

**William E. Acree, Jr.**

## **BIOGRAPHICAL SKETCH**

### **1. Mailing and Correspondence Information:**

Department of Chemistry  
University of North Texas  
1155 Union Circle Drive #305070  
Denton, TX 76203  
E-mail: [acree@unt.edu](mailto:acree@unt.edu)  
Telephone: (940) 565-3543



### **2. Educational Background:**

| Name                         | Location              | Date Graduated |
|------------------------------|-----------------------|----------------|
| Oak Park High School         | Kansas City, Missouri | May 1971       |
| University of Missouri-Rolla | Rolla, Missouri       | May 1975 B.S.  |
| University of Missouri-Rolla | Rolla, Missouri       | May 1977 M.S.  |
| University of Missouri-Rolla | Rolla, Missouri       | May 1981 Ph.D. |

### **Awards and Honors:**

Curators Scholarship (1971-75)  
Chancellors Scholarship (1975)  
Phi Eta Sigma Honor Society  
Phi Kappa Phi Honor Society  
Kappa Mu Epsilon Honorary Mathematics Society  
Outstanding Freshman Chemistry Student  
(awarded by W. T. Schrenk Chemical Society)  
Outstanding Graduating Senior in Chemical Sciences  
(awarded by the local section of Alpha Chi Sigma at the University of Missouri-Rolla)

### **3. Non-academic Work Experience:**

|                    |                                           |               |
|--------------------|-------------------------------------------|---------------|
| Research Associate | Phillips Petroleum Co.<br>Summer Employee | May-July 1980 |
|--------------------|-------------------------------------------|---------------|

### **4. Academic Experience:**

|                                  |                           |                           |
|----------------------------------|---------------------------|---------------------------|
| Chair of Chemistry               | University of North Texas | July 2009 – Aug. 2015     |
| Professor                        | University of North Texas | Sept. 1992 - Present      |
| Associate Professor              | University of North Texas | Sept. 1988 -<br>Aug. 1992 |
| Associate Professor<br>(tenured) | Kent State University     | Sept. 1986-<br>Aug. 1988  |
| Assistant Professor              | Kent State University     | Sept. 1982-               |

|                    |                                          |                          |
|--------------------|------------------------------------------|--------------------------|
|                    |                                          | Aug. 1986                |
| Faculty Associate  | Kent State's Liquid<br>Crystal Institute | March 1985-<br>Aug. 1988 |
| Instructor         | University of Kansas                     | Aug. 1981-<br>May 1982   |
| Research Associate | University of Kansas                     | Jan. 1980-<br>May 1981   |

### **Awards, Honors and Recognitions:**

Sigma Xi (Full member)  
 UNT Scholar of the Month (March, 1991)  
 Society of Applied Spectroscopy Tour Speaker for 1994  
 Recipient of 2004 UNT McNair Postbaccalaureate Achievement Program – Outstanding Service Award  
 Recipient of 2006 UNT Upward Bound Math & Science Program – Outstanding Mentor Award  
 Prof. William E. Acree, Jr. Award established in 2010 in my name by the Global Journal of Physical Chemistry for the best paper published each year in the journal in the area of thermodynamics, the award was transferred in 2012 to the best thermodynamics paper published in *ScienceJet* and discontinued in 2015  
 June 2012 issue of the *Journal of Spectroscopy and Dynamics* dedicated to Prof. William E. Acree, Jr.  
 UNT Libraries 2012 Outstanding Contributor to the University of North Texas Scholarly Works Award  
 Recipient of Professional Degree in Chemistry from Missouri University of Science and Technology (May 2013 graduation ceremony)  
 Fellow of The Royal Society of Chemistry, elected July of 2013  
 Fellow of International Union of Pure and Applied Chemistry (IUPAC), December of 2013  
 Recipient of the Analytical Challenge (Ksp Solubility Product) Award, sponsored by Springer-Verlag, July of 2015  
 Recipient of the Analytical Challenge (Highest Melting Point) Award, sponsored by Springer-Verlag, September of 2015  
 Recipient of the 2016 Yale Educator Award  
 Recipient of a 2018 College of Science Faculty Award for Service  
 Recipient of the UNT 2020 Ulys & Vera Knight Faculty Mentor Award  
 Recipient of the UNT 2021 TAMS and Honors College Excellence in Undergraduate Mentoring Award  
 Recognized as the Alumnus of the Month for June 2022 by the Department of Chemistry at the University of Missouri University of Science and Technology (MS&T)  
 Finalist for the 2023 CUR-Goldwater Outstanding Faculty Mentor Award  
 Finalist for the 2024 CUR-Goldwater Outstanding Faculty Mentor Award  
 Recipient of the UNT 2024 President's Council Service Award  
 Recognized by *Liquids* by having a special journal issue titled "Recent Advances in the Behavior of Liquids in Honor of Prof. Dr. William Acree, Jr."  
 Finalist for the 2025 CUR-Goldwater Outstanding Faculty Mentor Award

### **5. Editorial Advisory Board Memberships:**

Editorial Board of *IUPAC's Solubility Data Series* (Volume 56)  
 Editorial Board of John Wiley's *Solution Chemistry Series* (Oct. 1995 – Dec. 2000)  
 Editorial Board of *Science of Everyday Things* (Four volume series, by Gale Group of Thompson Learning, June 2001)  
 Editorial Advisory Board Member for the *Journal of Chemical and Engineering Data* (January 2004 - December 2006; January 2007 – December 2009; January 2010 – December 2012)  
 Editorial Advisory Board Member for the *Journal of Chemical Thermodynamics*

(January 2007 – December 2011, August 2023 – Present)  
 Co-Editor of the *Journal of Chemical Thermodynamics* (January 2012 – June 2023)  
 Top Reviewer Award for 2007 from the *Journal of Chromatography*  
 Editorial Board Member for the *Journal of Thermodynamics* (July 2008 – May 2017)  
 Editorial Board Member for the *International Journal of Liquid State Sciences*  
 (August 2008 – December 2012)  
 Editorial Advisory Board Member for the *Global Journal of Physical Chemistry* (March 2010 – June 2012)  
 Editorial Advisory Board Member for the *RASAYAN Journal of Chemistry* (May 2010 – December 2014)  
 Senior Advisor for the *Journal of Spectroscopy and Dynamics* (September 2010 – September 2013)  
 Senior Advisor for the journal *ScienceJet* (June 2012 – December 2014)  
 INTECH Science Board Member (2010 – 2011, 2011 – 2012, 2012 - 2013)  
 Editorial Advisory Board Member for *Journal of Basic and Applied Sciences* (May 2011 – December 2012)  
 Editorial Advisory Board Member for *Open Journal of Fluid Dynamics* (January 2012 – December 2013)  
 Editorial Advisory Board Member for *Conference Papers in Chemistry* (September 2012 – December 2014)  
 Editorial Advisory Board Member for *Modern Chemistry* (December 2012 – December 2014)  
 Editorial Advisory Board Member for *Green and Sustainable Chemistry* (September 2012 – December 2020)  
 Editorial Advisory Board Member for *European Chemical Bulletin* (September 2012 – December 2022)  
 Editorial Advisory Board Member for *International Research Journal of Thermodynamics*  
 (February 2013 – December 2020)  
 Editorial Advisory Board Member for *The Open Chemical Engineering Journal* (July 2013 – December 2020)  
 Editorial Advisory Board Member for *Liquids* (October 2020 – February 2023)  
 Editorial Advisory Board Member for *Journal of Applied Solution Chemistry and Modeling*  
 (June 2012 – Present)  
 Editorial Advisory Board Member for *Mediterranean Journal of Chemistry* (July 2012 – Present)  
 Editorial Advisory Board Member for *Journal of Thermodynamics and Catalysis* (September 2012 – Present)  
 Editorial Advisory Board Member for *Modern Chemistry and Applications* (February 2013 – Present)  
 Editorial Advisory Board Member for *International Journal of Quantitative Structure-Property Relationships* (May 2015 – Present)  
 Editorial Advisory Board Member for *Journal of Chemistry and Applied Chemical Engineering* (July 2017 – Present)  
 Editorial Advisory Board Member for *Pharmaceutical Sciences* (August 2019 – Present)  
 Editorial Advisory Board Member for the Physical Chemistry Section of *Molecules* (September 2019 – Present)  
 Editorial Advisory Board Member for the Thermal Management Section of *Energies* (December 2019 – Present)  
 Editorial Advisory Board Member for *Revista Colombiana de Ciencias Químico Farmacéuticas* (May 2020 – Present)  
 Editorial Advisory Board Member for *Thermo* (July 2020 – Present)  
 Section Editor-in-Chief of “Molecular Liquids” for the journal *Liquids* (February 2023 – Present)  
 Editorial Advisory Board Member for *ImmunoAnalysis* (March 2024 – Present)  
 Editorial Board Member for the *Journal of Solution Chemistry* (appointment starts Jan. 2025)

## 6. Memberships on Professional Society Subcommittees:

Membership on the IUPAC Subcommittee on Solubility and Equilibrium Data (January 2014 – Present)

## 7. Academic Service Assignments:

### **University-Wide Service Assignments:**

Member of University-wide Subcommittee for SACS accreditation:  
Graduate Programs (April 1993 – April 1995)

Member of University-wide Subcommittee for SACS accreditation:  
External Grants and Contracts and Related Corporate Entities  
(April 1993 – April 1995)

Member of University Developing Scholars Committee (June 1996 – Sept 2000)  
Chair of (1998 – 2000)

Member of the University Committee to Evaluate Administrators  
(Sept. 1996 – Sept 2002; appointed by Faculty Senate)

Member of the University Sunset Review Team for the Institute of Applied Sciences  
Chair of (Spring 2002)

Member of the UNT Endorsement Committee for Simon Scholarship Award for Noble Purpose  
(Fall 2004; Committee established by UNT Office for Nationally Competitive Scholarships)

Member of the Faculty Senate (elected Representative from Group VII, Nov. 2006 – May 2007; elected Representative from Group VII, Sept. 2024-Present)

Chemistry Departmental Coordinator for UNT State Employee Charitable Campaign  
(Aug. 2005 – Sept. 2015)

Mentor for the UNT Emerald Eagle Scholars Program (Sept. 2007 – Aug. 2008;  
Sept. 2009 – Aug. 2011)

Faculty Ambassador (Oct. 2007 – Sept. 2009)

Member of University Scholar's Committee (Spring 2012 and 2013)

Member of University Chemical Hazards Committee (April 2013-May 2015, Chair of April 2013–  
May 2015)

Member of University Environmental Oversight and Risk Review Committee (April 2013 – Sept. 2015)

Member of the University First Flight Task Force (Jan. 2014 – Sept. 2014)

Member of the Provost's Open Access Advisory Board (May 2016 – June 2019; Chair of Oct. 2017 – June 2019)

Member of the University Writing Committee (Nov, 2017 – Aug. 2020)

Member of the COVID-19 Graduate Student Grade Appeal Committee (May 2020 – Aug. 2020)

Member of the Academic Affairs Committee (Sept. 2020 – Aug. 2023)

Member of University Mentoring Program Grants Selection Committee (Oct. 2020 – Dec. 2020)

Member of Administrator Evaluation Committee (AEC) for Reappointment of Dean Quintanilla (Jan. 2025 – Present)

### **College Service Assignments:**

Member of KSU's Honors College Policy Council (1985 – 1987)

Member of College of Arts & Sciences Graduate Curriculum Committee  
(Aug. 1994 - Aug. 1998, Sept. 2000 – Aug. 2003; Sept. 2016 – May 2017)

Member of College of Arts and Sciences Departmental Assessment Committee  
(Aug. 1996 – March 1997; elected member)

Member of College of Arts & Sciences Council of Advisors (June 2005 – July 2009; Sept. 2016 –  
May 2017)

Member of College of Arts & Sciences Undergraduate Curriculum Committee  
(Oct. 2007 – May 2009; elected member)

Member of College of Sciences Council of Advisors (May 2017 – Sept. 2021)

Member of College of Science Ad-hoc Space Committee (June 2018 – Dec. 2019)

Member of Health Professions Advisory Committee (April 2019 – May 2021)

Member of ad Hoc Faculty Grievance Committee (April 2019 - July 2019)

### **Departmental Service Assignments:**

Departmental Awards Coordinator (1984 – 1988)  
 Member of Departmental Graduate Committee (1986 – 1988)  
 Chemistry Department Representative to KSU's local AAUP Chapter  
 Member of Departmental Graduate Recruiting Committee (1991– 1993)  
 Departmental Recruiting Chair (1991 – 1993)  
 Departmental International Recruiting Chair (1993 – 1997)  
 Member of Departmental Personnel Affairs Committee (1990 – 1994; 1995 – 1998; 2003 – 2006, 2007 – 2009; 2015 – 2018; 2022 – Present); Chair of (1991 – 1994, 1997 – 1998; 2017 – 2018)  
 Member of Departmental Graduate Affairs Committee (1992 – 1997, Jan. 2000 – Sept. 2000)  
 Member of Departmental Undergraduate Affairs Committee (1997 – 2007; 2016 – 2021; Chair of Sept. 2000 – May 2007; Acting Chair of Jan. 2009 – Aug. 2009; Co-Chair of Sept. 2016 – Sept. 2021)  
 Analytical Chemistry Division Chair (Jan. 1994 – May 1994; Sept. 1995 – June 2008; June 2023 – Present)  
 Departmental Seminar Coordinator (Aug. 1994 – Dec. 1995)  
 Adhoc Committee to revise Departmental Tenure Policy (Spring 1996); Chair of Departmental Representative to SRB Space Committee (June 1996 – Sept. 2001)  
 Member of Departmental Tenure and Promotion to Associate Professor Committee (Sept. 1991 – Present; Chair of Sept. 2017 – Sept. 2018)  
 Member of Departmental Promotion to Full Professor Committee (Sept. 1992 – Present; Chair of Sept. 2017 – Sept. 2018)  
 Adhoc Committee on Departmental Instrumentation (Sept. 1997 – Sept. 2002; Chair of Sept. 1997 – Sept. 2000)  
 Interim Undergraduate Chemistry Advisor (Jan. 2001 – March 2001)  
 Undergraduate Chemistry Advisor (June 2005 – June 2009; Sept. 2016 – Sept. 2021)  
 Member of Departmental New Science Building Committee (Sept. 2001 – Dec. 2005; Chair of Sept. 2001– Dec. 2005)  
 Member of Chemistry Departmental REU Advisory Board (March 2003 – Dec. 2005; May 2007 – May 2011)  
 Associate Chair of Chemistry (May 2007 – May 2009; Sept. 2018 – May 2021; July 2024 – Present)  
 Co-Advisor UNT ACS Student Affiliate Chapter (Nov. 2016 – Present) **Student chapter received Certificates of Achievement in both 2017 and 2017, as well as a 2018-2019 and 2023-2024 Honorable Mention Awards from the ACS**  
 Member of Departmental Grade Appeal Committee (Sept. 2015 – June 2020)  
 Chair of Departmental Grade and Academic Integrity Appeals Committee (Sept. 2021 – Present)  
 Chair of Departmental Faculty Awards Committee (Sept. 2021 – Aug. 2024)  
 Faculty Advisor to the Beta Eta Chapter of Alpha Chi Sigma (Jan. 2022 – May 2022, chapter went dormant because of lack of new members)  
 Member of Departmental Alumni Relations Committee (Jan. 2023 – Present)  
 Chair of Departmental Graduate Affairs Committee (July 2024 – Present)  
 Departmental Graduate Student Advisor (July 2024 – Present)

