

David A. Nicewicz

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1. Education

2006 Ph.D. in Organic Chemistry; University of North Carolina at Chapel Hill
2002 M.S. in Organic Chemistry; University of North Carolina at Charlotte
2000 B.S. Cum Laude in Chemistry; University of North Carolina at Charlotte

2. Professional Experience

2018-present Professor; University of North Carolina at Chapel Hill
2018-present Associate Editor, *Synlett*
2015-2018 Director of Graduate Studies, Department of Chemistry, University of North Carolina
2015-2018 Associate Professor; University of North Carolina at Chapel Hill
2009-2015 Assistant Professor; University of North Carolina at Chapel Hill
2007-2009 Postdoctoral Research; Princeton University
Advisor: Professor David W. C. MacMillan
2001-2006 Graduate Research; University of North Carolina at Chapel Hill
Advisor: Professor Jeffrey S. Johnson
2000-2001 Graduate Research; University of North Carolina at Charlotte
Advisor: Professor Craig A. Ogle
1999-2000 Undergraduate Research; University of North Carolina at Charlotte
Advisor: Professor Craig A. Ogle
1999 Undergraduate Research; University of North Carolina at Charlotte
Advisor: Professor Jordan C. Poler

3. Honors, Awards and Memberships

2017 The Hirata Award, Nagoya University, Japan
2016 Society of Synthetic Organic Chemistry, Japan Lectureship Award
2015 Camille Dreyfus Teacher-Scholar Award
2015 Ruth Hettleman Prize for Artistic and Scholarly Achievement – University of North Carolina
2015 Eli Lilly Grantee Award
2014-2019 NSF CAREER Award
2014 Amgen Young Investigator Award
2013 Boehringer Ingelheim New Investigator Award in Organic Chemistry
2013 Junior Faculty Development Award – University of North Carolina
2012 Packard Fellowship in Science and Engineering
2012 Thieme Chemistry Journal Award
2011 James Moeser Award for Distinguished Research
2009 Eli Lilly New Faculty Award
2007-2009 National Institutes of Health Ruth L. Kirschstein Postdoctoral Fellow
2004-2005 ACS Division of Organic Chemistry Graduate Fellowship; Novartis Pharmaceuticals

2004	Eli Lilly Graduate Fellowship: University of North Carolina
2003-2004	Ralph Walton Bost Graduate Fellowship: University of North Carolina
2001-2002	Francis P. Venable Graduate Fellowship: University of North Carolina
2001-Present	American Chemical Society Member
1999-2000	Sigma Xi
1999	Carolina Chemistry Scholar

4. Publications

a.) Books/Book Chapters

Johnson, J. S.; Nicewicz, D. A. "Copper Lewis Acids." In *Modern Aldol Reactions*; Mahrwald, R., Ed.; Wiley-VCH: Weinheim, 2004; Vol. 2, 69-103.

