

Ryan Coll

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Education

- **Texas A&M University**, Department of Chemistry
○ Ph.D. in Chemistry
College Station, TX
Expected 2019
- **Wake Forest University**, Winston-Salem NC (2010-2014)
○ B.S., Chemistry, Biochemistry Concentration (Cum Laude),
GPA 3.513/4.0

Research Experience

Texas A&M University

Graduate Student with Dr. Kim R. Dunbar

College Station, TX
2014-present

Theoretically and Experimentally Guided Design for Tuning the Reactivity of Partial Paddlewheel Dirhodium(II,II) Complexes for Photodynamic Therapy Applications

- Investigated the effects of altering the electronic environment around the dirhodium(II,II) bond on the complexes' photodynamic and catalytic abilities
- Performed Organic ligand/coordination compound synthesis
- Studied the structure of synthesized products using nuclear magnetic resonance spectroscopy, mass spectrometry, and single crystal X-ray diffraction
- Cultured cancer cells for biological experiments
- Observed chemical properties of complexes using electronic absorption spectroscopy and cyclic voltammetry
- Explore electronic properties of complexes using density functional theory and time-dependent density functional theory

Wake Forest University

Undergraduate Research Assistant with Dr. Ronald Nofle

Winston-Salem, NC
2013-2014

- Explored alternate methods to synthesize bis(2-thiophene)imide using microwave radiation and separation techniques.
- Tested bis(2-thiophene)imide for electrochemical properties by placing sample on glassy carbon electrode and immersing in copper and iron-based solutions.

Teaching Experience

Texas A&M University

Teaching Assistant

College Station, TX

2014-present

- Taught organic chemistry lab (I and II) to over 200 students
- Taught “Molecular Science for Citizens” lab to approximately 20 students

Wake Forest University

Teaching Assistant

Winston-Salem, NC

2013

- Taught qualitative analysis lab to approximately 20 students

Leadership Experience

Texas A&M University

Organization for Cultural Diversity in Chemistry

President (2016-present)

College Station, TX

- Organized board member general election
- Hosted board member meetings
- Contacted local elementary schools for science outreach events
- Updated board members of Alliance for Diversity in Science and Engineering of affiliate’s activities

Treasurer (2015-2016)

- Managed organization’s budget
- Settled reimbursement for organization purchases

Historian (2014-2015)

- Photographed organization events
- Wrote organization newsletter

Phi Lambda Upsilon Honorary Chemical Society

Secretary (2017-present)

- Organized goggle sales for undergraduate laboratory courses
- Track student member involvement

Conference Presentations

Coll, R.P.; Millet, A.; Dolinar, B.S.; Pellois, J.-P.; Turro, C.; Dunbar, K.R. Design of new partial paddlewheel dirhodium(II,II) complexes featuring electron donating and withdrawing ligands and their potential use as photodynamic therapy agents. Poster presentation delivered at American Chemical Society Southwestern Regional Meeting, Galveston, TX, November, 2016.