

## **CURRICULUM VITAE**

### **Gregory J. Smith, PhD**

Associate Professor  
Department of Chemistry and Biochemistry  
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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
- Texas Academy of Science

### Research experience

- Supervising undergraduates as Principle Investigator at Angelo State University (2013 – present)
- 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

- 2023 ASU Undergraduate Research Symposium – Experimentally Determining the Best Methods to Oxidize and Form Monolayers on Titania for DSSC Research, Gabrielle Blackmon and **Gregory J. Smith**. April 21, 2023, San Angelo, TX.
- 2023 ASU Undergraduate Research Symposium – Development of a Mathematical Model for Calculation of Thin Film Thickness from Ellipsometry Measurements, Alexis Washington and **Gregory J. Smith**. April 21, 2023, San Angelo, TX.
- 2023 American Chemical Society Spring National Meeting – Formation of a Silicon-Carbon Hybrid Anode Material for Lithium-Ion Batteries, Sara Stepanek and **Gregory J. Smith**. March 27, 2023, Indianapolis, IN.
- 2023 Texas Academy of Science 126th Annual Meeting – Formation of Silicon-Carbon Hybrid Anode Material for Lithium-Ion Batteries, Sara Stepanek, Diego Sanchez, and **Gregory J. Smith**. March 3, 2023, San Angelo, TX.
- 2022 ASU Undergraduate Research Symposium – Formation of Silicon-Carbon Hybrid Anode Material for Lithium-Ion Battery, David Paul McDaniel and **Gregory J. Smith**. April 29, 2022, San Angelo, TX.
- 2022 ASU Undergraduate Research Symposium – Oxide and Monolayer Formation on Titanium for Dye-Sensitized Solar Cell Research, Woorim Seo and **Gregory J. Smith**. April 29, 2022, San Angelo, TX.
- 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 73<sup>rd</sup> 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 DyeSensitized Solar Cells, **Smith, G. J.**; Murphy, R.; Harrington, S.; Berrie, C. L. Nov. 19, 2011, Lawrence, KS.
- 2011 AVS 58<sup>th</sup> 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
- Visible/Ultraviolet Spectroscopy
- 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