b.) Refereed Papers/Articles

i.) Independent Career

- 44) McManus, J. B.; Onuska, N. P. R.; Nicewicz, D. A. "Generation and Alkylation of α -Carbamyl Radicals via Organic Photoredox Catalysis." *J. Am. Chem. Soc.* **2018**, *140*, 9056-9060.
- 43) Morse, P. D.; Nguyen, T. M.; Cruz, C. L.; Nicewicz, D. A. "Enantioselective Counter Anions in Photoredox Catalysis: The Asymmetric Cation Radical Diels-Alder Reaction." *Tetrahedron* **2018**, *74*, 3266-3272.
- 42) Margrey, K. A.; Czaplyski, W. L.; Nicewicz, D. A.; Alexanian, E. J. "A General Strategy for Aliphatic C-H Functionalization Enabled by Organic Photoredox Catalysis." *J. Am. Chem. Soc.* **2018**, *140*, 4213-4217.
- 41) Wu, F.; Wang, L.; Chen, J.; Nicewicz, D. A.; Huang, Y. "Direct Synthesis of Polysubstituted Aldehydes via Visible Light-Catalysis." *Angew. Chem. Int. Ed.* **2018**, *57*, 2174-2178.
- 40) Margrey, K. A.; Levens, A.; Nicewicz, D. A. "Direct C-H Arylation of Primary Amines via Organic Photoredox Catalysis." *Angew. Chem. Int. Ed.* **2017**, *56*, 15644-15648.
- 39) Tay, N. E.; Nicewicz, D. A. "Cation Radical-Accelerated Nucleophilic Aromatic Substitution via Organic Photoredox Catalysis." *J. Am. Chem. Soc.* **2017**, *139*, 16100-16104.
- 38) Dongare, P.; MacKenzie, I.; Wang, D.; Nicewicz, D. A.; Meyer, T. J. "Oxidation of Alkyl Benzenes by a Flavin Photooxidation Catalyst on Nano-Structured Metal Oxide Films." *Proc. Natl. Acad. Sci. U.S.A.* **2017**, *114*, 9279-9283.
- 37) Margrey, K. A.; McManus, J. B.; Bonazzi, S.; Zecri, F.; Nicewicz, D. A. "Predictive Model for Site-Selective Aryl and Heteroaryl C-H Amination via Organic Photoredox Catalysis." *J. Am. Chem. Soc.* **2017**, *139*, 11288-11299.
- 36) Wang, L.; Wu, F.; Chen, J.; Nicewicz, D. A.; Huang, Y. "Visible Light-Mediated [4+2] Cycloaddition of Styrenes: Synthesis of Tetralin Derivatives." *Angew. Chem. Int. Ed.* **2017**, *56*, 6896-6900.
- 35) McManus, J. B.; Nicewicz, D. A. "Direct C-H Cyanation of Arenes via Organic Photoredox Catalysis." *J. Am. Chem. Soc.* **2017**, *139*, 2880-2883.
- 34) Griffin, J. D.; Cavanaugh, C. L.; Nicewicz, D. A. "Reversing the Regioselectivity of Halofunctionalization Reactions via Cooperative Photoredox and Copper Catalysis." *Angew. Chem. Int. Ed.* **2017**, *56*, 2097-2100.
- 33) Margrey, K. A.; Nicewicz, D. A. "A General Approach to Catalytic Alkene Anti-Markovnikov Hydrofunctionalization Reactions via Acridinium Photoredox Catalysis." *Acc. Chem. Res.* **2016**, *49*, 1997-2006. (*invited contribution*).