### **Service to Other Academic Programs:**

TAMS Admission Interviewer (Spring, 1996, 1997 and 2001)  
 Research mentor for summer UNT Upward Bound Math & Science Program (Summer 1992 – 2017)  
 Panel Member for McNair Program (Fall 1995, Summer 1997 and Summer 1998)  
 Mentor for the UNT McNair Postbaccalaureate Achievement Program (Spring 1997 – 2017)  
 Member of the UNT McNair Postbaccalaureate Achievement Program Advisory Board (Jan. 2000 – May 2017)  
 Member of the FOCUS Scholarships Advisory Board (this is for a funded research grant that Dr. Lee Hughes and Dr. Diana Mason are Co-PIs on; Jan. 2009 – Jan. 2013)  
 TAMS Scientific Review Committee, Board Member (May 2015 – Present)  
 Mock Lecturer for TAMS Preview and Early Start Days (Sept. 2017 - Present)

Member of Teach North Texas (TNT) Promotion Committee (Sept. 2018 – Dec. 2019; Chair of Sept. 2018 – Dec. 2019)

Member of TAMS Distinguished Alumnus Award Committee (Nov. 2018 – Aug. 2019)

### **Mentoring Activities for Texas Academy of Math and Science Students:**

Mentor to eight Regional Finalists and sixteen Semifinalists in the Siemens Competition

**Regional Finalists:** Sai Achi (2009); Mariam Saifullah (2010); Shulin Ye (2010); Sumedha Mehta (2014); Akash Wadawadigi (2014); Nina Kuprasertkul (2014); Colleen Dai (2015); Shoshana Zhang (2015)

**Semi-Finalists:** Sai Achi (2009); Mariam Saifullah (2010); Shulin Ye (2010); Vicky Chou (2011); Amanda Quay (2011); Helen Lu (2013); Kalpana Satish (2013); Danyang Shan (2013); Sumedha Mehta (2014); Akash Wadawadigi (2014); Nina Kuprasertkul (2014); Colleen Dai (2015); Shoshana Zhang (2015); Sarah Cheeran (2016); Bihan Jiang (2016); Amber Lu (2016)

Mentor to two Semifinalists in the Intel Science Search

Sai Achi (2009); Amanda Quay (2012)

Mentor to eight Barry M. Goldwater Scholarship recipients

Amanda Quay (2012); Amber Lu (2017); Ellen Qian (2019); Jonathan Lu (2019); David Yue (2019); Shrika Eddula (2021); Neel Shanmugam (2022); Ramya Motati (2024)

Mentor to one Truman Scholarship Finalist

David Yue (2019)

Two students working in the Acree laboratory were selected to participate in the Research Science Institute, sponsored by the Center for Excellence in Education (CEE)

Jonathan Lu (Summer 2019); Saikiran Motati (Summer 2024)

One student working in the Acree laboratory was named among the top 300 Scholars in the Regeneron Science Talent Search Competition (Saikiran Motati, 2025)

Mentor to 3 TAMS students (N. Kurasertkul, S. Mehta and A. Wadawadigi) who competed in the 2015 Fort Worth Regional Science Fair – Awards received by students include second place in Biochemistry (Senior Division), third place in the awards given by Lockheed Martin Aeronautics Company, and first place in the awards given by the Tarrant County Veterinary Medical Association

Mentor to 3 TAMS students (N. Kurasertkul, S. Mehta and A. Wadawadigi) who competed in the 2015 Exxon Mobil Science and Engineering Fair – Award received by the students was fifth place in Senior Division Life Sciences – Biochemistry

Mentor to 2 TAMS students (S. Zhang and C. Dai) who competed in the 2015 Exxon Mobile Science and Engineering Fair – Award received by the students was fourth place in Senior Division Physical Sciences – Mathematical Science

Mentor to 3 TAMS students (S. Cheeran, B. Jiang and A. Lu) who competed in the 2016 Fort Worth Regional Science Fair – Awards received by students included first place in Mathematics (Senior Division), first place in the award given by ASU Walton Sustainability Solutions Initiative, and first place in the award given by Mu Alpha Theta

Mentor to 1 TAMS student (B. Jiang) who competed in the 2017 Fort Worth Regional Science Fair - Award received by the student was first place in Senior Division - Energy and Transportation

Mentor to 1 TAMS student (E. Qian) who competed in the 2018 Fort Worth Regional Science Fair - Award received by the student was first place in Senior Division - Chemistry

Mentor to 1 TAMS student (E. Qian) who competed in the 2018 Texas State Science and Engineering Fair - Award received by the student was third place in Senior Division - Chemistry

Mentor to 2 TAMS students (S. Wang and K. Liu) who competed in the 2019 Fort Worth Region Science Fair - Award received by the students was first place in the award given by the North Texas Section of the American Industrial Hygiene Association

Mentor to 2 TAMS students (S. Eddula and J. Huang) who competed in the 2020 Fort Worth Regional Science Fair – Award received by the students was first place in Senior Division – Environmental Management and Sciences

Mentor to 2 TAMS students (S. Eddula and J. Huang) who were UNT's two student representatives at the Capitol's 2021 Texas Undergraduate Research Day

Mentor to 2 TAMS students (S. Eddula and J. Huang) who competed in the 2021 Fort Worth Regional Science Fair – Award received by the students was first place in Senior Division - Environmental Management & Sciences, students also received six place overall award in the Senior Division

Mentor to 2 TAMS students (S. Cai and A. Xu) who competed in the 2021 Fort Worth Regional Science Fair – Award received by the students was second place in Senior Division – Animal Sciences

Mentor to 2 TAMS students (K. Kim and P. Garlapati) who competed in the 2021 Fort Worth Regional Science Fair – Award received by the students was second place in Senior Division – Chemistry

Mentor to 1 TAMS student (E. Huang) who competed in the 2021 Fort Worth Regional Science Fair – Award received by the student was second place in Senior Division – Earth & Planetary Sciences

Mentor to 1 TAMS student (A. Xu) who competed in the 2021 Texas Junior Academy of Science (TJAS) competition – Award received by student was second place in Botany/Zoology category

Mentor to 1 TAMS student (K. Kim) who competed in the 2021 Texas Junior Academy of Science (TJAS) competition – Award received by student was second place in the Environmental Science category.

Mentor to 2 TAMS students (S. Sinha and A. Varadharajan) who competed in the 2022 Fort Worth Regional Science Fair – award received by students was second place in Senior Division – Chemistry

Mentor to 1 TAMS student (S. Cai) who competed in the 2022 Fort Worth Regional Science Fair – award received by student was first place in Senior Division – Environmental Management & Sciences; as well as two special awards: first place – U.S. Agency for International Development, and first place – Ricoh Sustainable Development Award.

Mentor to 1 TAMS student (A. Xu) who competed in the 2022 Fort Worth Regional Science Fair – award received by student was third place in Senior Division – Plant Sciences

Mentor to 2 TAMS students (S. Sinha and N. Shanmugam) who competed in the 2023 Fort Worth Regional Science Fair – award received by students was a special award: third place – NASA Earth System Science Award

Mentor to 1 TAMS student (R. Motati) who competed in the 2023 Texas State Stockholm Junior Water Prize from the Water Environment Association of Texas – award received by student was third place

Mentor to 3 TAMS students (R. Motati, T. Kandi and S. Motati) who competed in the 2024 Fort Worth Regional Science Fair – award received by students was first place in Senior Division – Chemistry

### **Service to the Chemical Profession:**

City of Kent Task Force for "Right-to-Know" Legislation (1985-1987)

Judge for the ACS Meeting-in-Miniature (Spring 1992, meeting at the University of North Texas; Spring 1993, meeting at East Texas State University; Spring 2000, meeting at the University of North Texas)

Program Advisory Committee for First Conference of the International Academy of Physical Science (held Feb. 1996 in Bilaspur, India)

Sigma Xi Officer (Vice-President of UNT Chapter, May 1997-May 1998)

Program Committee for Symposium on "Chemometrics, Imaging, and Pattern Recognition for the Monitoring of the Environment," (held Sept. 1999 in Boston, MA)

Contributor to the *World of Chemistry* Encyclopedia (Published by the Gale Group, 1999)

Consultant for Texas International Education Consortium – my portion of project involved design of introductory chemistry laboratory component for a new university in Saudi Arabia (arranged by Dean of Arts and Sciences), February 2005.

Judge for the 54<sup>th</sup> Annual Fort Worth Regional Science Fair (Chemistry section), Fair held at the University of North Texas, March, 2005

Judge for the 55<sup>th</sup> Annual Fort Worth Regional Science Fair (Environmental Science section), Fair held at the University of North Texas, March, 2006

Judge for the 56<sup>th</sup> Annual Fort Worth Regional Science Fair (Chemistry section), Fair held

at the University of North Texas, March, 2007  
 Examination Reviewer/Consultant (Secondary and High School Examinations) for Harcourt Assessment, Inc.; March 2007 – March 2009  
 Judge for the 57<sup>th</sup> Annual Fort Worth Regional Science Fair (Best of Fair), Fair held at the University of North Texas, March, 2008  
 Member of IUPAC Project Group on Solubility DATA Series - Celebrating 100 Volumes of Plenitude of the IUPAC-NIST Series (Jan. 2014 - Aug. 2014)  
 Member of ACS Southwest Regional Subcommittee to Select Winner of the 2016 E. Ann Nalley Award (July 2016 - October 2016)  
 Member of IUPAC Task Force on Recommended Reference Materials for Phase Equilibrium Studies (June 2017 - Present)  
 External Evaluator of the Chemistry Program at Tarleton State University (July 16, 2018)  
 Member of IUPAC Task Force on Henry's Law Constants (Aug. 2019 – Dec. 2021)  
 Member of IUPAC Task Force on Gold Book Update of Terms from the Glossary of Terms Related to Solubility (April 2021 - Present)  
 Honorary Guest Editor for 2022 September Special Issue of the *Journal of Solution Chemistry* dedicated to Professor Michael Abraham **(Special issue contained 10 papers)**  
 Guest Editor for the Special Issue in *Liquids* on Modeling of Liquids Behavior: Experiments, Theory and Simulations **(Special issue contained 14 papers)**  
 Guest Editor for the Honorary Issue in *Liquids* dedicated to Professor Christian Reichardt **(Special issue contained 15 papers)**  
 Guest Editor for the Special Issue in *Thermo* in the Editorial Board Members' Collection Series: Molecular Simulation and Thermodynamics  
 Guest Editor for the Special Issue in *Liquids* on Recent Advances in the Behavior of Liquids in Honor of Prof. Dr. William Acree, Jr. **(Closing date is July 2024; eleven papers have already been accepted for publication in the special issue)**  
 Guest Editor for the Special Issue in *Liquids* on Thermodynamics of Molecular Complexation and Hydrogen Bonding in Solution Chemistry – A Themed Issue Honoring Professor Dr. Boris N. Solomonov

Reviewer for the following chemical journals: *Journal of Chromatography*; *Applied Spectroscopy*; *Journal of Solution Chemistry*; *International Journal of Pharmaceutics*; *Journal of Chemical and Engineering Data*; *Journal of Pharmaceutical Sciences*; *Analytical Letters*; *Journal of Colloid and Interface Science*; *Journal of Chemical Society, Faraday Transactions*; *Journal of Molecular Liquids*; *Fluid Phase Equilibria*; *Canadian Journal of Chemistry*; *Mikrochimica Acta*; *Industrial and Engineering Chemistry Research*; *Thermochimica Acta*; *Journal of Chemical Society, Perkin Transactions 2*; *Journal of Physical Chemistry*; *Journal of Chemical Education*; *The Analyst*; *Analytica Chimica Acta*; *Journal of Chemical Thermodynamics*; *Journal of Physical and Chemical Reference Data*; *Journal of the American Chemical Society*; *Talanta*; *Macromolecules*; *Chemical Engineering Communication*; *Environmental Science and Technology*; *Spectrochimica Acta*; *Physical Chemistry Chemical Physics*; *Polycyclic Aromatic Compounds*; *Journal of Organic Chemistry*; *Journal of the Chemical Society, Chemical Communications*; *Green Chemistry*; *Structural Chemistry*; *Electrophoresis*; *Organic & Biomolecular Chemistry*; *Spectroscopy Letters*; *New Journal of Chemistry*; *Journal of Separation Science*; *Journal of Environmental Monitoring*; *Pharmaceutical Research*; *Journal of Photochemistry and Photobiology A*; *South African Journal of Chemistry*; *Science of the Total Environment*; *Energy & Fuels*; *Organic Geochemistry*; *Physics and Chemistry of Liquids*; *Chemical Research in Toxicology*; *QSAR & Combinatorial Science*; *Die Pharmazie*; *Organic Letters*; *Journal of Chromatographic Science*; *Asian-Pacific Journal of Chemical Engineering*; *Journal of Physical Organic Chemistry*; *Analytical and Bioanalytical Chemistry*; *Environmental Chemistry Letters*; *Chemical Physics Letters*; *International Journal of Thermophysics*; *Bioconjugate Chemistry*; *Environmental Toxicology and Chemistry*; *Electrophoresis*; *Journal of Drug Targeting*; *Global Journal of Physical Chemistry*; *Luminescence: The Journal of Biological and Chemical Luminescence*; *International Journal of Chemical Engineering*; *Chemical Engineering Journal*; *International Journal of Analytical Chemistry*; *Korean Journal of Chemical Engineering*; *Journal of Petroleum Science and Engineering*; *Scientific Reports*; *European Journal of Pharmaceutical Sciences*; *Journal of Thermal*

