# Lindsey O. Davis

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## A. Education

B.S. Chemistry, Berry College, 2005

Ph.D. Wake Forest University, 2009 (Advisors: Suzanne Tobey and Paul Jones)

Thesis: "Development of Metal-Catalyzed Reactions of Allenes with Imines and the Investigation of Brønsted Acid Catalyzed Ene Reactions"

## B. Post-graduate Work

2011-current, Assistant Professor of Chemistry, Berry College

2009-2011, Visiting Assistant Professor of Chemistry, Berry College

## C. Courses Taught

- Organic Chemistry I/Life-Sciences (CHM 221/223) and associated labs
- Organic Chemistry II/Life-Sciences (CHM 222/224) and associated labs
- Biochemistry I (CHM 341)
- Advanced Organic Chemistry (CHM 421) and associated lab
- General Chemistry I/II Lab (CHM 108L/109L)
- Introduction to Chemistry (CHM 102) and associated lab
- Wars of the Future: A Chemical Perspective (SPT 163) and associated lab
- First-Year Seminar (BCC 100)
- Senior Seminar (CHM 490)

## D. Peer-Reviewed Publications (Berry College undergraduates are underlined in the citations and an asterisk is used to indicate corresponding author(s).)

10. Evans, C. S.; Davis, L.O.* Recent Advances in Organocatalyzed Domino C–C Bond-Forming Reactions. *Molecules* **2018**, *23*, 33.

9. Dahlmann, H. A.; McKinney, A. J.; Santos, M. P.; Davis, L. O.* Organocatalyzed Intramolecular Carbonyl-Ene Reactions. *Molecules*, **2016**, *21*, 713.

8. Davis, L. O.* Investigation of Intramolecular Hydrogen Bonds using $^{1}$H NMR Spectroscopy: An Organic Chemistry Laboratory for Life-Science Majors. *Chem. Educator*, **2015**, *20*, 254.

7. Davis, L. O.*; Putri, M. A.; Meyer, C. L.; Durant, C. P. Phosphoric acid mediated tautomerism of imines: addition of a secondary enamine intermediate to aldehydes. *Tetrahedron Letters*, **2014**, *55*, 3100.
6. Davis, L. O.* Recent developments in the synthesis and applications of pyrazolidines. A review, *Organic Preparations and Procedures International*, **2013**, *45*, 437.
5. Davis, L. O.*; Daniel, W. F.; Tobey, S. L., Phosphonic acid catalyzed synthesis of pyrazolidines. *Tetrahedron Letters,* **2012**, *53*, 522.
4. Davis, L. O.; Tobey, S. L.* A halide-initiated aza-Baylis–Hillman reaction: generation of unnatural amino acids. *Tetrahedron Letters*, **2010**, *51*, 6078.
3. Oliver, L. H.; Puls, L. A.; Tobey, S. L.* Brønsted acid promoted imino-ene reactions. *Tetrahedron Letters*, **2008**, *49*, 4636.
2. Breton, G. W.*; Oliver, L. H.; Nickerson, J. E. Synthesis of a stereochemically defined 1, 2-diazetine N, N'-dioxide and a study of its thermal decomposition. *Journal of Organic Chemistry*, **2007**, *72*, 1412.
1. Breton, G. W.*; Nickerson, J. E.; Greene, A. M.; Oliver, L. H. Thermal decomposition of meso- and d, l-3,4-dimethyldiazetine N, N'-dioxide. *Organic Letters*, **2007**, *9*, 3005.

**E. Presentations** (Undergraduate students are underlined and the presenter is marked with an asterisk.)

Davis, L.*, Chambers, D., Breton, G., Martin, K.; "Synthesis and evaluation of 2-(dimethylamino)biphenyl-2'-carboxaldehydes." Tetrahedron Symposium, Riva del Garda, Italy. **28 Jun. 2018**.

