CURRICULUM VITAE

Gregory J. Smith, PhD

Associate Professor
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Appointments

- Associate Professor (September 2019 to present)
  Assistant Professor (August 2013 to August 2019)
  Department of Chemistry and Biochemistry
  Angelo State University, San Angelo, TX

Education

- University of Kansas, Lawrence, KS
  Doctoral degree in Chemistry (May 2013)
  Focus: Physical Chemistry/Nanoscale Fabrication and Surface Science
  Thesis Title: Nanoscale Manipulation of Surfaces and Interfaces: Engineering Electrical Properties Through Nanofabrication
  Research Advisor: Professor Cindy L. Berrie

- Texas A&M University-Corpus Christi, Corpus Christi, TX
  B.S. degree in Chemistry (December 2006)

Awards

- Ray Q. Brewster Award – advanced graduate teaching award 2012, University of Kansas

Teaching experience (as Faculty at Angelo State University)

- General Chemistry I Lecture and Laboratory
- General Chemistry II Lecture and Laboratory
- Physical Chemistry I Lecture and Laboratory
- Physical Chemistry II Lecture and Laboratory
- Chemistry Capstone

Teaching experience (as Teaching Assistant)

- Foundations of Chemistry I (KU)
- Quantitative Analysis (TAMU-CC)
- Biological Physical Chemistry Laboratory (KU)
- Physical Chemistry I (KU)
- Physical Chemistry I Laboratory (KU)
- Physical Chemistry II Laboratory (KU)
- Graduate mentor to an NSF REU Student (Zachary Bushman), 2012

Professional organization memberships

- American Chemical Society
- American Vacuum Society

Research experience

- Doctoral research (with Prof. Cindy L. Berrie, University of Kansas, 2007-2013)
- Undergraduate research (with Prof. Timothy P. Causgrove, Texas A&M University-Corpus Christi)

Grants as PI

- Faculty Research Enhancement Program
  Angelo State University
  Award: $7620
  2018
  Investigation of Size Distortion of Silicon Nanoparticles upon Lithiation in Lithium-Ion Batteries

Selected Presentations

- 2019 ACS Joint Southwest and Rocky Mountain Regional Meeting – Studying the Size and Shape Changes of Silicon Nanoparticles Upon Lithiation with Scanning Electron Microscopy, David Paul McDaniel and **Gregory J. Smith.** November 15, 2019, El Paso, TX.
- 2019 ASU Undergraduate Research Symposium – Dye Sensitized Solar Cells: Characterization of Monolayer Attachment Chemistry, Katherine N. Dunlap and **Gregory J. Smith**. April 26, 2019, San Angelo, TX.
- 2018 ASU Undergraduate Research Symposium – Investigating Relative Binding Strengths of Various Attachment Chemistries to Titania Surfaces for Potential Use in Dye-Sensitized Solar Cells, Jenna Placzek, Bailey Harvey, and **Gregory J. Smith**. April 20, 2018, San Angelo, TX.
- 2018 ASU Undergraduate Research Symposium –Silicon Nanoparticles in the Enhancement and Modification of Lithium Ion Batteries, Petronella Machingura and **Gregory J. Smith**. April 20, 2018, San Angelo, TX.
- 2018 ASU Undergraduate Research Symposium – Characterization of Self Assembled Monolayer Oxidation Using Nano-Lithography, Alfredo Felipe and **Gregory J. Smith**. April 20, 2018, San Angelo, TX.
- 2017 ACS 73rd Annual Southwest Regional Meeting – Characterization and Observation of Dopants on Nano-Quartz Crystal Growth, Alfredo Felipe and **Gregory J. Smith**. October 30, 2017, Lubbock, TX.
- 2017 ACS National Meeting - Observation and Manipulation of Silver on Quartz Nano-Crystals, Alfredo Felipe and **Gregory J. Smith**. August 22, 2017, Washington DC.
- 2017 ACS National Meeting - Investigating relative binding strengths of various attachment chemistries to titania surfaces for potential use in dye sensitized solar cells, Bailey Harvey and **Gregory J. Smith**. August 20, 2017, Washington, DC.
- 2017 ASU Undergraduate Research Symposium - Creating and Analyzing Silicon Nanoparticles, James Shrader and **Gregory J. Smith**. April 21, 2017, San Angelo, TX.
- 2017 ASU Undergraduate Research Symposium - Characterization and Observation of Dopants on Nano Quartz, Alfredo Felipe and **Gregory J. Smith**. April 21, 2017, San Angelo, TX.
- 2016 The Great War Centennial Commemoration Lecture Series – Chemical Warfare in the Great War, John Osterhout, Ralph Zehnder, **Gregory Smith**. Feb. 16, 2016, San Angelo, TX.

- 2012 Kansas Physical Chemistry Symposium – Surface Potential Mapping of Azulene Derivatives Adsorbed on Graphite, **Smith, G. J.**, Berrie, C. L. Oct. 27, 2012, Manhattan, KS.
- 2012 Kansas NSF-EPSCoR Kansas Center for Solar Energy Research Annual Program Review – Surface Potential Mapping of Azulene Derivatives Adsorbed on Graphite, **Smith, G. J.**, Berrie, C. L. June 10-11, 2012, Wichita, KS.
- 2011 Kansas Physical Chemistry Symposium – Investigating the Dye-Titania Interface for Dye-Sensitized Solar Cells, **Smith, G. J.**; Murphy, R.; Harrington, S.; Berrie, C. L. Nov. 19, 2011, Lawrence, KS.
- 2011 AVS 58th International Symposium and Exhibition – Nanoscale Surface Patterning for Controllable Metal Deposition, **Smith, G. J.**; Berrie, C. L. Oct. 30-Nov. 4, 2011, Nashville, TN.
- 2011 Kansas NSF-EPSCoR Kansas Center for Solar Energy Research Annual Program Review – Investigating the Dye-Titania Interface for Dye-Sensitized Solar Cells, **Smith, G. J.**; Murphy, R.; Berrie, C. L. June 12-14, 2011, Manhattan, KS.
- 2010 ACS Midwest Regional Meeting – Towards Copper Nanostructure Formation Using SAMs on Gold and Silicon Substrates, **Smith, G. J.**; Berrie, C. L. Oct. 27-29, 2010, Wichita, KS.

Techniques and skills

- Atomic force microscopy, conductive probe atomic force microscopy, kelvin force probe microscopy
- Scanning Electron Microscopy
- Ellipsometry
- Goniometry
- Training in infrared spectroscopy including reflection absorption infrared spectroscopy (RAIRS), UV-Vis spectroscopy, bomb calorimetry, laser-induced fluorescence, pump-probe spectroscopy
- Proficiency with Microsoft Office, ChemBioDraw
- Experience with Gaussian, Hyperchem