*Analysis and Calorimetry; International Journal of Environmental Analytical Chemistry; Characterization of Materials; Indian Journal of Chemistry, Section A; Arabian Journal of Chemistry; International Journal of Physical Sciences; Journal of Molecular Structure; Journal of Shanghai Jiao Tong University; Natural Product Communications; Recent Patents on Chemical Engineering; Mini-Reviews in Medicinal Chemistry; Current Pharmaceutical Analysis; Iranian Journal of Pharmaceutical Research; American Chemical Science Journal; International Journal of Energy Research; SAR and QSAR in Environmental Research; Green and Sustainable Chemistry; Advances in Chemical Engineering; Journal of Chemical Technology and Biotechnology; Journal of Industrial and Engineering Chemistry; Bulgarian Chemical Communications; Journal of Applied Solution Chemistry and Modeling; Journal of Computer Aided Molecular Design; Mediterranean Journal of Chemistry; Chemical Engineering Research and Design; Biomacromolecules; Pharmaceutical Sciences; Chemistry Central Journal; Journal of Luminescence; Colloids and Surfaces A; Journal of Environmental Chemical Engineering; Molecular Physics; Environmental Sciences: Processes and Impacts; Chemical Product and Process Monitoring; Critical Reviews in Analytical Chemistry; Industrial Crops and Products; Monatshefte für Chemie; Journal of CO<sub>2</sub> Utilization, Separation and Purification Technology; Fermentation; ChemEngineering; Canadian Journal of Chemical Engineering; Chinese Journal of Chemical Engineering; Processes; Mendeleev Communications; French-Ukrainian Journal of Chemistry; Symmetry; Journal of Pharmacy and Pharmacology; Pharmaceutics; Food Hydrocolloids; Photochemical and Photobiological Sciences; Journal of AOAC International; Pure and Applied Chemistry; Chemical Data Collections; Revista Colombiana de Ciencias Químico – Farmacéuticas; Energies; Journal of the Taiwan Institute of Chemical Engineers; International Journal of Biological Macromolecules; Data; Journal of the Mexican Chemical Society; Iranian Journal of Pharmaceutical Sciences; Journal of Food Engineering; Materials; Chemistry; Biochemical and Biophysical Research Communications; Separations; Annales Pharmaceutiques Françaises; BMC Chemistry; ImmunoAnalysis; Physchem; International Journal of Molecular Sciences.*

Reviewer for CRC Press

Reviewer for the following funding agencies: National Science Foundation, ACS Petroleum Research Fund

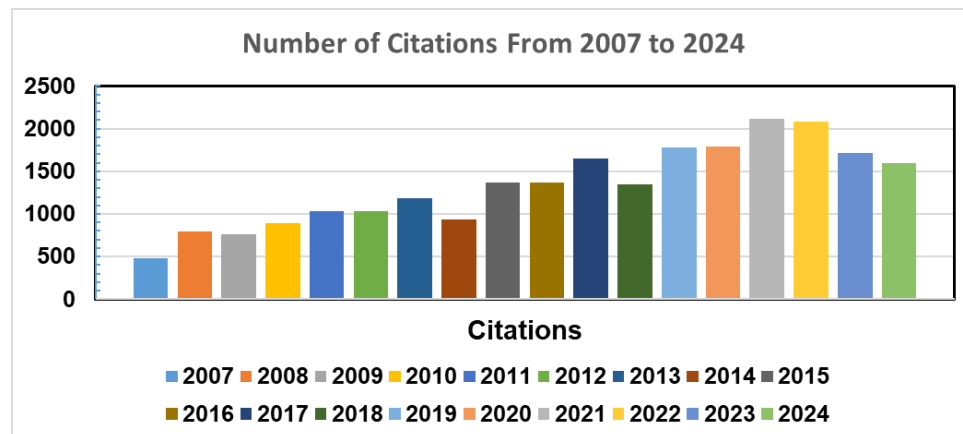
## 8. Publications:

Source: Google Scholar

Sum of Times Cited is 29,702

Average Citations per Article is 26.04

h-Index is 76



Dr. Acree has published more than 499 peer-refereed research papers with graduate and undergraduate student co-

authors. In the list of authors on the following publications the **names of the graduate student are in green font**, **the names of the undergraduate chemistry and biology majors are in red font**, **the names of the undergraduate McNair scholars are in blue font**, **the names of the undergraduate TAMS scholars are in purple font**, **the names of the undergraduate NSF-REU participants are in aqua font**, and **the names of the summer Upward Bound Math and Science high school students are in orange font**. 1047 of Dr. Acree's publications list UNT as his University affiliation. 314 of Dr. Acree's publications are co-authored by graduate students and 341 papers are co-authored by undergraduate and high school students. Graduate and undergraduate students are first authors on 224 and 137 of Dr. Acree's publications, respectively.

### Textbooks, Monographs, or Chapters:

1. "Thermodynamic Properties of Nonelectrolyte Solutions," **W. E. Acree, Jr.**, Academic Press, Inc., Orlando, FL, 1984, 306 pp.
2. "Nonelectrolyte Solutions: Thermodynamics," **W. E. Acree, Jr.**, *The Encyclopedia of Physical Science and Technology* (by Academic Press, Inc.), Vol. 9, 61-78 (1987).
3. "Nonelectrolyte Solutions: Thermodynamics," (Updated), **W. E. Acree, Jr.**, *The Encyclopedia of Physical Science and Technology* (by Academic Press, Inc.), Vol. 11, 1-22 (1992).
4. "Polycyclic Aromatic Hydrocarbons in Pure and Binary Solvent Mixtures," **W. E. Acree, Jr.**, Ed., IUPAC Solubility Data Series, Vol. 54, Oxford University Press, London, 1994, xlv + 337 pp.
5. "Predictive Methods for Solute Solubility in Binary Solvent Mixtures," **W. E. Acree, Jr.**, book chapter in *Current Topics in Solution Chemistry*, Council of Scientific Research Integration, Trivandrum, India, Volume 1, pp 1-30 (1994).
6. "Polycyclic Aromatic Hydrocarbons: Binary Nonaqueous Systems, Part I: Solutes A-E," **W. E. Acree, Jr.**, Ed., IUPAC Solubility Data Series, Vol. 58, Oxford University Press, 1995, xlv + 338 pp.
7. "Polycyclic Aromatic Hydrocarbons: Binary Nonaqueous Systems, Part 2: Solutes F-Z," **W. E. Acree, Jr.**, Ed., IUPAC Solubility Data Series, Vol. 59, Oxford University Press, 1995, xxx + 347 pp.
8. "Solvent-Modulated Fluorescence Behavior and Photophysical Properties of Polycyclic Aromatic Hydrocarbons Dissolved in Fluid Solution," **W. E. Acree, Jr.**, **S. Pandey** and **S. A. Tucker**, book chapter in *Current Topics in Solution Chemistry*, Research Trends, Trivandrum, India, Volume 2, pp. 1-27 (1997).
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### Educational Publications:

1. "Comment on Free Energy and Equilibrium: The Basis of  $\Delta G^\circ = -RT \ln K$  for Reactions in Solution," **W. E. Acree, Jr.**, *J. Chem. Educ.*, **63**, 150 (1986).
2. "Primary and Secondary Inner-Filtering: Effect of  $K_2Cr_2O_7$  on Fluorescence Emission Intensities of Quinine Sulfate," **S. A. Tucker, V. L. Amszi** and **W. E. Acree, Jr.**, *J. Chem. Educ.*, **69**, A8 (1992). **(featured laboratory experiment)**.
3. "Studying Acid-Base Equilibria in Two-Phase Solvent Media: Analyzing Results Using Aqueous Surfactant Solutions with Organic Solvents in the Titration of Analytes with Low Solubilities and Low Dissociation Constants," **S. A. Tucker, V. L. Amszi** and **W. E. Acree, Jr.**, *J. Chem. Educ.*, **70**, 80 (1993); **reprinted in part in Quantitative Chemical Analysis**, 4th Edition, authored by D. C. Harris; W. H. Freeman, New York, NY, 1995, pp. 302-303.
4. "Student Design of an Analytical Laboratory Method: Titrations and Indicator Ranges in Mixed Aqueous-Organic Solvents," **S. A. Tucker** and **W. E. Acree, Jr.**, *J. Chem. Educ.*, **71**, 71 (1994).
5. "Modern Laboratory Experiment for Instrumental Analysis: Analytical Method for Simultaneous Determination of Chloride and Bromide Ions Based Upon Fluorescence Quenching Methods," **S. A. Tucker** and **W. E. Acree, Jr.**, *J. Chem. Educ.*, **72**, A31 (1995). **(featured laboratory experiment)**.
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7. "Quantitative Determination of Cr (III) and Co(II) Using a Spectroscopic H-Point Standard Addition Method," **S. Pandey, J. R. Powell, M. E. R. McHale** and **W. E. Acree, Jr.**, *J. Chem. Educ.*, **74**, 848 (1997).
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10. "Comparison of Analytical Methods: Direct Emission Versus First-Derivative Fluorometric Methods for Quinine Determination in Tonic Waters," S. Pandey, T. L. Borders, C. E. Hernández, L. E. Roy, G. D. Reddy, G. L. Martinez, A. Jackson, G. Brown and W. E. Acree, Jr., *J. Chem. Educ.*, 76, 85 (1999).
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### Conference Proceedings:

1. "Using Spectroscopy Experiments in Laboratory to Facilitate Learning in Chemistry Lecture," A. Wilson, T. W. Stephens and W. E. Acree, Jr., *La Chimica nella Scuola*, XXXIV, 409 (2012). [22<sup>nd</sup> International Conference of Chemistry Education and 11<sup>th</sup> European Conference on Research in Chemical Education]

### Electronic Publications:

1. "Enthalpy of Fusion Database," J. S. Chickos, W. E. Acree, Jr. and J. F. Liebmann, database is contained in NIST Chemistry Webbook, accessible at <http://webbook.nist.gov> (Entered in database in July 2001 – remained in database until December 2018).

### Invited Book Reviews:

1. *Inorganic Chromatographic Analysis* (Book Review), *J. Amer. Chem. Soc.*, 108, 4687 (1986).
2. *Ions in Solution: Basic Principles of Chemical Interactions* (Book Review), *J. Amer. Chem. Soc.*, 111, 5981 (1989).
3. *Chemistry of Nonaqueous Solutions: Current Progress* (Book Review), *J. Amer. Chem. Soc.*, 117, 1672 (1995).
4. *High-Speed Countercurrent Chromatography* (Book Review), *J. Amer. Chem. Soc.*, 119, 1498 (1997).
5. *Introduction to Analytical Gas Chromatography: Second Edition, Revised and Expanded* (Book Review), *J. Amer. Chem. Soc.*, 120, 6849 (1998).
6. *Basic Gas Chromatography* (Book Review), *J. Chem. Educ.*, 75, 1094 (1998).
7. *Liquid Interfaces in Chemistry and Biology* (Book Review), *J. Chem. Educ.*, 75, 1391 (1998).
8. *Basic Principles of Inorganic Chemistry* (Book Review), *J. Chem. Educ.*, 76, 1341 (1999).
9. *Characterization of Compounds in Solution: Theory and Practice* (Book Review), *J. Amer. Chem. Soc.*, 124, 3186 (2002).

### Editorials:

1. "Editorial," W. E. Acree, Jr., R. D. Weir and A. A. H. Padua, *J. Chem. Thermodyn.*, 105, A1 (2017).

2. "Editorial: Pharmaceuticals Solubility is Still Nowadays Widely Studied Everywhere," F. Martínez, A. Jouyban and **W. E. Acree, Jr.**, *Pharm. Sci.* 23, 1 (2017) **(by invitation)**.
3. "Michael H. Abraham and his Developed Parameters: Various Applications in Medicine, Chemistry and Biology," A. Jouyban and **W. E. Acree, Jr.**, *Pharm. Sci.*, 28, 170 (2022) **(by invitation)**.
4. "Introduction to the Michael Abraham Special Issue," **W. E. Acree, Jr.**, *J. Solution Chem.*, 51, 971 (2022) **(Guest Editor for Special Issue)**.
5. "The Impact of Automation on Immunoanalysis Testing," **W. E. Acree, Jr.**, *ImmunoAnalysis*, 3, 12-01 (2023).

### Data Table Publications:

1. "Heat of Fusion of Some Organic Compounds," **W. E. Acree, Jr.**, *Handbook of Chemistry and Physics* (65th Ed.), CRC Press, Inc. pp. C689-693.
2. "Heat Capacity ( $C_p$ ) of Organic Liquids and Vapors at 25 °C," **W. E. Acree, Jr.**, *Handbook of Chemistry and Physics* (66th Ed.) CRC Press, Inc., pp. D174-175.
3. "Excess Volume. Oxolan-2-one + Benzene," **W. E. Acree, Jr.**, K. Gholami, D. R. McHan and J. H. Rytting, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 17, 102 (1989).
4. "Excess Volume. Oxolan-2-one + Toluene," **W. E. Acree, Jr.**, K. Gholami, D. R. McHan and J. H. Rytting, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 17, 103 (1989).
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6. "Heats of Fusion of Some Organic Compounds," **W. E. Acree, Jr.**, *Handbook of Chemistry and Physics* (1st Student Ed.), CRC Press, Inc., pp. C666-670.
7. "Enthalpy of Fusion of Some Organic Compounds," (Updated), **W. E. Acree, Jr.**, *Handbook of Chemistry and Physics* (71th Ed.), CRC Press, Inc., pp. 5:84-91.
8. "Excess Volume. Chlorobenzene + *n*-Heptane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 20, 45 (1992).
9. "Excess Volume. Chlorobenzene + *n*-Octane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 20, 46 (1992).
10. "Excess Volume. Chlorobenzene + 2,2,4-Trimethylpentane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 20, 47 (1992).
11. "Excess Volume. Chlorobenzene + Cyclohexane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 20, 48 (1992).
12. "Excess Volume. Chlorobenzene + Dibutyl Ether," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 20, 49 (1992).
13. "Excess Volume. Dibutyl Ether + *n*-Heptane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A*, 20, 50 (1992).
14. "Excess Volume. Dibutyl Ether + *n*-Octane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data*

*Mixtures, Ser. A, 20, 51 (1992).*

15. "Excess Volume. Dibutyl Ether + 2,2,4-Trimethylpentane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A, 20, 52 (1992).*
16. "Excess Volume. Dibutyl Ether + Cyclohexane," **W. E. Acree, Jr.** and **I.-L. Teng**, *Int. DATA Ser., Sel. Data Mixtures, Ser. A, 20, 53 (1992).*

### Miscellaneous:

1. "New Aspects of Liquid Crystals and Foams in Decontamination," Principal Investigators were **W. E. Acree, Jr.** and G. H. Brown, Technical Report for U. S. Army Contract DAAA15-85-C-0019, 1987.
2. "Correlation and Estimation of Aqueous Solubilities of Substituted Benzenes, Polychlorinated Biphenyls and Polycyclic Aromatic Hydrocarbons," C.-C. Tsai, **W. E. Acree, Jr.**, T. Blair, E. Gifford, L. J. Peterson and S.-T. Liao, *QSAR in Environmental Toxicology-III*, 207-210 (1988).

