

## Brett Nathaniel Hemric

Assistant Professor of Chemistry  
University of Tampa



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### Professional Appointments

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**Assistant Professor of Chemistry**, University of Tampa, Tampa, FL     2021 – present  
**Postdoctoral Research Associate**, University of Illinois at Urbana-Champaign, Urbana, IL     2019 – 2021

### Education

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**Ph.D. – Organic Chemistry**     2013 – 2018  
Duke University, Durham, NC

**B.S. – Biochemistry and Molecular Biology**     2009 – 2013  
Liberty University, Lynchburg, VA

### Research Training

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**Postdoctoral Researcher**, University of Illinois at Urbana-Champaign, Champaign, IL     2019 – 2021  
Advisor: Dr. Scott Denmark

- Collaborated with Janssen Pharmaceutica on *de novo* synthesis of proprietary small molecule drug leads/derivatives in pursuit of more efficacious treatments.
- Studied selenium redox catalysis for oxyamination of alkenes.

**Graduate Researcher**, Duke University, Durham, NC     2014 – 2018  
Advisor: Dr. Qiu Wang

- Studied copper-catalyzed amino oxygenation of alkenes and 1,3-dienes through a unique nitrogen-initiated approach using *O*-benzoylhydroxylamines.

**NSF REU Undergraduate Researcher**, University of North Texas, Denton, TX     Summer 2012  
Advisor: Dr. Rob Petros

- Studied biodegradation of PEG-crosslinked acrylate nanoparticles used as novel drug vessels.

### Publications

(†undergraduate student, ‡equal contribution, \*corresponding author)

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Mumford, E.M.;‡ [Hemric, B.N.](#);‡ Denmark, S.E.\* “Catalytic, Enantioselective *Syn*-Oxyamination of Alkenes.” *Manuscript in review*.

[Hemric, B.N.](#)\* “Beyond Osmium: Progress in 1,2-Amino Oxygenation of Alkenes, 1,3-Dienes, Alkynes, and Allenes.” *Org. Biomol. Chem.* **2021**, *19*, 46–81. [[Link](#)]

[Hemric, B.N.](#);‡ Ku, C.K;‡ Wang, Q.\* “*O*-Benzoyl-*N*-hydroxylmorpholine.” *Encycl. Reagents Org. Synth.* **2020**. [[Link](#)]

[Hemric, B.N.](#); Chen, A.W.;† Wang, Q.\* “Copper-catalyzed 1,2 amino oxygenation of 1,3-dienes: a chemo-, regio-, and site-selective three-component reaction with carboxylic acids and *O*-acylhydroxylamines.” *ACS Catal.* **2019**, *9*, 10070–10076. [[Link](#)]

[Hemric, B.N.](#); Chen, A.W.;† Wang, Q.\* “Copper-catalyzed modular amino oxygenation of alkenes: a rapid access to diverse 1,2-amino oxygen-containing skeletons.” *J. Org. Chem.* **2019**, *84*, 1468–1488. [[Link](#)]

## Publications continued (†undergraduate student, ‡equal contribution, \*corresponding author)

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Ortiz, G.X. Jr.; [Hemric, B.N.](#); Wang, Q.\* “Direct and selective 3-amidation of indoles using electrophilic *N*-[(benzenesulfonyl)oxy]amides.” *Org. Lett.* **2017**, *19*, 1314–1317. [[Link](#)]

[Hemric, B.N.](#); Shen, K.; Wang, Q.\* “Copper-catalyzed amino lactonization and amino oxygenation of alkenes using *O*-benzoylhydroxylamines.” *J. Am. Chem. Soc.* **2016**, *138*, 5813–5816. [[Link](#)]

[Hemric, B.N.](#); Wang, Q.\* “Copper-catalyzed intermolecular oxyamination of olefins using carboxylic acids and *O*-benzoylhydroxylamines.” *Beilstein J. Org. Chem.* **2016**, *12*, 22–28. [[Link](#)] *Invited submission.*

## Awards, Honors, and Fellowships

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F32 Postdoctoral Fellowship Finalist, National Institutes of Health	2020
GAANN Fellowship, US Department of Education	Fall 2017 – Fall 2018
Shaffer-Hunnicuttt Research Fellowship, Duke University	Summer 2017
Graduate Travel Award, Duke University	2016
Division of Organic Chemistry Graduate Travel Award, American Chemical Society	2016
Burroughs Wellcome Fellowship, Duke University	2015 – 2016, Spring 2017
Graduate Research Fellowship Honorable Mention, National Science Foundation	2015
Student of the Year in Biochemistry & Molecular Biology, Liberty University	2013
Kappa Mu Epsilon Math Honors Society, Liberty University	2013
Promising Student of the Year in Chemistry (2 <sup>nd</sup> year award), Liberty University	2011

## Teaching and Mentoring Experience

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### GAANN Teaching Experience, Duke University, Durham, NC

- Developed and executed a curriculum for Organic Chemistry II recitation (not previously part of the Duke University course offering).

### Independent Study Mentor, Duke University, Durham, NC

- Andy Chen (7 semesters, now medical student at Indiana University School of Medicine)
- Kathy Dai (3 semesters, now medical student at Duke University School of Medicine)

### Chemistry Guest Lecturer, Duke University, Durham, NC

Introduction to Undergraduate Research (1 semester)

- Taught course section on verbal and visual presentation of scientific research.

### Chemistry Teaching Assistant

Organic Chemistry I Recitation – Duke University (2 semesters)

Organic Chemistry I/II Recitation – Liberty University (5 semesters)

Organic Chemistry II Lab – Duke University (2 semesters)

Organic Chemistry I/II Lab – Liberty University (10 semesters)

Biochemistry I/II Lab – Liberty University (2 semesters)

Analytical Chemistry Grader – Liberty University (1 semester)

Introductory Chemistry Lab – Liberty University (4 semesters)

### Private Tutor – Chemistry, Lynchburg, VA and Durham, NC

## Public Presentations

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### Oral Presentations:

Annual Denmark Lab Total Synthesis Competition (Team Captain), Urbana, IL	Oct. 2020
Dissertation Defense, Durham, NC	Nov. 2018
4 <sup>th</sup> Duke University Chemistry Research Symposium, Durham, NC	Oct. 2018
Postdoctoral Research Interview, Urbana, IL	July 2018
252 <sup>nd</sup> ACS National Meeting, Philadelphia, PA	Aug. 2016
Summer REU Research Presentation, Denton, TX	Aug. 2012

### Poster Presentations:

55 <sup>th</sup> Heterocyclic Compounds Gordon Research Conference, Newport, RI	June 2018
69 <sup>th</sup> Southeast Regional Meeting of the ACS, Charlotte, NC	Nov. 2017
3 <sup>rd</sup> Duke University Chemistry Research Symposium, Durham, NC	Oct. 2017
8 <sup>th</sup> ACS Division of Organic Chemistry Graduate Research Symposium, Portland, OR	July 2017
9 <sup>th</sup> Chapel Hill Pharmaceutical Sciences Conference, Chapel Hill, NC	Oct. 2015
128 <sup>th</sup> North Carolina Section Conference of the ACS, Durham, NC	Nov. 2014

## Service/Volunteer Activities

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<b>Reviewer</b> , Royal Society of Chemistry	2020 – present
<b>Graduate NMR Manager</b> , Duke University	2014 – 2019
<b>Recruitment Host</b> , Duke University	2014 – 2018
<b>Chemistry Research Symposium Organizer</b> , Duke University	2014 – 2017
<b>Media Coordinator</b> – Graduate Chemistry Council, Duke University	2015 – 2016