- 32) Joshi-Pangu, A.; Lévesque, F.; Roth, H. G.; Oliver, S. F.; Campeau, L.-C.; Nicewicz, D., DiRocco, D. A. "Acridinium-Based Photocatalysts: A Sustainable Option in Photoredox Catalysis." *J. Org. Chem.* **2016**, *81*, 7244-7249.
- 31) Romero, N. A.; Nicewicz, D. A. "Organic Photoredox Catalysis." *Chem. Rev.* **2016**, *116*, 10075-10166 (invited contribution).
- 30) Roth, H. G.; Romero, N. A.; Nicewicz, D. A. "Experimental and Calculated Electrochemical Potentials of Common Organic Molecules for Applications to Single Electron Redox Chemistry." *Synlett*, **2016**, *27*, 714-723.
- 29) Perkowski, A. J.; Cruz, C. L.; Nicewicz, D. A. "An Ambient Temperature Newman-Kwart Rearrangement Mediated by Organic Photoredox Catalysis." *J. Am. Chem. Soc.*, **2015**, *137*, 15684-15687.
- 28) Cavanaugh, C. L.; Nicewicz, D. A. "Synthesis of α -Benzyloxyamino- γ -Butyrolactones via a Polar Radical Crossover Cycloaddition Reaction." *Org. Lett.*, **2015**, *17*, 6082-6085.
- 27) Romero, N. A.; Margrey, K. A.; Tay, N. E.; Nicewicz, D. A. "Site-Selective Arene C-H Amination via Photoredox Catalysis." *Science*, **2015**, *349*, 1326-1330.
- 26) Griffin, J. D.; Zeller, M. A.; Nicewicz, D. A. "Hydrodecarboxylation of Carboxylic and Malonic Acid Derivatives via Organic Photoredox Catalysis: Substrate Scope and Mechanistic Insight." *J. Am. Chem. Soc.* **2015**, *137*, 11340-11348.
- 25) Perkowski, A. J.; You, W.; Nicewicz, D. A. "Visible Light Photoinitiated Metal-Free Living Cationic Polymerization of 4-Methoxystyrene." *J. Am. Chem. Soc.* **2015**, *137*, 7580-7583.
- 24) Gesmundo, N. J.; Grandjean, J. M.; Nicewicz, D. A. "Amide and Amine Nucleophiles in Polar Radical Crossover Cycloadditions: Synthesis of γ -Lactams and Pyrrolidines." *Org. Lett.* **2015**, *17*, 1316-1319.
- 23) Morse, P. D.; Nicewicz, D. A. "Divergent Regioselectivity in Photoredox-Catalyzed Hydrofunctionalization Reactions of Unsaturated Amides and Thioamides." *Chem. Sci.* **2015**, *6*, 270-274.
- 22) Romero, N.; Nicewicz, D. A. "Mechanistic Insight into the Photoredox Catalysis of Anti-Markovnikov Alkene Hydrofunctionalization Reactions." *J. Am. Chem. Soc.* **2014**, *136*, 17024-17035.
- 21) Nicewicz, D. A. "9-Mesityl-10-Methylacridinium Perchlorate" *eEros*.
- 20) Zeller, M. A.; Riener, M.; Nicewicz, D. A. " γ -Butyrolactone Synthesis via Polar Radical Crossover Cycloaddition Reactions: Diastereoselective Synthesis of Methylenolactocin and Protolichesterinic Acid." *Org. Lett.* **2014**, *16*, 4810-4813.
- 19) Wilger, D. J.; Grandjean, J. M.; Lammert, T.; Nicewicz, D. A. "The Direct Anti-Markovnikov Addition of Mineral Acids to Styrenes." *Nature Chem.* **2014**, *6*, 720-726.
- 18) Gesmundo, N. J.; Nicewicz, D. A. "Cyclization-Endoperoxidation Cascade Reactions of Dienes Mediated by a Pyrylium Photoredox Catalyst." *Beilstein J. Org. Chem.* **2014**, *10*, 1272-1281 (invited submission for special issue: "Organic Synthesis Using Photoredox Catalysis").
- 17) Nguyen, T. M.; Manohar, N.; Nicewicz, D. A. "Anti-Markovnikov Hydroamination of Alkenes Catalyzed by a Two-Component Organic Photoredox System: Direct Access to Phenethylamine Derivatives." *Angew. Chem. Int. Ed.* **2014**, *53*, 6198-6201.
- 16) Nicewicz, D. A.; Hamilton, D. S. "Organic Photoredox Catalysis as a General Strategy for Anti-Markovnikov Hydrofunctionalization." *Synlett* **2014**, *25*, 1191-1196 (invited submission).
- 15) Nicewicz, D. A.; Nguyen, T. M. "Recent Applications of Organic Dyes as Photoredox Catalysts." *ACS Catal.* **2014**, *4*, 355-360 (invited submission).
- 14) Perkowski, A. J.; Nicewicz, D. A. "Direct Catalytic Anti-Markovnikov Addition of Carboxylic Acids to Alkenes." *J. Am. Chem. Soc.* **2013**, *135*, 10334-10337.