### 9. Papers Presented:

1. "Thermochemical Investigations of Solubility in Binary Solvent Systems," **W. E. Acree, Jr.**, presented at Missouri Academy of Science, Rolla, Missouri, April, 1976.
2. "Solubility in Binary Solvent Systems. Specific vs. Nonspecific Interactions" **W. E. Acree, Jr.**, and J. H. Rytting, presented at Midwest Regional ACS Meeting, Columbia, Missouri, November, 1981.
3. "Thermodynamic Models for Solubility in Binary Solvent Systems," **W. E. Acree, Jr.**, Academy of Pharmaceutical Sciences, San Antonio, Texas, February, 1985 (**invited symposium speaker**).
4. "Synthesis and Characterization of Nitrones," **J. J. Kirchner** and **W. E. Acree, Jr.**, presented at Central Regional SAACS Meeting, Kent, Ohio, April, 1986.
5. "Solubility of Pyrene in Binary Solvent Mixtures," **C. L. Judy** and **W. E. Acree, Jr.**, presented at Central Regional SAACS Meeting, Kent, Ohio, April, 1986.
6. "Solubility in Binary Solvents: The NIBS vs. Wilson Model," **N. M. Pontikos** and **W. E. Acree, Jr.**, presented at Central Regional SAACS Meeting, Kent, Ohio, April, 1986.
7. "Experimental Artifacts and Determination of Accurate  $\pi$  Values," K. W. Street, Jr., and **W. E. Acree, Jr.**, presented at Central Regional ACS Meeting, Bowling Green, Ohio, June, 1986.
8. "Correlation and Estimation of Aqueous Solubilities of Polycyclic Aromatic Hydrocarbons, Halogenated Benzenes, and Polychlorinated Biphenyls," C.-C. Tsai, **W. E. Acree, Jr.**, R. J. Baker, F. S. Fojas, and L. J. Peterson, presented at 2nd International Workshop on QSAR in Environmental Toxicology, June, 1986.
9. "The  $\pi$  Solvent Polarity Scale: Solvent Mixtures Used in Reversed-Phase Liquid Chromatography," K. W. Street, Jr. and **W. E. Acree, Jr.**, presented at National ACS Meeting, New Orleans, LA, September, 1987.
10. "Solvent Polarity Scales Used in Chromatography," K. W. Street, Jr., **W. E. Acree, Jr.** and C. F. Poole, presented at Pittsburgh Conference & Exposition, New Orleans, LA, February, 1988.
11. "Correlation and Estimation of Aqueous Solubilities of Substituted Benzenes, Polychlorinated Biphenyls,

- and Polycyclic Aromatic Hydrocarbons," C.-C. Tsai, **W. E. Acree, Jr.**, T. Blair, E. Gifford, and L. J. Peterson, presented at 3rd International Workshop on QSAR in Environmental Toxicology, May, 1988.
12. "Application of Polycyclic Aromatic Hydrocarbon (PAH) Solute Probes in Analytical Chemistry," K. W. Street, Jr., **W. E. Acree, Jr.**, R. Waris, **S. A. Tucker** and J. C. Fetzer, presented at Pittsburgh Conference & Exposition, Atlanta, GA, March, 1989.
  13. "PAH Solvent Polarity Probes: General Considerations and Applications," **S. A. Tucker**, R. Waris, K. W. Street, Jr., **W. E. Acree, Jr.**, C. F. Poole, and J. C. Fetzer, presented at National ACS Meeting, Dallas, Texas, April, 1989.
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  15. "Fluorescence Properties-Molecular Structure Correlations for Polycyclic Aromatic Hydrocarbon (PAH) Solute Probes Used in Analytical Chemistry," **S. A. Tucker**, **W. E. Acree, Jr.**, **A. I. Zvaigzne**, K. W. Street, Jr. and J. C. Fetzer, presented at Pittsburgh Conference & Exposition, New York, New York, March, 1990.
  16. "Fluorescence Properties-Molecular Structure Correlations for Polycyclic Aromatic Hydrocarbon (PAH) Solute Probes Used in Analytical Chemistry," **W. E. Acree, Jr.**, presented at Texas Chemistry Forum, Austin, Texas, May, 1990 (**invited symposium speaker**).
  17. "Fluorescence Behavior of Polycyclic Aromatic Hydrocarbon (PAH) Solute Probes," **W. E. Acree, Jr.**, **S. A. Tucker**, **A. I. Zvaigzne** and K. W. Street, Jr., poster presented at Texas Chemistry Forum, Austin, Texas, May, 1990.
  18. "Predicting the Thermochemical Properties of Weakly Associated Multicomponent Solutions," **A. I. Zvaigzne** and **W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Dallas, Texas, April, 1991.
  19. "Thermochemical Investigations of Ternary Nonelectrolyte Associated Solutions," **W. E. Acree, Jr.**, **A. I. Zvaigzne** and **I.-L. Teng**, presented at the 1991 Midwest Thermodynamics Symposium, Osage Beach, Missouri, May, 1991.
  20. "Examination of Selective Quenching Agents and Discriminating Solvents for Identification of Polycyclic Aromatic Compounds," **S. A. Tucker**, **V. L. Amszi**, **W. E. Acree, Jr.** and J. C. Fetzer, presented at Pittsburgh Conference & Exposition, New Orleans, Louisiana, March, 1992.
  21. "Quantitative Structure-Property Relationships for Aqueous Solubilities," T. T. Blair, **W. E. Acree, Jr.**, E. M. Gifford and C.-C. Tsai, presented at 5th International Workshop on QSAR in Environmental Toxicology, July, 1992.
  22. "Selective Quenching of Polycyclic Aromatic Nitrogen Hetero-atom's Fluorescence Emission," **W. E. Acree, Jr.**, **S. A. Tucker** and **V. L. Amzsi**, presented at 48th Southwest Regional ACS Meeting, Lubbock, Texas, October, 1992.
  23. "Polycyclic Aromatic Compounds: A Comprehensive Review," **S. A. Tucker**, **V. L. Amszi** and **W. E. Acree, Jr.**, presented at 48th Southwest Regional ACS Meeting, Lubbock, Texas, October, 1992.
  24. "Polycyclic Aromatic Hydrocarbons: Examination of Solvent Polarity Behavior and Selective Quenching Phenomena via Steady-State Fluorescence," **S. A. Tucker** and **W. E. Acree, Jr.**, Detroit, Michigan, presented at FACSS National Meeting, October, 1993.
  25. "Effect of Solvent Polarity on the Selectivity of Nitromethane for Discriminating Between Alternant

- Versus Nonalternant Polycyclic Aromatic Hydrocarbons," **S. A. Tucker** and **W. E. Acree, Jr.**, presented at FACSS National Meeting, Detroit, Michigan, October, 1993.
26. "Effect of Electron Withdrawing and Electron Donating Substituents on the Photophysical Properties of Polycyclic Aromatic Compounds," **S. A. Tucker**, **J. M. Griffin**, **D. C. Wilkins** and **W. E. Acree, Jr.**, presented at Pittsburgh Conference and Exposition, Chicago, Illinois, March, 1994.
  27. "Unusual Solvent Modulated Fluorescence Emission Behavior of 1-Methylcoronene and 1,2-Dimethylcoronene in Nonelectrolyte Solvents of Varying Polarity," **S. A. Tucker**, **W. E. Acree, Jr.** and J. C. Fetzer, presented at Pittsburgh Conference and Exposition, Chicago, Illinois, March, 1994 (S.A. Tucker invited participant in Graduate Student Poster session).
  28. "Application of Polycyclic Aromatic Hydrocarbon Solute Probes for Examining Preferential Solvation in Binary Solvent Mixtures," **S. A. Tucker** and **W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Fort Worth, Texas, April, 1994.
  29. "The Dissociation Enthalpies of the (N-O) Bonds on Some Pyridine *N*-Oxide Derivatives," **W. E. Acree, Jr.**, **S. A. Tucker**, M. D. M. C. Ribeiro da Silva, M. A. R. Matos, J. M. Goncalves, M. A. V. Ribeiro da Silva and G. Pilcher, poster presented at Thermodynamic Workshop, Warsaw, Poland, August, 1994.
  30. "Polycyclic Aromatic Hydrocarbons as Standards for Spectrofluorometric Wavelength Calibration," **W. E. Acree, Jr.**, **S. A. Tucker**, **J. R. Powell** and J. C. Fetzer, presented at Eastern Analytical Symposium, New Jersey, November, 1994 (**invited symposium speaker**).
  31. "Characterization of and Spectral Behavior of Dual-Fluorescent Solvatochromic Probe Molecules in Micellar Solutions," **J. R. Powell**, **W. E. Acree, Jr.** and **S. A. Tucker**, presented at Pittsburgh Conference and Exposition, New Orleans, Louisiana, March, 1995.
  32. "Comparison of Spectrofluorometric Probe Methods for Determining Preferential Solvation," **S. A. Tucker** and **W. E. Acree, Jr.**, presented at Pittsburgh Conference and Exposition, New Orleans, Louisiana, March, 1995.
  33. "Thermochemical Investigations of Hydrogen-Bonded Solutions," **A. I. Zvaigzne** and **W. E. Acree, Jr.**, presented at National AIChE meeting, Houston, Texas, March, 1995.
  34. "Thermochemical Studies Involving Aromatic C-Nitroso and C-Nitro Compounds," M. D. M. C. Ribeiro da Silva, M. A. R. Matos, **W. E. Acree, Jr.**, **S. A. Tucker**, and G. Pilcher, presented at the International Conference on Thermodynamics, Reading, United Kingdom, April, 1995.
  35. "Thermochemical Studies of Some Quinoxaline Derivatives," M. D. M. C. Ribeiro da Silva, M. A. R. Matos, J. M. Goncalves, **W. E. Acree, Jr.**, **S. A. Tucker** and G. Pilcher, presented at Calorimetry Conference, Gaithersburg, Maryland, July 23-28, 1995.
  36. "Comparison of Spectroscopic Probe Methods for Determining Preferential Solvation Around a Dissolved Fluorophore," **W. E. Acree, Jr.** and **J. R. Powell**, presented at FACSS National Meeting, Cincinnati, Ohio, October, 1995 (**invited symposium speaker**).
  37. "Anionic Micellar Solvents as Exceptions to the Nitromethane Selective Quenching Rule," **S. Pandey**, K. A. Fletcher and **W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Denton, Texas, April, 1996.
  38. "Evaluation of Caro's Acid as a Titrant for Iron (II) Determinations," **J. R. Powell** and **W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Denton, Texas, April, 1996.

39. "Application of Mobile Order Theory to Alcohol + 2-Alkoxyethanol Solvent Mixtures," **M. E. R. McHale**, **A.-S. M. Kauppila** and **W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Denton, Texas, April, 1996.
40. "Energetica da Ligacao N-O em Derivados da Piridina-*N*-Oxide," M. D. M. C. Ribiero da Silva, M. A. R. Matos, M. C. Vaz, **W. E. Acree, Jr.** and **J. R. Powell**, presented at National meeting of the Portuguese Chemical Society, Porto, Portugal, May, 1996.
41. "Energetic Studies of Benzofurazan *N*-Oxide Derivatives: The Dissociation Enthalpies of the N-O Bonds," **W. E. Acree, Jr.**, S. G. Bott, **S. A. Tucker**, M. D. M. C. Ribeiro da Silva, M. A. R. Matos and G. Pilcher, presented at IUPAC Thermodynamics Conference, Japan, August 1996.
42. "Advances in the Estimation of Fusion Entropies and Enthalpies by Group Additivity," J. S. Chickos and **W. E. Acree, Jr.**, presented at National ACS Meeting, Orlando, FL, September, 1996.
43. "Anionic Micellar Solvents as Exceptions to the Nitromethane Selective Quenching Rule," **S. Pandey**, K. A. Fletcher and **W. E. Acree, Jr.**, present at FACSS, Kansas City, Missouri, October, 1996.
44. "Thermochemical Studies of Two Quinoxaline-di-*N*-oxide Derivatives," M. D. M. C. Ribeiro da Silva, M. A. R. Matos, L. M. N. B. F. Santos, **W. E. Acree, Jr.** and G. Pilcher, presented at Fifteenth Experimental Thermodynamics Conference, Surrey, United Kingdom, April, 1997.
45. "Vapor-Liquid Equilibrium for Systems that Contain More than One Alcohol: Comparison of Kretschmer-Wiebe and Mobile Order Models," **W. E. Acree, Jr.** and S. W. Campbell, presented at 13th Symposium on Thermophysical Properties, Boulder, Colorado, June 22-27th, 1997.
46. "The Dissociation Enthalpies of the N-O Bonds in Pyridine-Carboxylic Acid *N*-Oxide Isomers," M. D. M. C. Ribeiro da Silva, M. A. R. Matos, L. M. B. F. Santos, J. C. M. Ribeiro and **W. E. Acree, Jr.**, presented at Jornades Mediterranees de Calorimetria i Anàlisi Termica, Plana de Mallorca, Spain, June 24-28, 1997.
47. "Thermodynamics of Mobile Order Theory," **W. E. Acree, Jr.**, **J. R. Powell**, **M. E. R. McHale**, **A. I. Zvaigzne** and S. W. Campbell, presented at 53rd Southwest Regional ACS Meeting, Tulsa, Oklahoma, October, 1997.
48. "Selective Fluorescence Quenching Agents for Polycyclic Aromatic Hydrocarbon (PAH) Analysis," **S. Pandey** and **W. E. Acree, Jr.**, presented at 53rd Southwest Regional ACS Meeting, Tulsa, Oklahoma, October, 1997.
49. "D(N-O) Bond Dissociation Enthalpies in Substituted Quinoxaline 1,4-Dioxide, Pyridine *N*-Oxide and Benzofurazan *N*-Oxide Derivatives," **W. E. Acree, Jr.**, M. D. M. C. Ribeiro da Silva and G. Pilcher, presented at 53rd Southwest Regional ACS Meeting, Tulsa, Oklahoma, October, 1997.
50. "Mobile Order Theory and the Thermodynamics of Hydrogen Bonding," **C. E. Hernández**, **L. E. Roy** and **W. E. Acree, Jr.**, presented at the 215th National ACS Meeting, Dallas, Texas, April, 1998.
51. "Analytical Method Selection: Comparison of Two Fluorescence Methods for Quinine Determination in Tonic Waters," **L. E. Roy**, **C. E. Hernández**, **S. Pandey** and **W. E. Acree, Jr.**, presented at the 215th National ACS Meeting, Dallas, Texas, April, 1998.
52. "Selective Fluorescence Quenching of Alternant Polycyclic Aromatic Hydrocarbons in Molecularly Organized Solvent Media," **S. Pandey** and **W. E. Acree, Jr.**, presented at the 215th National ACS Meeting, Dallas, Texas, April, 1998.
53. "Mobile Order Theory and the Thermodynamics of Hydrogen Bonding," **C. E. Hernández**, **L. E. Roy** and