Davis, L.*, Santos, M.*, Dahlmann, H., McKinney, A.; "Intramolecular carbonyl-ene reactions catalyzed by a trifylphosphoramide." Spring 2016 National American Chemical Society Meeting, San Diego, CA. **16 Mar. 2016.**

Izaguirre, J.*, Kaelin, T., Davis, L.; "Synthesis of novel fluorescent, universal DNA nucleosides." Spring 2016 National American Chemical Society Meeting, San Diego, CA. **15 Mar. 2016.** (poster)

Kaelin, T.*, Izaguirre, J. N., Davis, L.; "Synthesis of a fluorescent universal DNA nucleoside." 67th Southeast/71st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN. **4-7 Nov. 2015.** (poster)

Davis, L. O.*, Izaguirre, J., Carter, A.; "Synthesis of a Novel Universal Fluorescent Nucleoside." National Organic Symposium, College Park, MA. **30 Jun. 2015.**

Davis, L. O.*, Putri, M., "Phosphoric acid mediated tautomerism of imines: Addition of imines to aldehydes." 65th Southeast Regional Meeting of the American Chemical Society, Atlanta, GA. **13-16 Nov. 2013**.

Gaspard, A. C.*, Davis, L. O., Hearn, A.; "Syntheses of novel universal fluorescent DNA

nucleosides." 65th Southeast Regional Meeting of the American Chemical Society, Atlanta, GA, **14 Nov. 2013.** (poster)

Putri, M. *, Davis, L. O.; "Development of Brønsted acid catalyzed intramolecular imino-ene reaction." 65th Southeast Regional Meeting of the American Chemical Society, Atlanta, GA, **14 Nov. 2013.** (poster)

Gaspard, A. C.*, Davis, L. O.; "Synthesis of a novel universal fluorescent DNA nucleoside." 48th Annual Conference of the National Collegiate Honors Council, New Orleans, LA, **8 Nov. 2013.** (poster)

Davis, L. O.*, Putri, M., Meyer, C. M., Durant, C. P.; "Phosphonic Acid Promoted Addition of Imines and Aldehydes." National Organic Symposium, Seattle, WA. **24 Jun. 2013.**

Durant, C. P.*, Meyer, C. M.*, Davis, L. O.; "Phosphonic acid promoted aldol-type reactions between imines and unactivated aldehydes." National American Chemical Society Meeting, San Diego, CA, **26 Mar. 2012.**

Daniel, W. F. M.*, and Davis, L. O.; "Brønsted Acid Promoted Cyclization Reactions of Hydrazones." Herty Medal Undergraduate Research Symposium (HMURS), Morehouse College, Atlanta. **17 Sept. 2010.** (Received an Honorable Mention award for the poster.)

## F. Grants

**6/2018** National Science Foundation NOYCE grant (Funded: $1.2 million; co-PIs: Drs. Jill Cochran and Jackie McDowell; listed as Senior Personnel)

**8/2015** Faculty Development Grant, "Universal Fluorescent DNA Nucleoside Synthesis." (Funded: $2,878)

**3/17/2014** Center for Teaching Excellence Summer Course Enhancement, "Design of CHM 224, Organic Chemistry II for Life-Science Majors." (Funded: $1,000)

**2/5/2014** Course Technology Enhancement, "Redesign of CHM 223, Organic Chemistry I for Life-Science Majors." (Funded: $2529.68)

**11/1/2013** Petroleum Research Fund, "One-pot Stereoselective Olefin Metathesis Using Phosphonium Ylides." (Not funded: $50,000)

**8/2013** Faculty Development Grant, "Synthesis of Fluorescent DNA Nucleosides and Homoallylic Amines." (Funded: $3,000)

**6/23/2013** ACS Division of Organic Chemistry, "Travel Award for Outstanding Undergraduate Faculty." (Funded: $600.00)

**11/2/2012** Petroleum Research Fund, "One-pot Stereoselective Olefin Metathesis Using Phosphonium Ylides." (Not funded: $50,000)

**5/18/2011** Faculty Development Grant, "Synthesis of Fluorescent Universal RNA Bases." (Funded: $962.00)

**12/9/2010** MNS Development of Undergraduate Research program, "Novel Reactions in Organic Chemistry: The Development of Phophonium Ylide Promoted Metathesis Reactions and Characterization of Pyrazolidines." (Funded: $606.88)

## G. Awards and Honors

2014 McRae Award
2013-2016 ACS Chemistry Ambassador