- 13) Nguyen, T. M.; Nicewicz, D. A. "Anti-Markovnikov Hydroamination of Alkenes Catalyzed by an Organic Photoredox System." *J. Am. Chem. Soc.* **2013**, *135*, 9588-9591.
 - 12) Wilger, D. J.; Gesmundo, N. J.; Nicewicz, D. A. "Catalytic Hydrotrifluoromethylation of Styrenes and Unactivated Aliphatic Alkenes via an Organic Photoredox System." *Chem. Sci.* **2013**, *4*, 3160-3165.
 - 11) Riener, M.; Nicewicz, D. A. "Synthesis of Cyclobutane Lignans via an Organic Single Electron Oxidant-Electron Relay System" *Chem. Sci.* **2013**, *4*, 2625-2629.
 - 10) Grandjean, J.; Nicewicz, D. A. "Synthesis of Highly Substituted Tetrahydrofurans via Catalytic Polar-Radical Crossover Cycloadditions of Alkenes and Alkenols." *Angew. Chem. Int. Ed.* **2013**, *52*, 3967-3971.
 - 9) Hamilton, D. S.; Nicewicz, D. A. "Direct Catalytic Anti-Markovnikov Hydroetherification of Alkenols." *J. Am. Chem. Soc.* **2012**, *134*, 18577-18580.
- ii.) Pre-Independent Career
- 8) Boyce, G. R.; Greszler, S. N.; Johnson, J. S.; Linghu, X.; Malinowski, J. T.; Nicewicz, D. A.; Satterfield, A. D.; Schmitt, D. C.; Steward, K. M. "Silyl Glyoxylates. Conception and Implementation of Simple but Useful New Reagents for Multicomponent Coupling." *J. Org. Chem.* **2012**, *77*, 4503-4515.
 - 7) Nicewicz, D. A.; MacMillan, D. W. C. "Merging Photoredox Catalysis with Organocatalysis: The Direct Asymmetric Alkylation of Aldehydes." *Science* **2008**, *322*, 77-80.
 - 6) Nicewicz, D. A.; Satterfield, A. D.; Schmitt, D. C.; Johnson, J. S. "Self-Consistent Synthesis of the Squalene Synthase Inhibitor Zaragozic Acid C." *J. Am. Chem. Soc.* **2008**, *130*, 17281-17283.
 - 5) Nicewicz, D. A.; Br t ch , G.; Johnson, J. S. "tert-Butyl tert-butyldimethylsilyl glyoxylate: A Useful Conjunctive Reagent." *Org. Synth.* **2008**, *85*, 278-286.
 - 4) Nicewicz, D. A.; Johnson, J. S. "Three-Component Coupling Reactions of Silyl glyoxylates, Alkynes, and Aldehydes: A Chemoselective One-Step Glycolate Aldol Construction." *J. Am. Chem. Soc.* **2005**, *127*, 6170-6171.
 - 3) Nicewicz, D. A.; Yates, C. M.; Johnson, J. S. "Enantioselective Cyanation/Brook Rearrangement/C-Acylation Reactions of Acylsilanes Catalyzed by Chiral Metal Alkoxides." *J. Org. Chem.* **2004**, *69*, 6548-6555.
 - 2) Nicewicz, D. A.; Yates, C. M.; Johnson, J. S. "Catalytic Enantioselective Acylation of Silyloxy(nitrile)Anions." *Angew. Chem. Int. Ed.* **2004**, *43*, 2652-2655.
 - 1) Linghu, X.; Nicewicz, D. A.; Johnson, J. S. "Tandem Carbon-Carbon Bond Constructions via Catalyzed Cyanation/Brook Rearrangement/C-Acylation Reactions of Acylsilanes." *Org. Lett.* **2002**, *4*, 2957-2960.
- c.) Patents
- Nicewicz, D. A.; Hamilton, D. S.; Perkowski, A. J. "Direct Anti-Markovnikov Addition of Acids to Alkenes." US Patent No. 9,365,530.
- Nicewicz, D. A.; Hamilton, D. S. "Direct Anti-Markovnikov Addition of Acids to Alkenes." US Patent No. 10,017,441.
- Nicewicz, D. A.; Romero, N. A.; Margrey, K. A.; Tay, N. E. "Photoredox-Catalyzed Direct C-H Functionalization of Arenes." PCT/US16/35549.

5. Invited Presentations

- 07/15/19 26th International Symposium on Synthesis in Organic Chemistry, Cambridge, UK.
- 07/11/19 2019 Division of Organic Chemistry Graduate Research Symposium, Duke University, Durham, NC.
- 06/17/19 9th Pacific Symposium on Radical Chemistry, Pacific Grove, CA.
- 02/04/19 Andrew S. Kende Distinguished Lecturer, University of Rochester, Rochester, NY.
- 10/18/18 University of Basel, Basel, Switzerland.