- W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Dallas, Texas, April, 1998.
54. "Alkylpyridinium Cations as Selective Fluorescence Quenching Agents for Alternant Versus Nonalternant Polycyclic Aromatic Hydrocarbons," **L. E. Roy**, **S. Pandey** and **W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Dallas, Texas, April, 1998.
  55. "The Dissociation Enthalpies of the N-O Bonds on Pyridine *N*-Oxide Derivatives," M. D. M. C. Ribeiro da Silva, M. A. R. Matos, M. C. Vaz, L. M. N. B. F. Santos, G. Pilcher, **W. E. Acree, Jr.** and **J. R. Powell**, presented at International Symposium on Calorimetry and Chemical Thermodynamics, Campinas, Brazil, April 5-9, 1998.
  56. "Dissociation Enthalpy of the (N-O) Bond in 6-Methoxyquinoline *N*-Oxide," M. D. M. C. Ribeiro da Silva, L. M. N. B. F. Santos, O. O. P. Fernandes and **W. E. Acree, Jr.**, presented at International Conference on Chemical Thermodynamics, Porto, Portugal, July, 1998.
  57. "Development of Spectroscopic Methods for the Determination of Chemicals in Pain Medications," **T. L. Sharp**, **C. E. Hernández**, **L. E. Roy**, **K. M. De Fina** and **W. E. Acree, Jr.**, presented at ACS Southeastern Regional Meeting, Research Triangle, North Carolina, November 6, 1998.
  58. "Enthalpies of Combustion of 2-Iodosobenzoic Acid and of 4-Nitrosophenol: The Dissociation Enthalpy of the (I-O) Bond," M. D. M. C. Ribeiro da Silva, M. A. R. Matos, M. L. C. C. H. Ferrao, L. M. P. F. Amaral, M. S. Miranda, **W. E. Acree, Jr.** and G. Pilcher, presented at the Sixteenth Thermodynamics Conference, London, United Kingdom, April, 1999.
  59. "Estudo Termoquímico e Teórico de Cianopirazinas," M. S. Miranda, M. A. R. Matos, M. D. M. C. Ribeiro da Silva, V. M. F. Morais, and **W. E. Acree, Jr.**, presented at National meeting of the Portuguese Chemical Society, Coimbra, Portugal, October, 1999.
  60. "Estudo Termoquímico de Derivados da 4-Nitrosopirazola," M. D. M. C. Ribeiro da Silva, S. C. C. Ferreira, I. A. P. Rodrigues, L. C. M. da Silva and **W. E. Acree, Jr.**, presented at National meeting of the Portuguese Chemical Society, Coimbra, Portugal, October, 1999.
  61. "Solubilities of Anthracene, Fluoranthene and Pyrene in Organic Solvents. Comparison of Calculated Values Using UNIFAC and Modified UNIFAC (Dortmund) with Experimental Data and Values Using Mobile Order Theory," H. K. Hansen, C. Riverol and **W. E. Acree, Jr.**, presented at 2nd International Conference on Petroleum and Gas Phase Behavior and Fouling, Copenhagen, Denmark, August, 2000.
  62. "Thermochemical and Theoretical Studies of 2,6-Pyridinedicarboxylic Acid and Dimethylpyridine-2,6-dicarboxylate," M. A. R. Matos, M. D. M. C. Ribeiro da Silva, M. C. F. Marques, V. M. F. Morais and **W. E. Acree, Jr.**, presented at 5th Encontro Nacional de Química-Física, Faro, Portugal, September, 2001.
  63. "The Dissociation Enthalpy of the (N-O) Bond in 2-Hydroxypyridine *N*-Oxide: The Influence of the Hydrogen Bond," M. S. Miranda, M. D. M. C. Ribeiro da Silva, M. A. R. Matos, V. M. F. Morais and **W. E. Acree, Jr.**, presented at 5th Mediterranean Conference on Calorimetry and Thermal Analysis, MEDICTA 2001, A Coruna-Galicia, Spain, September, 2001.
  64. "Contribution to the Energetics of the (N-O) Bonds on Benzofurazan-*N*-Oxide Derivatives," M. D. M. C. Ribeiro da Silva, J. C. M. Ribeiro, A. L. R. Silva, M. A. R. Matos and **W. E. Acree, Jr.**, presented at The International Society for Biological Calorimetry, ISBCXII, A Coruna-Galicia, Spain, September, 2001.
  65. "Prediction of Total Phase Change Entropies and Enthalpies of Liquid Crystals by Group Additivity," J. S. Chickos and **W. E. Acree, Jr.**, presented at North American Thermal Analysis Conference, St. Louis, Missouri, October, 2001.

66. "Contribution to the Thermochemical Study of Nitrobenzofurazan Derivatives," M. D. M. C. Ribeiro da Silva, J. M. Goncalves, O. D. F. Santiago and **W. E. Acree, Jr.**, presented at 6th Mediterranean Conference on Calorimetry and Thermal Analysis, MEDICTA 2003, Porto, Portugal, July, 2003.
67. "The Mean Dissociation Enthalpy of the (N-O) Bonds in 2,3-Dimethylquinoxaline 1,4-Dioxide," M. D. M. C. Ribeiro da Silva, J. M. Goncalves, E. A. Sousa, J. R. B. Gomes and **W. E. Acree, Jr.**, presented at 6th Mediterranean Conference on Calorimetry and Thermal Analysis, MEDICTA 2003, Porto, Portugal, July, 2003.
68. "Contribucao Para o Estudo Termoquimico de 4-Nitro-2,1,3-benzotiadiazole," M. D. M. C. Ribeiro da Silva, M. J. Sottomayor, M. A. A. Vieira and **W. E. Acree, Jr.**, presented at National Meeting of Portuguese Chemical Society, Portugal, April 22-24, 2004.
69. "Estudo Calorimetrico de Derivados Alquilados da 4-Nitropiridina *N*-Oxido," E. A. Sousa, **W. E. Acree, Jr.** and M. D. M. C. Ribeiro da Silva, presented at National Meeting of Portuguese Chemical Society, Portugal, April 22-24, 2004.
70. "Modeling the Surface Tension of Mixed Solvents at Various Temperatures," A. Jouyban, A. Fathi Azarbayjani and **W. E. Acree, Jr.**, presented at Iranian Analytical Chemistry meeting, Mashhad, Iran, May 18-20, 2004.
71. "Modeling Acid Dissociation Constant of Analytes in Binary Solvents at Various Temperatures," A. Jouyban, S. Soltani, A. A. Matin and **W. E. Acree, Jr.**, presented at Iranian Analytical Chemistry meeting, Mashhad, Iran, May 18-20, 2004.
72. "Modeling the Density of Binary Solvents at Various Temperatures," A. Jouyban, A. Fathi-Azarbaijani, S. Soltani, S. Varez and **W. E. Acree, Jr.**, presented at 9<sup>th</sup> Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran, 2004.
73. "Modeling the Viscosity of Binary Solvents at Various Temperatures," A. Jouyban, Z. Fekari, A. A. Matin, Z. Vaez and **W. E. Acree, Jr.**, presented at 9<sup>th</sup> Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran, 2004.
74. "Estudo Calorimétrico da 4-Fenilpyridina *N*-Óxido," E. A. Sousa, **W. E. Acree, Jr.** and M. D. M. C. Ribeiro da Silva, presented at Livro de Resumos do 7<sup>o</sup> Encontro Nacional de Química – Física S.P.Q., Comunicação P11, Porto, Portugal, July 2005.
75. "Correlation of Retention Factor of Analytes in Quaternary Solvent Mobile Phases Using Jouyban-Acree Model, A. Jouyban, H. Hanaee, M. R. Rashidi, S. Esnaashari and **W. E. Acree, Jr.**, presented at Malaysian Pharmaceutical Conference 2005, Kuala Lumpur, Malaysia 2005.
76. "Predicting Biologically Important Properties Using Solubilities and the Abraham General Solvation Model," **C. Givens, S. Keown, D. M. Stovall, K. R. Hoover**, W. E. Acree, Jr. and M. H. Abraham, presented at 231<sup>st</sup> ACS National Meeting, Atlanta, Georgia, March 26-30, 2006.
77. "Experimental Thermochemical Study of Two Pyrazine *N,N'*-Dioxide Derivatives," M. D. M. C. Ribeiro da Silva, M. A. A. Vieira and **W. E. Acree, Jr.**, presented at International Symposium on Calorimetry and Chemical Thermodynamics, Campinas, Brazil, April, 2006.
78. "Predictive Methods: Are Experimental Measurements Still Necessary," **W. E. Acree, Jr.**, presented at the IUPAC conference, Boulder, Colorado, July 27-August 4, 2006. (**invited symposium speaker**)
79. The Mean Dissociation Enthalpy of the N-O Bond for 2,2'-Bipyridine *N,N'*-Dioxide," M. D. M. C. Ribeiro da Silva, A. R. Monteiro, J. M. Gonçalves and **W. E. Acree, Jr.**, presented at the IUPAC conference,

Boulder, Colorado, July 27-August 4, 2006.

80. "Energetics of the Pyridinecarboxylic Acid Methyl Ester Isomers," M. D. M. C. Ribeiro da Silva, V. L. S. Freitas and **W. E. Acree, Jr.**, presented at the European Symposium on Thermal Analysis and Calorimetry, Krakow, Poland, August 27-31, 2006.
81. "Prediction of Pyrene Solubility in Non-Aqueous Solvent Mixtures Using Jouyban-Acree Model," A. Jouyban, E. Tamizi and **W. E. Acree, Jr.**, presented at Iranian Pharmaceutical Conference, Tehran, Iran, August, 2006.
82. "Solubility Prediction of Solutes in Non-aqueous Binary Solvents Using a Combination of Jouyban-Acree and Abraham Models," A. Jouyban, S. Soltani and W. E. Acree, Jr., presented at Iranian Pharmaceutical Conference, Tehran, Iran, August, 2006.
83. "Thermochemical Study of Two Dimethylpyrazine-*N,N*-Dioxide Derivatives," M. D. M. C. Ribeiro da Silva, J. I. T. A. Cabral and **W. E. Acree, Jr.**, presented at MEDICTA 2007, Palermo, Italy, September, 2007.
84. "Modeling of the Simultaneous Effects of Mobile Phase Composition and Temperature on the Capacity Factor of Analytes in HPLC Using Jouyban-Acree Model, S. Soltanpour, **W. E. Acree, Jr.** and A. Jouyban, presented at 11<sup>th</sup> Iranian Pharmaceutical Sciences Conference, Kerman, Iran 2008.
85. "Prediction of Drug Solubility in Water-Cosolvent Mixtures by a Combination of the Jouyban-Acree Model and Catalan Parameters," M. A. A. Fakhree, **W. E. Acree, Jr.** and A. Jouyban, presented at 11<sup>th</sup> Iranian Pharmaceutical Sciences Conference, Kerman, Iran 2008.
86. "New Generation Ionic Liquids Characterization by Linear Solvation Energy Models," **L. Sprunger** and **W. E. Acree, Jr.**, presented at ACS Meeting-in-Miniature, Denton, TX, May 2009.
87. "Characterization of New Generation Ionic Liquid Chromatographic Stationary Phases," **L. Sprunger**, **W. E. Acree, Jr.** and M. H. Abraham, presented at 238<sup>th</sup> ACS National Meeting, Washington, DC, Aug. 2009.
88. "Prediction of Diffusion Coefficients for Binary Liquid Systems," A. Jouyban, S. Soltani, M. Mohammadzadeh, S. Tatardar and **W. E. Acree, Jr.**, presented at 16<sup>th</sup> Iranian Seminar of Analytical Chemistry, Harnadan, Iran, 2009.
89. "Modeling of Retention Behavior of Analytes RP-HPLC with Mixed Mobile Phases Using a Combination of Jouyban-Acree and Abraham Parameters," A. Jouyban, S. Soltani, A. Chabra, Z. Bagherzadeh and **W. E. Acree, Jr.**, presented at 16<sup>th</sup> Iranian Seminar of Analytical Chemistry, Harnadan, Iran, 2009.
90. "Thermodynamic Properties of New Generation Ionic liquids," **L. Sprunger**, **W. E. Acree, Jr.** and M. H. Abraham, presented at 239<sup>th</sup> ACS National Meeting, San Francisco, CA, March 2010 (oral presentation in special symposium devoted to ionic liquids).
91. "Modeling of Retention Behavior of Analytes RP-HPLC with Mixed Mobile Phases Using a Combination of Jouyban-Acree and Abraham Parameters," S. Soltani, Z. Baghernezad, A. Chabra, A. Shayanfar, **W. E. Acree, Jr.** and A. Jouyban, presented at 12<sup>th</sup> Iranian Pharmaceutical Sciences Congress, Zanjan, Iran, 2010.
92. "Using Spectroscopy Laboratory Experiments to Facilitate Learning in Chemistry Lecture," **A. Wilson**, **T. W. Stephens** and **W. E. Acree, Jr.**, presented at 22<sup>nd</sup> International Conference of Chemistry Education and 11<sup>th</sup> European Conference on Research in Chemical Education, Rome, Italy, July 2012.
93. "NIST-Journal Cooperation to Improve the Quality of Published Experimental Data: New On-line Tools and IUPAC Recommendations," R. D. Chirico, M. Frenkel, J. W. Magee, V. V. Diky, K. Kroenlein, C. D.

