2007 – present Member of Huntsville Rotary Club District 5910, Member of Board of Directors (2011)

2005 – present Faith Lutheran Church School Board Member

1999 – 2002 ACS Panhandle Plains Local Section Officer

## CERTIFICATIONS AND CLEARANCES

2003 CTM Certification, Toastmasters International, Club 9440, Amarillo, TX

2002 Six-Sigma Black Belt Certification, BWXT Pantex LLC, Amarillo, TX

2002 Department of Energy Q & SCI Security Clearances, BWXT Pantex LLC, Amarillo, TX

2001 OSHA 40-Hour Hazardous Waste Operations Certification, West Texas A&M University

## SCHOLARLY AND CREATIVE CONTRIBUTIONS

- Williams, D. L.; Kuhn, A. T.; O'Bryon, T. M.; Konarik, M. M.; Huskey, J. E., Contact Angle Measurements Using Cellphone Cameras to Implement the Bikerman Method, *Galvanotechnik*, 102(8), 1718-1725, (2011).
- Williams, D. L.; Kuhn, A. T.; Amann, M. A.; Hausinger, M. B.; Konarik, M. M.; Nesselrode, E. I. Computerized Measurement of Contact Angles, *Galvanotechnik*, 101(11), 2502-2512, (2010).
- Williams, D. L.; Kuklenz, K. D. Controlling the Particle-Size Distribution of Nitroanilines via the Hansen Solubility Parameters and Precipitation Paths, *Proceedings of the 43rd Combustion Subcommittee Meeting of the Joint Army Navy NASA Air Force (JANNAF) Interagency Propulsion Committee, Enhanced Blast Phenomenology*, La Jolla, (2009).
- Williams, D. L.; Kuklenz, K. D. A QSAR Model for Predicting Solvents and Solvent Blends for Energetic Materials, *Proceedings of the International Annual Conference of ICT, 40<sup>th</sup> (Energetic Materials)*, Karlsruhe, Germany, 2/1-2/11, (2009).
- Williams, D. L.; Kuklenz, K. D., A Determination of the Hansen Solubility Parameters of Hexanitrostilbene (HNS), *Propellants Explosives and Pyrotechnics*, 34(5), 452-457, (2009).
- Williams, D. L.; Flaherty, T. J.; Alnasleh B. K., Beyond Lambda-Max Part 2: Predicting Molecular Color, *Journal of Chemical Education*, 86(3), 333-339 (2009).
- Williams, D. L.; Kuklenz, K. D. An Evaluation of Modified IMS Swabs for the Screening of Oxidizers and Home-made Explosives, *Texas Journal of Science*, 60(4), 299-308, (2008).
- White, R. C.; White J. H.; Williams D. L.; Granic-White M.; White, J. W., Discoveries in Chemistry and Textiles: The Development of a Two-Week Elective Chemistry Course in Germany and Paris, *The Chemical Educator* 13(6), 392-396 (2008).
- Williams, D. L.; Jupe, C. L.; Kuklenz, K. D.; Flaherty, T. J., An Inexpensive, Digital Instrument for Surface Tension, Interfacial Tension, and Density Determination, *Industrial & Engineering Chemistry Research*, 47(12), 4286-4289 (2008).
- Williams, D. L., Flaherty, T. J., Jupe, C. L., Coleman, S. A., Marquez K. A., Stanton J. J., Beyond Lambda-Max: Transforming Visible Spectra into 24-bit Color Values, *Journal of Chemical Education*, 84(11), 1873-1877 (2007).
- Flaherty T. J., Timmons J.C., Wroblecki D. A., Orlor E. B., Langlois D. A., Wurden, K. J., Williams, D. L., Infrared and Raman Spectral Signatures of Aromatic Nitration in Thermoplastic Urethanes, *Applied Spectroscopy*, 61(6), 608-612 (2007).
- Lopez, E. P., Moddeman, W. E., Birkbeck, J. Williams, D.L., Benkovich M.G., Solvent Substitution – PART 2: The Elimination of Flammable, RCRA and ODC Solvents for Wipe Application, *CleanTech Magazine*, 4(10), 14-16 (2004).

