

# Kaleigh M. Margita

margita@mailbox.sc.edu

## EDUCATION

**Biophysical Chemistry Graduate Student**

*North Carolina State University, Raleigh, NC*

*August 2017*

**B.S. Chemistry with a Concentration in Biochemistry/ Spanish Minor**

*Newberry College, Newberry, SC*

*May 2014*

## GRADUATE COURSEWORK

- Advanced Physical Chemistry in Biology
- Analytical Spectroscopy
- Chemical Separations
- Spectroscopic Methods in Chemical Biology
- Mass Spectrometry
- Magnetic Resonance in Chemistry

## LABORATORY SKILLS

- Transmission Electron Microscope
- Infrared Spectroscopy
- Plasma Etching
- Nuclear Magnetic Resonance Spectroscopy
- Dynamic Light Scattering
- Photolithography
- Scanning Electron Microscope
- UV-Vis
- Fluorometer
- High Performance Liquid Chromatography
- Metal Deposition
- Microbiological Assays
- Electron Paramagnetic Resonance
- Microplate Reader
- ICP Spectroscopy
- LECO
- VIDAS

## RESEARCH

- “Effect of solution ionic strength on the pKa of the nitroxide pH EPR probe 2,2,3,4,5,5-hexamethylimidazolidin-1-oxyl” Principal Investigator: Alex I. Smirnov, Biophysical Chemistry, North Carolina State University, Raleigh, North Carolina
- “Influence of Planar Organic Electrochemical Transistor Device Geometry in the Characterization of Barrier Tissue” Principal Investigator: George Malliaras, Bioelectronics, Ecole Nationale Supérieure des Mines, France
- “Monitoring and Imaging Hypoxic Cells and Tissues Using Perfluorinated Near-Infrared Fluorescent Micelles” Principal Investigator: Dr. Sam Achilefu, Biochemistry, Washington University, St. Louis, Missouri

## PUBLICATIONS

- Margita, K.; Voynov, M.; Smirnov, I. Effect of Solution Ionic Strength on the pKa of the Nitroxide pH EPR Probe 2,2,3,4,5,5-Hexamethylimidazolidin-1-oxyl. *Cell Biochemistry and Biophysics*. **2017**, 75, 185-193.
- Ramuz, M.; Margita, K.; Hama, A.; Leleux, P.; Rivnay, J.; Bazin, I.; Owens, R. M. Optimization of a Planar All-Polymer Transistor for Characterization of Barrier Tissue. *ChemPhysChem*. **2015**, 16, 1210–1216.

## PRESENTATIONS

- “Effect of solution ionic strength on the pKa of the nitroxide pH EPR probe 2,2,3,4,5,5-hexamethylimidazolidin-1-oxyl”
  - Southeastern Regional Meeting of the American Chemical Society in Columbia, SC, *October 2016*
- “Influence of Planar Organic Electrochemical Transistor Device Geometry in the Characterization of Barrier Tissue”
  - National Nanotechnology Infrastructure Network Conference in Atlanta, GA, *August 10-15, 2013*
  - Newberry College Research Day, 1<sup>st</sup> Place Award Winner, *October 2013*
  - Southeastern Regional Meeting of the American Chemical Society in Atlanta, GA, *November 2013*
  - Western Carolina Chapter of American Chemical Society at Furman University, *April 2014*
- “Monitoring and Imaging Hypoxic Cells and Tissues Using Perfluorinated Near-Infrared Fluorescent Micelles”
  - National Nanotechnology Infrastructure Network Conference in Washington DC, *August 11-16, 2012*
  - Newberry College Research Day, 1<sup>st</sup> Place Award Winner, *October 2012*
  - Southeastern Regional Meeting of the American Chemical Society in Raleigh, NC, *November 2012*

## RELATED EXPERIENCE

- **Chemistry Instructor, University of South Carolina** 2022-2025
  - Teaching General Chemistry Lectures, Recitations, and Laboratory classes
- **Adjunct Chemistry Instructor, Newberry College** 2022-2023
  - Combination General, Organic, and Biochemistry course instructor
- **Research Assistant/Graduate Student, North Carolina State University Chemistry Department** 2022
  - Conducted biophysical research under the guidance of Dr. Alex I. Smirnov
- **Environmental Manager II, South Carolina Department of Health and Environmental Control** 2018-2021
  - Ensured compliance of water systems with regulations through sampling and inspections
- **Graduate Student/Teaching Assistant, North Carolina State University Chemistry Department** 2015
  - General Chemistry Lab and Recitation instructor
- **Physical Science Technician, USDA-ARS, Florence** 2015
  - Performed soil and cotton research with agronomist Dr. Phil Bauer
- **Quality Control Laboratory Technician, ISE, Newberry** 2014-2015
  - Performed microbiological testing and prevented industrial contamination
- **Work Study Student, Newberry College Math and Science Department** 2010-2014
  - Organic/General Chemistry Teaching Assistant, office work and laboratory preparation