- Muzny, A. F. Kazakov, I. M. Abdulgatatov, G. R. Hardin, T. W. de Loos, J. P. O'Connell, C. M. McCabe, J. F. Brennecke, P. M. Mathias, A. R. H. Goodwin, J. Wu, K. N. Marsh, R. D. Weir, **W. E. Acree, Jr.**, A. Padua, W. M. Haynes, D. G. Friend, A. Mandelis, V. Rives, C. Schick, S. Vyazovkin and E. Chen, presented at 2012 ICCT, Brazil, August 2012.
94. "Leveraging Open Notebook Science for Solubility and Melting Point Predictions for Optimizing Reactions and Recrystallizations," M. J. McBride, J.-C. Bradley, **W. E. Acree, Jr.**, A. Lang and A. Williams, presented at 244<sup>th</sup> ACS National Meeting & Exposition, Philadelphia, PA, August 19-23, 2012.
  95. "Correlations of Solute Partitioning and Enthalpies of Solvation for Organic Solutes in the Ionic Liquids 1-Hexyl-3-methylimidazolium Tetracyanoborate, 1-(2-Methoxyethyl)-1-methylpiperidinium bis(Trifluoromethylsulfonyl)imide and 1-(2-Methoxyethyl)-1-methylpyrrolidinium bis(Trifluoromethylsulfonyl)imide Using a Temperature Independent Free Energy Relationships," **T. W. Stephens**, **B. Willis**, **N. Dabadge**, **A. Tian**, **W. E. Acree, Jr.** and M. H. Abraham, presented at ACS Southwest Regional Meeting, New Orleans, LA, November 2012.
  96. "NIST-Journal Cooperation to Improve the Quality of Published Experimental Data: New On-line Tools and IUPAC Recommendations," R. D. Chirico, M. Frenkel, J. W. Magee, V. V. Diky, K. Kroenlein, C. D. Muzny, A. F. Kazakov, I. M. Abdulgatatov, G. R. Hardin, T. W. de Loos, J. P. O'Connell, C. M. McCabe, J. F. Brennecke, P. M. Mathias, A. R. H. Goodwin, J. Wu, K. N. Marsh, R. D. Weir, **W. E. Acree, Jr.**, A. Padua, W. M. Haynes, D. G. Friend, A. Mandelis, V. Rives, C. Schick, S. Vyazovkin and E. Chen, presented at 245<sup>th</sup> ACS National Meeting & Exposition, New Orleans, LA, April 7-12, 2013.
  97. "Correlations of Solute Partitioning and Enthalpies of Solvation for Organic Solutes in Two Morpholinium Ionic Liquids Using a Temperature Independent Free Energy Relationship," **T. W. Stephens**, **W. E. Acree, Jr.** and M. H. Abraham, presented at 245<sup>th</sup> ACS National Meeting & Exposition, New Orleans, LA, April 7-12, 2013.
  98. "Temperature Independent Cation-Specific and Anion-Specific Abraham Model Coefficients for Predicting the Gas-to-Ionic Liquid Partition Coefficient," **T. W. Stephens**, **W. E. Acree, Jr.** and M. H. Abraham, presented at 245<sup>th</sup> ACS National Meeting & Exposition, New Orleans, LA, April 7-12, 2013.
  99. "Temperature Independent Free Energy Relationships for Three Ionic Liquids Based on the Trifluorotris-(perfluoroethyl)phosphate Anion," **T. W. Stephens**, **W. E. Acree, Jr.**, and M. H. Abraham, presented at 44<sup>th</sup> ACS Western Regional Meeting, Santa Clara, CA, October 3-6, 2013.
  100. "Determination and Correlation of Molar Entropies of Solvation for Three Piperidinium Based Ionic Liquids with the Abraham Model," **T. W. Stephens** and **W. E. Acree, Jr.**, presented at ACS Southwest Regional Meeting, Waco, TX, November 16-19, 2013.
  101. "Correlations of Solute Partitioning for Organic Solutes in Two Ionic Liquids Based on the 1-(2-Methoxyethyl)-1-methylpiperidinium Cation Using a Temperature Independent Free Energy Relationship Based on the Abraham Solvation Model," **T. W. Stephens**, **W. E. Acree, Jr.** and M. H. Abraham, presented at 247<sup>th</sup> ACS National Meeting & Exposition, Dallas, TX, March 16-20, 2014.
  102. "Determination of Gas-to-Ionic Liquid Partition Coefficients for Ionic Liquids Using Two Temperature Independent Group Contribution Methods," **T. W. Stephens**, **W. E. Acree, Jr.** and M. H. Abraham, presented at 247<sup>th</sup> ACS National Meeting & Exposition, Dallas, TX, March 16-20, 2014.
  103. "Shaken not Stirred. Y'All: A Comparison of Select Texas Vodkas," **T. W. Stephens**, D. Mason, **R. L. Ford**, A. George and **W. E. Acree, Jr.**, presented at 247<sup>th</sup> ACS National Meeting & Exposition, Dallas, TX, March 16-20, 2014.
  104. "Analyzing Solubility Descriptors Using the Abraham Solvation Parameter Model," **J. A. Reyes** and **W. E.**

- Acree, Jr.**, presented at 247<sup>th</sup> ACS National Meeting & Exposition, Dallas, TX, March 16-20, 2014.
105. “NIST-Journal Cooperation: Pre-Acceptance Evaluation and On-line Tools to Improve the Quality of Published Experimental Data,” R. D. Chirico, M. Frenkel, J. W. Magee, V. V. Diky, K. Kroenlein, C. D. Muzny, A. F. Kazakov, I. M. Abdulagatov, G. R. Hardin, T. W. De Loos, J. P. O’Connell, C. McCabe, J. F. Brennecke, P. M. Mathias, A. R. H. Goodwin, J. Wu, K. N. Marsh, R. D. Weir, **W. E. Acree, Jr.**, A. Pádua, W. M. Haynes, D. G. Friend, A. Mandelis, V. Rives, C. Schick, S. Vyazovkin and E. Chen, presented at the International Conference on Chemical Thermodynamics, Durban, South Africa, July 27-Aug. 1, 2014.
  106. “Models to Evaluate Experimental Solubility Data for Crystalline Nonelectrolyte Solutes in Organic Mono-solvents and Solvent Mixtures,” **W. E. Acree, Jr.**, presented at 248<sup>th</sup> ACS National Meeting & Exposition, San Francisco, CA, August 10-14, 2014 (invited symposium speaker).
  107. “Thermodynamic Properties of Organic Solutes Dissolved in 1,2,3-*tris*(Dimethylamino)cycloproenylium and Alkylquinuclidinium Based Ionic Liquids,” L. Cesari, F. Mutelet and **W. E. Acree, Jr.**, presented at APCIL Congress, HanZhou, China, October 2016.
  108. “Solubility of Sorbic Acid in Organic Mono-solvents: Calculation of Abraham Model Solute Descriptors from Measured Solubility Data,” **M. Barrera** and **W. E. Acree, Jr.**, presented at ACS Regional Meeting-in-Miniature, Dallas, Texas, April, 2017.
  109. “Solubility of Sorbic Acid in Organic Mono-solvents: Calculation of Abraham Model Solute Descriptors from Measured Solubility Data,” **M. Barrera** and **W. E. Acree, Jr.**, presented at McNair Conference at the University of California, Berkley, California, July, 2017.
  110. “Predicting Drug Separations for Ionic Liquid Phases Using an Intelligent Decision Tree & the Abraham Model,” **K. Smart**, W. E. Acree, Jr. and T. D. Golden, presented at Southwestern Association of Toxicologists (SA) Fall Meeting, Dallas, Texas, November 2018.
  111. “Fostering Outstanding Cohorts in Undergraduate Science: A Ten-Year Retrospective,” L. E. Hughes, **W. Acree**, S. Gao, D. Mason, P. Padilla and U. Philipose, to be presented at Gordon Research Conference on Undergraduate Biology Education Research, Lewiston, Maine, June 23-28, 2019.
  112. “Modelling Nonelectrostatic Solute-Solvent Interactions in Continuum Embedding,” C. Hille, S. Ringe, J. Filser, M. Deimel, C. Kunkel, **W. E. Acree**, K. U. Reuter and H. Oberhofer, presented at 258<sup>th</sup> ACS National Meeting & Exposition, San Diego, California, August 25-29, 2019.
  113. “Development of Abraham Model Correlations for an Analytically Important Extraction Solvent MIBK,” **W. E. Acree, Jr.**, **E. Garcia** and **K. Smart**, accepted for presentation at 259<sup>th</sup> ACS National Meeting & Exposition, Philadelphia, Pennsylvania, March 22-26, 2020. (ACS meeting cancelled due to COVID 19).
  114. “Development of Abraham Model Expressions for Predicting the Standard Molar Enthalpies of Vaporization of Organic Compounds at 298.15 K,” **B. N. Churchill** and W. E. Acree, Jr., presented at 260<sup>th</sup> ACS National Meeting & Exposition, virtual, Aug. 17-30, 2020.
  115. “Estimation of Chemical Toxicity due to Fentanyl Compounds,” **K. Smart**, T. D. Golden and **W. E. Acree**, presented at 73rd AAFS Meeting, Virtual, February 2021.
  116. “Novel GLC-based Methods for Isomeric Fentanyl Analogs,” **K. Smart**, D. Golden, G. Verbeck and **W. E. Acree, Jr.**, presented at Pittsburgh Conference & Exposition, virtual meeting, March 8, 2021.
  117. “Separation of Fentanyl Analogues Using GLC-based Methods with Ionic Liquids,” **K. Smart**, **K. Reyes**, **W. E. Acree, Jr.**, G. F. Verbeck, IV and T. D. Golden, presented at Pittsburgh Conference & Exposition,

March 9, 2022.

118. "Gas Chromatographic Separation of Fentanyl Analogues with an Ionic Phase," **K. Smart**, **K. Reyes**, **W. Acree, Jr.**, G. F. Verbeck and T. D. Golden, presented at 54<sup>th</sup> ACS Regional Meeting-in-Miniature, Dallas, Texas, April, 2022.
119. "Determination of Abraham Model Solute Descriptors for Hippuric Acid from Measured Molar Solubilities in Several Organic Mono-Solvents of Varying Polarity and Hydrogen-Bonding Ability," **S. Sinha**, **A. Varadharajan** and **W. E. Acree, Jr.**, presented at 264<sup>th</sup> ACS National Meeting & Exposition, Chicago, Illinois, August, 2022.
120. "Updated Abraham Model Correlations for Describing Solute Transfer into Both 2-Pentanol and 3-Methyl-1-butanol Based on Much Larger Data Sets," **C. Webber** and **W. E. Acree, Jr.**, presented at 267<sup>th</sup> ACS National Meeting & Exposition, New Orleans, Louisiana, March 18, 2024.
121. "Determination of Thermodynamic Parameters of Fentanyl-Like Compounds Using Chromatography: A Preliminary Study," **A. Silva**, **K. Smart**, **W. E. Acree, Jr.** and **T. D. Golden**, presented at SACNAS NDiSTEM Conference, Phoenix, Arizona, October 2024. (poster).

## 10. Seminars Presented:

1. "Thermochemical Investigations of Gas-Liquid Chromatography," seminar presented at Louisiana State University, April, 1984.
2. "Thermodynamic Aspects of Gas-Liquid Chromatography," presented at Clarkson College of Technology, October, 1984.
3. "Thermodynamic Aspects of Gas-Liquid Chromatography," presented at Memphis State University, March, 1985.
4. "Thermochemical Aspects of Gas-Liquid Chromatography," presented at University of Texas at San Antonio, March, 1985.
5. "Solubilization Predictions and Coatings Applications," 3-hour seminar in Surface Coatings II at Kent State University, November, 1986.
6. "Applications of Liquid Crystals in Chemistry," presented at Ashland College, February, 1987.
7. "Applications of Liquid Crystals in Chemistry," presented at Thiel College, December, 1987.
8. "Thermochemical Investigations of Associated Solutions," presented at University of Missouri-St.Louis, January, 1988.
9. "Thermochemical Investigations of Gas-Liquid Chromatography," presented at North Texas State University, March, 1988.
10. "Thermochemical Investigations of Associated Solutions," presented at University of Toledo, March, 1988.
11. "Thermochemical Investigations of Associated Solutions," presented at University of Missouri-Rolla, April, 1990.
12. "Thermochemical Investigations of Associated Solutions," presented at Texas Women's University, October, 1990.

13. "Physicochemical Solution Model for Describing Thermodynamic Properties of Associated Solutions," presented at East Texas State University, April, 1993.
14. "Spectrofluorometric Probe Methods for Studying Molecular Interactions in Fluid Solution," presented at the Toledo Section of the Society for Applied Spectroscopy meeting, March, 1994.
15. "Spectrofluorometric Probe Methods for Studying Molecular Interactions in Fluid Solution," presented at the Cincinnati Section of the Society for Applied Spectroscopy meeting, March, 1994.
16. "Photophysical Properties of Polycyclic Aromatic Hydrocarbons," presented at Wichita State University, April, 1994.
17. "Thermodynamic Models for Hydrogen-Bonding Systems," presented at Texas Women's University, February, 1995.
18. "Spectrofluorometric Probe Methods for Studying Molecular Interactions in Fluid Solution," presented at Oklahoma State University, April, 1995.
19. "Thermodynamics of Mobile Order Theory," presented at University of South Florida, April, 1997.
20. "Thermodynamic Modeling of Hydrogen-Bonded Solutions: Comparison of Various Models," presented at University of Missouri-St. Louis, March, 1999.
21. "Linear Free Energy Relationships for Chemical, Physical and Biological Processes," presented at New Mexico Tech University, October, 2003.
22. "Applications Involving and Predictions of Phase Transition Enthalpies," presented at St. Louis Sectional ACS Award Symposium Honoring James S. Chickos, April, 2006.
23. "Linear Free Energy Relationships for Chemical, Physical and Biological Processes," presented at Oklahoma State University, April, 2006.
24. "Linear Free Energy Relationships for Chemical, Physical and Biological Processes," presented at Texas Women's University, October, 2014.
25. "Linear Free Energy Relationships for Chemical, Physical and Biological Processes," presented at Texas A & M University at Kingsville, June, 2016.
26. "Linear Free Energy Relationships for Chemical, Physical and Biological Processes," presented at Texas A & M University at San Antonio, July, 2016.
27. "Spectroscopic and Thermodynamic Studies of Organic Compounds and Solutions," presented at Missouri University of Science and Technology, March, 2017.

#### **11. B.S. Honors and Masters Thesis, and Doctoral Dissertations Directed:**

1. "Solubility of Pyrene in Binary Solvent Mixtures," C. L. Judy, B.S. Honors Thesis, 1986.
2. "Thermochemical Investigations of Gas-Liquid Chromatography: Retention Behavior of Solutes on Binary Liquid-Crystalline Solvent Mixtures," C. A. Rouse, Ph.D. Dissertation, 1986.
3. "Thermodynamic and Empirical Methods for Predicting Solubility in Binary Solvents," A. D. Procyk, B.S.

Honors Thesis, 1987.

4. "Thermochemical Investigations of Associated Solutions," J. W. McCargar, Ph.D. Dissertation, 1988. Jim received Kent State University's local Sigma Xi section's award for the outstanding doctoral dissertation in 1988.
5. "Polycyclic Aromatic Hydrocarbons and Polycyclic Aromatic Sulfur Heterocycles: Solubility and Spectroscopic Studies," S. A. Tucker, B.S. Honors Thesis, 1990.
6. "Thermochemical Investigation of Ternary Nonelectrolyte Solutions," I.-Lih Teng, M.S. Thesis, 1992.
7. "Spectroscopic Properties of Polycyclic Aromatic Compounds," S. A. Tucker, Ph.D. Dissertation, 1994. (Sheryl received the UNT Chemistry Departmental 1994 James and Ruth Spurlock award for outstanding graduate student research work.)
8. "Spectrofluorometric Probe for Examining Preferential Solvation in Binary Mixtures," D. C. Wilkins, M.S. Thesis, 1994.
9. "Spectrofluorometric and Solubility Studies of Polycyclic Aromatic Hydrocarbons in Hydrogen Bonded Binary Solvent Mixtures," J. R. Powell, Ph.D. Dissertation, 1997.
10. "Chemical Equilibria in Binary Solvent Mixtures," M. E. R. McHale, Ph.D. Dissertation, 1997.
11. "Mobile Order Theory as Applied to Polycyclic Aromatic Heterocycles," K. A. Fletcher, M.S. Thesis, 1997.
12. "A Quenchofluorometric Study of Polycyclic Aromatic Hydrocarbons in Molecularly Organized Media," S. Pandey, Ph.D. Dissertation, 1998. (Sid received the UNT Chemistry Departmental 1997 James and Ruth Spurlock award for outstanding graduate student research work.)
13. "Polycyclic Aromatic Hydrocarbons: Spectrofluorometric Quenching and Solubility Behavior," L. E. Roy, B.S. Honors Thesis, 1999.
14. "Thermodynamic Properties of Nonelectrolyte Solutes in Ternary Solvent Mixtures," T. Deng, Ph.D. Dissertation, 1999.
15. "Thermochemical Study of Crystalline Solutes Dissolved in Ternary Hydrogen-Bonding Solvent Mixtures," K. J. Pribyla, Ph.D. Dissertation, 2001.
16. "Thermodynamics of Mobile Order Theory: Solubility and Partition Aspects," K. M. De Fina, M. S. Thesis, 2004.
17. "Thermodynamics of the Abraham General Solvation Model: Solubility and Partition Aspects," D. M. Stovall, M. S. Thesis, 2006.
18. "Predicting Aquatic Toxicities Using the Abraham General Solvation Model," K. R. Bowen, B.S. Biology Honors Thesis, 2006.
19. "Thermochemical Investigations of Crystalline Solutes in Non-electrolyte Solutions: Mathematical Representation of Solubility Data and the Development of Predictive Solubility Equations in Systems with Specific and Non-specific Interactions," A. I. Zvaigzne, Ph.D. Dissertation, 2008.
20. "Predicting Chemical and Biochemical Properties Using the Abraham General Solvation Model," C. Mintz, Ph.D. Dissertation, 2009.