13. Lopez, E. P., Moddeman, W. E., Birkbeck, J. Williams, D.L., Benkovich M.G., Solvent Substitution – PART 1: The Elimination of Flammable, RCRA and ODC Solvents for Wipe Application, *CleanTech Magazine*, 4(9), 16-19 (2004).
14. Williams D. L., Timmons J. C., Woodyard J. D., Rainwater K. A., Richardson B. R., Lightfoot J. M., Burgess C. E., and Heh J. L., UV-Induced Degradation Rates of 1,3,5-Triamino-2,4,6-Trinitrobenzene, *Journal of Physical Chemistry A*, 107(44), 9491-9494 (2003).
15. Williams D. L., Ashcraft R. W., *A Technical Review of the Radiological Characterization of Nuclear Weapons at Pantex*, Pantex Technical Report, (2003).
16. Birkbeck J. C., Kuehler N. L., Williams D. L., Moddeman W. E., X-ray Photoelectron Spectroscopic (XPS) Examinations of Beryllium Metal Surfaces Exposed to Chlorinated Solvents, *Surface Interface Analysis*, 27, 273-282, (1999).
17. Al-Katahni A., Williams D. L., Nibler J. W., Sharpe S. W., High Resolution Infrared Studies of  $\text{Al}(\text{BH}_4)_3$  and  $\text{Al}(\text{BD}_4)_3$ , *Journal of Physical Chemistry A*, 102(3), 537-544. (1998).
18. Williams D. L., Minarik P. R., Nibler J. W., PC Calculations Using Gaussian for Windows -- a Complement to Laboratory Measurements on HCl, *Journal of Chemical Education*, 73(7), 608-611 (1996).

### FUNDED GRANTS (\$275,575) AT SAM HOUSTON STATE UNIVERSITY

#### Internal

2005	\$5,000	A study of the molecular vibrations of nitrated explosive binders, FRG
2007	\$15,000	Improving the security of air travel against home-made threats, EGR
2008	\$5,000	Development of a standardized computer model for Hansen solubility parameters, FRG

#### External

2006	\$25,263	Determining the surface tension and interfacial tension of liquids and complex mixtures, Subcontract through the University of Texas for the DOE Pantex Plant
2006	\$29,804	Surface tension of compositional variations of Sylgard 184 with respect to temperature and time, DOE Pantex Plant
2007 – 2008	\$95,671	Measurement of constants for crystalline explosives, DOE Pantex Plant
2008 – 2010	\$99,837	Determination of HSPs for cleaning applications, DOE Pantex Plant

### HONORS, AWARDS, AND OTHER SPECIAL RECOGNITIONS

2010	Outstanding Teacher – Alpha Chi National Honor Society
2008	“Best Darn Teacher in the World Award” – Phi Sigma Pi National Honor Fraternity
2005	Academic Research Award, DCG Partnership Inc.
1994	Milton Harris Teaching Excellence Award as a GTA, Oregon State University
1993	Outstanding Teaching Assistant Award, Oregon State University, 1993

### PROFESSIONAL SERVICE

Reviewer for the following entities: ScienceDirect Search Tools, Elsevier; Journal of Chemical Education; The Chemical Educator; US Army Corps of Engineers' Engineer Research and Development Center (ERDC); Joint Army Navy NASA Air Force (JANNAF) Journal, Chemical Propulsion Information Analysis Center; Physical Chemistry-GRE, Texas Teacher Certification Chemistry and General Science Exams, Educational Testing Service; Journal of Physical Chemistry A

### TEACHING PERFORMANCE

#### COURSES TAUGHT

2004 – present	Physical Chemistry – Spectroscopy (Fall) and Thermodynamics (Spring)
2005 - present	Forensic Chemistry
2006 – present	Graduate Thermodynamics
2005 (summer)	Inorganic & Environmental Chemistry Lecture and Lab
1997 – 2002	Environmental Chemistry
1997 – 2001	Instrumental Analysis
1997 – 2001	Analytical Chemistry
1997 – present	Graduate Molecular Spectroscopy
1997 – present	General Chemistry I and II