21. "Salicylamide: Toxicity Correlations and Solubility Studies," B. Blake, B. S. Honors Thesis, 2010.
22. "Characterization of Novel Solvents and Absorbents for Chemical Separations," L. M. Grubbs, Ph.D. Dissertation, 2011.
23. "Characterization of Ionic Liquid Solvents using a Temperature Independent, Ion Specific Abraham Parameter Model," T. W. Stephens, Ph.D. Dissertation, 2014.
24. "Characterization of Aprotic Solutes and Solvents Using Abraham Model Correlations," M. Brumfield, M.S. Thesis, 2016.
25. "Using the Abraham Solvation Parameter Model to Predict Solute Transfer into Various Mono- and Multi-Functional Organic Solvents, E. F. Hart, Ph.D. Dissertation, 2018.
26. "Teaching First-Semester General Chemistry Using 3D Video Games Following an Atoms First Approach to Chemistry," D. Jenkins, Ph.D. Dissertation, (co-directed with Dr. D. Mason) 2018.
27. "Allowing Students to Have VOICES (Voluntary Options in Chemistry Education Schedules) in General Chemistry I," R. Ford, Ph.D. Dissertation (co-directed with Dr. D. Mason), 2018.
28. "The Abraham Solvation Model Used for Prediction of Solvent-Solute Interactions and New Methods for Updating Parameters," B. N. Churchill, Ph.D. Dissertation, 2021.
29. "Investigation of Ionic Liquids for Chromatographic Separation of Fentanyl Analogues," K. Smart, Ph.D. dissertation, (co-directed with Drs. T. Golden and G. Verbeck) 2022.

Non-Thesis Masters Students Directed:

1. Vicki L. Amszi (Fall, 1992; co-author of 4 publications, left school with a non-thesis masters degree after her mobile home was destroyed by fire).
2. Anastasia Wilson (Summer 2015; co-author of 10 publications; graduated with a Masters of Science in Industrial Chemistry).

## 12. Student Co-Authors and Student Mentees:

### 26 Graduate Students:

|                  |            |                         |            |
|------------------|------------|-------------------------|------------|
| Joyce Powell     | 40 papers  | Mary McHale             | 35 papers  |
| Siddarth Pandey  | 32 papers  | Tammy Borders           | 5 papers   |
| Sheryl Tucker    | 53 papers* | Laura Grubbs (Sprunger) | 41 papers  |
| Christine Rouse  | 2 papers   | James McCargar          | 9 papers   |
| Janet Byrd       | 1 paper    | Anita Zvaigzne          | 33 papers  |
| I.-Lih Teng      | 6 papers   | Denise Wilkins          | 5 papers   |
| Taihe Deng       | 14 papers  | Karen Pribyla           | 10 papers  |
| Michelle Stovall | 12 papers  | Christina Mintz         | 16 papers  |
| Kathleen Holley  | 2 papers   | Kristin Fletcher        | 12 papers  |
| Timothy Stephens | 24 papers  | Anastasia Wilson        | 10 papers  |
| Erin Hart        | 21 papers  | Michela Brumfield       | 9 papers   |
| Vicki Amszi      | 4 papers   | Katherine Smart         | 6 papers   |
| David Jenkins    | Co-advisor | Robyn Ford              | Co-advisor |

Brittani Churchill

10 papers

Chelsi Wilson

2 papers

\*Students whose names appear in a colored font worked in Dr. Acree's laboratory as both a graduate and an undergraduate student, or as both an undergraduate student and UBMS highschool student. The number of publications given for the student indicate the co-authored publications that the student obtained under the given academic classification heading. For example, Sheryl Tucker co-authored 53 papers as a graduate student and an additional 21 papers as an undergraduate chemistry major.

### **70 Undergraduate Chemistry and Biology Majors:**

|                         |                 |                      |                  |
|-------------------------|-----------------|----------------------|------------------|
| Cheryl Judy             | 4 papers        | Nicholas Pontikos    | 3 papers         |
| James Kirchner          | 3 papers        | Brian Donelan        | 1 paper          |
| Lisa Peterson           | 1 paper         | Mary Marthandan      | 1 paper          |
| Margaret Bissell        | 2 papers        | Charles Chittick     | 1 paper          |
| Alexander Procyk        | 2 papers        | Bridget Oswalt       | 2 papers         |
| Michael Rembert         | 2 papers        | David Sellers        | 2 papers         |
| Debra Murrall           | 2 papers        | Jordana Wallach      | 1 paper          |
| Lisa Cretalla           | 4 papers        | Julie Halmi          | 1 paper          |
| Hardjanti Darmodjo      | 2 papers        | Heather Bates        | 3 papers         |
| Brian Miller            | 3 papers        | Ann-Sofi Kaupila     | 19 papers        |
| Lindsay Roy             | 29 papers       | Stacy Payne          | 1 paper          |
| Jessica Sanders         | 3 papers        | Michael Tuggle       | 2 papers         |
| Satoru Horiuchi         | 2 papers        | Sabrina Childress    | 5 papers         |
| Karina DeFina           | 24 papers       | <b>Sheryl Tucker</b> | <b>21 papers</b> |
| Tiffany Van             | 6 papers        | Christopher Ezell    | 3 papers         |
| Angel Toro              | 2 papers        | Ebun Debase          | 3 papers         |
| <b>Michelle Stovall</b> | <b>2 papers</b> | Casandra Monarrez    | 6 papers         |
| Jee Woo                 | 4 papers        | Rodrick Coaxum       | 4 papers         |
| Eric Pustejovsky        | 7 papers        | Krisztina Pop        | 2 papers         |
| Rebekah Moreno          | 1 paper         | Brooke Blake-Taylor  | 6 papers         |
| Rhiannon Wold           | 5 papers        | Vallerie DeLeon      | 1 paper          |
| Beth Martine            | 3 papers        | Noehli De La Rosa    | 6 papers         |
| Hali Hensley            | 1 paper         | Malcolm Zimmerman    | 1 paper          |
| Angeline Wairegi        | 1 paper         | <b>Erin Hart</b>     | <b>2 papers</b>  |
| Lila Pipersburgh        | 1 paper         | Katherine Mateja     | 1 paper          |
| Grace Little            | 2 papers        | Hunter Singleton     | 2 papers         |
| Ashley Ramirez          | 3 papers        | Alex Klein           | 3 papers         |
| Megan Jodray            | 7 papers        | Karen Rodriguez      | 2 papers         |
| Rachel Fischer          | 5 papers        | Erin Connolly        | 2 papers         |
| Sara Strickland         | 1 paper         | Libby Ocon           | 2 papers         |
| Blessing Oloyede        | 1 paper         | Theresa Casillas     | 2 papers         |
| Alyssa Daniel           | 2 papers        | Kylie Wilder         | 1 paper          |
| Laine Longacre          | 4 papers        | Darla Benavides      | 2 papers         |
| Francis Jilawan         | 2 papers        | Adam Witterstaetter  | 2 papers         |
| Gabriel Perez           | 2 papers        | Carrie Prewitt       | 1 paper          |

### **82 Undergraduate TAMS Students:**

|                         |           |                       |           |
|-------------------------|-----------|-----------------------|-----------|
| Jason Griffin           | 6 papers  | Gaddum Reddy          | 6 papers  |
| Michael Spurgin         | 6 papers  | Karen Coym            | 14 papers |
| Priscilla Taylor        | 6 papers  | Ahn Tran              | 4 papers  |
| Katherine Burton        | 9 papers  | Amy Proctor           | 8 papers  |
| Sai Achi                | 8 papers  | Shulin Ye             | 8 papers  |
| Mariam Saifullah        | 9 papers  | Amanda Quay           | 8 papers  |
| Vicky Chou              | 8 papers  | Nishu Dabadge         | 6 papers  |
| Connie Shen             | 3 papers  | Amy Tian              | 7 papers  |
| Helen Lu                | 2 papers  | Kalpana Satish        | 2 papers  |
| Danyang Shan            | 2 papers  | Napasorn Kuprasertkul | 4 papers  |
| Sumedha Mehta           | 4 papers  | Akash Wadawadigi      | 4 papers  |
| Damini Grover           | 10 papers | Heidi Zettl           | 9 papers  |
| Shoshana Zhang          | 8 papers  | Colleen Dai           | 8 papers  |
| Victoria Koshevarova    | 6 papers  | Minaz Zad             | 3 papers  |
| Bihan Jiang             | 7 papers  | Amber Lu              | 2 papers  |
| Elizabeth Higgins       | 6 papers  | Sarah Cheeran         | 6 papers  |
| Melissa Horton          | 8 papers  | Anisha Wadawadigi     | 7 papers  |
| Olivia Zha              | 8 paper   | Xin Tong              | 5 papers  |
| Delani Woods            | 5 papers  | Ellen Qian            | 13 papers |
| Jonathan Lu             | 3 papers  | Yuqing Liu            | 4 papers  |
| Grace Lee               | 8 papers  | Melanie Che           | 7 papers  |
| Lainey Wang             | 6 papers  | David Yue             | 7 papers  |
| Avi Gupta               | 6 papers  | Reese Neal            | 4 papers  |
| Shang Wang              | 6 papers  | Kelly Liu             | 6 papers  |
| Alex Zhang              | 6 papers  | Siqi Zhu              | 4 papers  |
| Jingyi Dai              | 5 papers  | Shrika Eddula         | 11 papers |
| Carina Jiang            | 7 papers  | Grace Liu             | 5 papers  |
| Priya Tirumala          | 6 papers  | Jennifer Huang        | 7 papers  |
| Angelina Xu             | 11 papers | Kelly Kim             | 7 papers  |
| Evonne Huang            | 5 papers  | Sophia Cai            | 4 papers  |
| Neel Shanmugam          | 10 papers | Pravani Garlapati     | 1 paper   |
| Advika Varadharajan     | 12 papers | Sneha Sinha           | 7 papers  |
| Emily Wu                | 6 papers  | Miles Zhang           | 3 papers  |
| Chelsea Yang            | 4 papers  | Emily Yao             | 9 papers  |
| Nikita Shanmugam        | 6 papers  | Shuhan Wu             | 2 papers  |
| Amy Zhou                | 5 papers  | Ramya Motati          | 10 papers |
| Saikiran Motati         | 8 papers  | Trisha Kandi          | 6 papers  |
| Jocelyn Chen            | 6 papers  | Audrey Chen           | 6 papers  |
| Dhishithaa Kumarandurai | 3 papers  | Yixuan Yang           | 1 paper   |
| Bradley Lin             | 3 papers  | Allison Kabin         | 2 papers  |
| Sri Kowatha             | 2 papers  | Nitya Bhupathi Raju   | 2 papers  |

### **92 Upward Bound Math and Science (Summer High School Student Program):**

|               |          |                 |          |
|---------------|----------|-----------------|----------|
| Bradley Smith | 2 papers | Brad McKethan   | 1 paper  |
| Robin Barnes  | 1 paper  | Yvonne Cordero  | 2 papers |
| Abigail Rubio | 1 paper  | Cheridan Harris | 1 paper  |

|                       |          |                     |          |
|-----------------------|----------|---------------------|----------|
| Erika Martinez        | 1 paper  | Michelle Sanchez    | 1 paper  |
| Jose Lozano           | 1 paper  | Jennifer Trejo      | 1 paper  |
| Dusty Wright          | 1 paper  | Minh Nguyen         | 1 paper  |
| Joshua Wolfe          | 1 paper  | Andres Ibarra       | 1 paper  |
| Oscar Garza           | 1 paper  | Diana Voisinet      | 2 papers |
| Eboney Hamilton       | 1 paper  | Akiko Hizon         | 1 paper  |
| Andres Salazar        | 2 papers | Josh Martinez       | 1 paper  |
| Tishna Soto           | 1 paper  | Pablo Otero         | 2 papers |
| Alison Valdez         | 1 paper  | Nicole Vellegas     | 1 paper  |
| Melani Jayasekera     | 2 papers | Tatina Chee         | 1 paper  |
| Miranda Carrillo      | 2 papers | Sandra Padilla      | 3 papers |
| Alena Delacruz        | 1 paper  | Monica Corella      | 2 papers |
| Ashante Trufant       | 3 papers | Kim Theeuwes        | 1 paper  |
| Anna Blanco           | 1 paper  | Noe De La Sancha    | 3 papers |
| Stephanie Fishback    | 1 paper  | Ruth Cano           | 1 paper  |
| Ernesto Vela          | 3 papers | Sarah Duenas        | 1 paper  |
| Lisset Alcarzar       | 1 paper  | Geo Martinez        | 4 papers |
| Nancy Kuehn           | 1 paper  | Leigh Fisher        | 1 paper  |
| Amy Parker            | 1 paper  | Jessica Pacheco     | 1 paper  |
| Mason Nau             | 1 paper  | Autumn Jackson      | 4 papers |
| Sarah Abernathy       | 1 paper  | Lizette Sidransky   | 1 paper  |
| Guenevere Brown       | 4 papers | Karen Alexander     | 1 paper  |
| Priscilla Acosta      | 1 paper  | Ashley Furman       | 2 papers |
| Comfort Olugbuyi      | 1 paper  | Izamar Flores       | 1 paper  |
| Adam Bilbrey          | 2 papers | Araina Vance        | 1 paper  |
| David Mejorado        | 1 paper  | Jermica Love        | 2 papers |
| Derek Casares         | 1 paper  | Monica Calderas     | 1 paper  |
| Jacob Garza           | 2 papers | Ramie Hall          | 1 paper  |
| Ricardo Diaz          | 1 paper  | Jose Ruiz           | 1 paper  |
| Nicholas Montney      | 1 paper  | Amber Frizzelle     | 1 paper  |
| Kimberle Wolcott      | 2 papers | Megan Payne         | 1 paper  |
| Maribel Barrera       | 2 papers | Erika Sanchez       | 1 paper  |
| Troy Sanchez          | 1 paper  | Michael Garcia      | 1 paper  |
| Jackie Calzada        | 1 paper  | Bailey Bates        | 1 paper  |
| Justice Abban-Manesah | 1 paper  | Jennifer De La Rosa | 2 papers |
| Logan Kennemer        | 1 paper  | Jocelin Meza        | 1 paper  |
| Sarah Dunn            | 1 paper  | Janna Herron        | 1 paper  |
| Ketsia Kankolongo     | 1 paper  | Shy'an Ryan         | 1 paper  |
| Alfredo Sanchez       | 1 paper  | Ashley Pugh         | 1 paper  |
| Valeria Portillo      | 1 paper  | Donavyn Calhoon     | 1 paper  |
| Kyle Gillispie        | 1 paper  | Febronia Khalil     | 1 paper  |
| Randall Williams      | 1 paper  | Tiffany Mayes       | 1 paper  |
| Samantha Downs        | 1 paper  | Olivia Rose         | 1 paper  |

### **5 Undergraduate McNair Scholars:**

|                  |           |            |           |
|------------------|-----------|------------|-----------|
| Carmen Hernandez | 29 papers | Tina Sharp | 12 papers |
|------------------|-----------|------------|-----------|

|                 |          |                                |           |
|-----------------|----------|--------------------------------|-----------|
| Ivette Chuca    | 7 papers | Kaci Hoover (later Kaci Bowen) | 19 papers |
| Maribel Barrera | 8 papers |                                |           |

### **15 Summer REU Students:**

|                  |          |                        |                  |
|------------------|----------|------------------------|------------------|
| Amanda Charlton  | 8 papers | Charlisa Daniels       | 8 papers         |
| Chelsea Givens   | 4 papers | Stephanie Keown        | 4 papers         |
| Kelli Flanagan   | 6 papers | Tara Ladlie            | 4 papers         |
| Jennifer Gibbs   | 8 papers | McCoy McMillan-Wiggins | 2 papers         |
| Racheal Pointer  | 3 papers | Matthew Loera          | 4 papers         |
| Bria Willis      | 3 papers | Jesus Reyes            | ACS Presentation |
| Amber Schmidt    | 5 papers | Estefania Garcia       | 3 papers         |
| Catherine Webber | 2 papers |                        |                  |

## **13. Grantsmanship:**

### **Funded research proposals and grant applications:**

1. "New Aspects of Liquid Crystals and Foams in Decontamination," (with G. H. Brown), to US Army, 6/1/85, \$55,954.
2. "Novel Solubility Method for Determining Thermodynamic Properties of Nonelectrolyte Solid Solutions," to Petroleum Research Fund (ACS), 9/1/85, \$15,000.
3. "Aqueous Solubilities of Organic Pollutants and Related Compounds," (with C.-C. Tsai), to EPA, 9/18/86, \$184,200.
4. "Remote Sensing and Decontamination of Chemical Agents," (with K. W. Street), to DoD, 2/15/87, \$60,000.
5. "Novel Solubility Method for Determining Thermodynamic Properties of Nonelectrolyte Solid Solutions," to Petroleum Research Fund (ACS, Type SRF), 5/1/87, \$2,000.
6. "Polycyclic Aromatic Hydrocarbon Solute Probes," to Chevron Research Co., 1/1/87 - present, \$30,000 (market value of donated PAH solute probes).
7. "Polycyclic Aromatic Nitrogen Heterocycle Solute Probes," to SRI International, 1/1/90 - present, \$6,000 (market value of donated PANH solute probes).
8. "Thermodynamic Properties of Ternary Nonelectrolyte Solutions," to NSF, 9/89, \$164,617.
9. "Stability Testing of Caro's Acid," to Texas Instruments, 4/1/94 – 4/1/97, \$8,000.
10. "Novel GLC-based Method for Identification of Positional Isomeric Fentanyl," (Research Assistantship for K. Smart; P.I. is Teresa Golden; co-P.I.'s are W. E. Acree, Jr. and G. F. Verbeck), to NIH, 1/1/20 - 12/31/20, \$49,997.

\*\* In addition to the afore mentioned funded research grants, one of my graduate students (Ms. Sheryl Tucker) was supported by a NSF Doctoral Research Fellowship, an UNT Doctoral Research Fellowship and ACS Analytical Division Graduate Fellowship, and one scientific visitor to my research laboratory (Dr. P.R. Naidu) was partially supported under the Fulbright Program. Four of my graduate students (Mary McHale, Anita Zvaigzne, Sheryl Tucker and Laura Sprunger) received a Eli Lilly Travel Awards to present their

research at the American Institute of Chemical Engineers national meeting, and at the American Chemical Society national meeting.

#### **Funded Departmental research proposals that I contributed to:**

1. "Research Experiences for Undergraduates in Chemistry at the University of North Texas," (P.I.s were A. K. Wilson and T. Cundari), to NSF, 3/2003 – 3/2006, \$161,061. (I was one of several Senior Investigators on this Departmental research proposal.)
2. "Research Experiences for Undergraduates in Chemistry at the University of North Texas," (P.I.s were A. K. Wilson and T. Cundari), to NSF, 3/2007 – 3/2010, \$172,000. (I was one of several Senior Investigators on this Departmental research proposal.)
3. "Research Experiences for Undergraduates in Chemistry at the University of North Texas," (P.I.s were A. K. Wilson and R. Petros), to NSF, 3/2010 – 3/2013, \$212,000. (I was one of several Senior Investigators on this Departmental research proposal.)
4. "REU Site: Undergraduate Research Opportunities at the Interface of Computational and Experimental Chemistry at the University of North Texas," (P.I.s were A. K. Wilson and L. Slaughter), to NSF, 3/2015 - 3/2018, \$243,742. (I was one of several Senior Investigators on this Departmental research proposal.)
5. "UNT Chemistry REU," (P.I.s are L. Slaughter and H. Wong), to NSF, 9/1/18 - 8/31/21, \$279,576. (I was one of several Senior Investigators on this proposal.)

#### **Pending Research Proposal:**

1. "Permeability Calculations and Experiments for Drug Isomers and Analogs Using Artificial Membrane Assays and Abraham Solvation Model," (P.I. Teresa Golden; co-P.I. is W. E. Acree, Jr.) to NIJ, 1/1/25 - 12/31/27, \$162,536.

#### **Representative Unfunded Research Proposals and Grant Applications:**

(Complete listing will be provided upon request)

1. "Thermochemical Investigations of Associated Solutions Containing Organo-Sulfur Compounds," to DOE (Basic Energy Research), 12/89, \$164,600.
2. "Photochemical Reactions of Polycyclic Aromatic Hydrocarbons," to Welch Foundation, 1/90, \$75,000.
3. "Workshop for Faculty at Community and Junior Colleges," (joint, P.S. Braterman is P.I.), to National Science Foundation, 4/91, \$229,065.
4. "Purchase and Development of a Comprehensive Undergraduate Computing System," (with S.G. Bott and P. Marshall), to National Science Foundation, 11/90, \$29,686.
5. "Cooperative Research Program: University of North Texas and Universite de Paris VII -C.N.R.S," **W. E. Acree, Jr.**, to NSF, 4/90, \$16,350.
6. "Thermodynamic Properties of Hydrogen-Bonded Systems," to Welch Foundation, 1/15/92, \$90,000.
7. "Spectroscopic Properties of Polycyclic Aromatic Compounds," to National Science Foundation, 8/21/93, \$247,960.
8. "Thermodynamic Properties of Ternary Nonelectrolyte Solutions," to National Science Foundation, 9/1/93,

\$221,960.

9. "Understanding Green Science Processes," P.I. was D. Mason (W. E. Acree, Jr. was one of several investigators), to National Science Foundation, Spring 2003, \$1,803,665.
10. "Meeting the Challenges of Modeling Good Laboratory Practice in Chemistry Education," D. Mason (P.I.), W. E. Acree, Jr. (Co-P.I.) and T. Golden (Co-P.I.), to NSF, 6/04, \$99,998.
11. "Making STEM Connections and Applications Accessible to Secondary School Students Project, W. E. Acree, Jr. (P.I.) and D. Mason (Co-P.I.), to NSF, 6/04, \$1,936,750.
12. "REU Site: Opportunities in Chemistry at the University of North Texas," (P.I.s were A. K. Wilson and T. Cundari), to NSF, submitted on September 7, 2005, requested amount was \$220,242. (I was one of several Senior Investigators on this Departmental research proposal.)
13. "Facilitating Low-Income First-Generation College Students' Academic Sociocultural Learning" (submitted to Dept. of Educ., PI is Dr. Sharon Jenkins of the Department of Psychology), \$1,022,000. (I was one of five Investigators on this Departmental research proposal.)
14. "The Culture of Science: Low-Income First-Generation Undergraduates' Academic Acculturation Process" (submitted to DOE – PI is Dr. Sharon Jenkins of the Department of Psychology), \$1,163,000. If funded I would have been paid between 10 to 15 % of my monthly salary for each of the three summer months for four years.
15. "Promoting Low-Income First-Generation College Women's Pursuit of STEM Careers" (submitted to NIH, PI is Dr. Sharon Jenkins of the Department of Psychology), \$1,006,000. If funded I would have been paid 15 % of my monthly salary for each of the three summer months for three years.
16. "Mentoring McNair Scholars: Mentor and Staff Practices and Experiences" (Submitted to NIH, PI is Dr. Sharon Jenkins of the Department of Psychology), \$962,000. If funded I would have been paid at 30 % for the 3 months of summer.
17. "UNT Facilitating Achievement in Science Tracks (UNT-FAST)," (P.I. is L. Hughes; Co-P.I.s are W. E. Acree, S. Champlin, Y. Lin and S. Widner), to Howard Hughes Medical Institute, 2017 Inclusive Excellence Competition, 6/2017 - 6/2022, \$958,000.
18. "UNT Fostering Outstanding Cohorts in Undergraduate Sciences 2017," (P.I. is L. Hughes, Co-P.I.s are W. E. Acree, D. Chen, D. J. Liu and U. Philpose), to NSF, 9/2017-8/2022, \$999,848.
19. "UNT Inclusive Excellence Program," (P.I. is L. Hughes; Co-P.I.s are W. E. Acree, S. Champlin, Y. Lin and S. Widner), to Howard Hughes Medical Institute, 2018 Inclusive Excellence Competition, 6/2018 - 6/2023, \$929,377.
20. "Fostering Outstanding Cohorts in Undergraduate Science 2019: University of North Texas," (P.I. is L. Hughes, Co-P.I.s are W. E. Acree, P. D. Chen, J. Liu, U. Philpose, and J. Quintanilla), to NSF, 6/2019 - 5/2024, \$999,253.
21. "Fostering Outstanding Cohorts in Undergraduate Science 2020," (P.I. is L. Hughes, Co-P.I.s are W. E. Acree, P. D. Chen, J. Liu, U. Philpose, and C. Heidbrink), to NSF, 6/2020 - 5/2025, \$971,564.
22. "Collaborative Research ECR DBER: Investigating Dormant Essential Automaticity (IDEAS) in STEM" (Lead P.I. is M. Atkinson, co-P.I. is W. E. Acree, Jr.), to NSF DBER grant program, 7/1/21 – 6/31/24, \$415,834.

23. “Permeability Calculations, Database, and Scoring Metrics for Potential Drug Analogs Using Artificial Membrane Assays and Receptor Affinity Data,” (P.I. Teresa Golden; co-P.I. is W. E. Acree, Jr.) to NIH, 1/1/24 - 12/31/26, \$150,370.

## WILLIAM ACREE

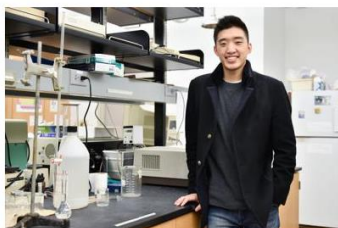
### MENTORING OF UNDERGRADUATE STUDENTS IN RESEARCH

Research Mentor to three 2019 Goldwater Scholars



Scholars were Ellen Qian (2<sup>nd</sup> from left), Jonathan Lu (3<sup>rd</sup> from left) and David Yue (2<sup>nd</sup> from right)

Research Mentor to  
2019 Truman Finalist



David Yue

Research Mentor to  
2017 Goldwater Scholar



Amber Lu

Research Mentor to  
2012 Goldwater Scholar



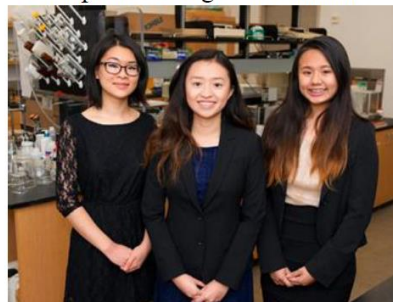
Amanda Quay (right)

Research Mentor to Three  
2014 Siemens Competition Regional Finalists



Sumedha Mehta (3<sup>rd</sup> from left), Akash Wadawadigi (center) and Nina Kuprasertkul (2<sup>nd</sup> from right)

Research Mentor to Two 2015 Siemens  
Competition Regional Finalists



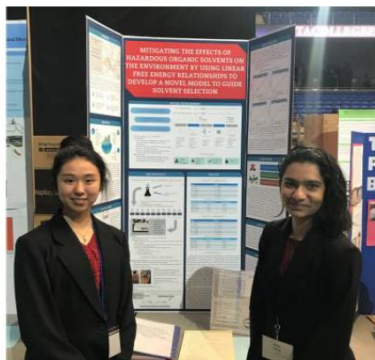
Colleen Dai (left) and Shoshana Zhang (center)

Research Mentor to  
2010 Siemens Competition  
Regional Finalist



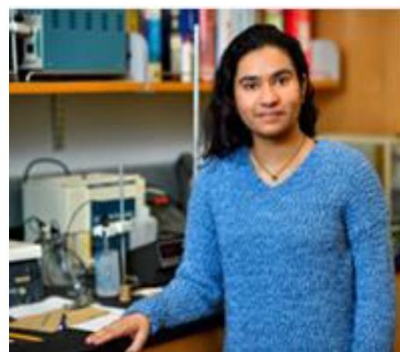
Shulin Ye

First place in Environment  
Management and Science  
2020 FWRSF



Jennifer Huang and  
Shrika Eddula

Research Mentor to  
2021 Goldwater Scholar



Shrika Eddula

Research Mentor to  
2022 Goldwater Scholar



Neel Shanmugam

Research Mentor to  
2024 Goldwater Scholar



Ramya Motati (right side)

## Recognitions Received from Other US Universities

### 2017 Stanford University Teacher Tribute



Nominated by Bihan Jiang

### 2015 Stanford University Teacher Tribute



Nominated by Akash Wadawadigi

### 2016 Yale Educator Award



Nominated by  
Shoshana Zhang