- 10/10/18 University of Strathclyde, Glasgow, Scotland, U.K.
- 07/25/18 Merck, West Point, PA.
- 07/09/18 AstraZeneca, Waltham, MA.
- 06/17/18 EuChem Conference on Organic Free Radicals, Marseille, France.
- 06/15/18 Institut Català d'Investigació Química, Tarragona, Spain.
- 06/01/18 Paquette Workshop, The Ohio State University, Columbus, OH. (*Student Invited*)
- 05/27/18 Canadian Chemistry Conference, Edmonton, Alberta, Canada.
- 04/24/18 Beilstein Meeting: Modern Photocatalysis, Potsdam, Germany.
- 04/06/18 E. Ambrose White Lecture, University of Kansas, Lawrence, KS.
- 03/30/18 University of Richmond, Richmond, VA.
- 03/20/18 Boston College, Boston, MA.
- 03/13/18 GlaxoSmithKline, King of Prussia, PA.
- 11/20/17 The 13th Hirata Award, Nagoya University, Japan.
- 11/08/17 Bayer Photochemistry Workshop, Düsseldorf, Germany.
- 07/09/17 Chemical Synthesis Symposium, 46th IUPAC World Chemistry Congress, São Paulo, Brazil.
- 05/31/17 Constellation Pharmaceuticals, Cambridge, MA.
- 05/18/17 Cornell University, Ithaca, NY.
- 05/04/17 Syngenta Crop Protection, Stein, Switzerland.
- 05/02/17 Novartis, Basel, Switzerland.
- 04/24/17 Advances in Synthesis and Complexing. RUDN, Moscow, Russia.
- 04/20/17 University of Pennsylvania, Philadelphia, PA. (*Student Choice Lecturer*)
- 04/03/17 Switchable Catalysis Symposium, ACS National Meeting, San Francisco, CA.
- 03/22/17 Michigan State University, East Lansing, MI.
- 03/16/17 University of Illinois, Urbana-Champaign, IL.
- 03/14/17 University of Wisconsin, Madison, WI.
- 11/11/16 Abbvie Process, North Chicago, IL.
- 10/10/16 12th International Symposium on Free Radicals (ISOFR-12), Shanghai, China.
- 10/05/16 *Abbvie Lecture*, California Institute of Technology, Pasadena, CA.
- 10/04/16 Janssen Research and Development, San Diego, CA.
- 09/09/16 Tokyo Institute of Technology, Tokyo, Japan.
- 09/06/16 33rd Seminar of Synthetic Chemistry, Niseko, Hokkaido, Japan. (*Lectureship Award*)
- 09/05/16 Kyoto University, Kyoto, Japan.
- 08/19/16 Pfizer, Groton, CT.
- 07/03/16 Balticum Organicum Syntheticum (BOS 2016), Riga, Latvia.
- 07/01/16 University of Munich, Munich, Germany.
- 06/19/16 French-American Chemical Society Meeting (FACS-XVI), Santa Barbara, CA.
- 06/14/16 ACS Green Chemistry and Engineering Conference, Portland, OR.
- 05/24/16 25th Inter-American Photochemical Society Meeting, Santiago, Chile.
- 05/13/16 Novartis, Cambridge, MA.
- 05/06/16 *Allergan Lecture*, University of California, Irvine, CA.
- 05/05/16 University of California, Riverside, Riverside, CA.
- 05/03/16 *Excellence in Chemistry Symposium*, UT Southwestern Medical Center, Dallas, TX.
- 04/14/16 University of Pittsburgh, Pittsburgh, PA.

- 04/12/16 SUNY Albany, Albany, NY.
- 03/31/16 *Padwa Lecture*, Columbia University, New York, NY.
- 02/05/16 University of Kentucky, Lexington, KY.
- 12/15/15 Pacifichem 2015, Honolulu, HI.
- 10/06/15 DuPont, Wilmington, DE.
- 09/25/15 University of Miami, Coral Gables, FL. (*Student Invited*)
- 08/31/15 *Plenary Lecture*, Science Forum 2015, Dresden, Germany.
- 08/28/15 Eastman Chemical (formally Taminco), Ghent, Belgium.
- 08/26/15 Bayer CropScience, Monheim, Germany.
- 08/16/15 Journal of Organic Chemistry/Organic Letters Symposium, American Chemical Society, National Meeting, Boston, MA.
- 07/17/15 7th Pacific Symposium on Radical Chemistry, Singapore.
- 07/14/15 South University of Science and Technology of China, Shenzhen, China.
- 06/29/15 Dow Agrosiences, Indianapolis, IN.
- 06/05/15 Bristol Myers Squibb, Lawrenceville, NJ.
- 06/05/15 Bristol Myers Squibb, Wallingford, CT.
- 06/03/15 *Genentech Lecture*, University of Ottawa, Ottawa, Canada.
- 04/13/15 Emory University, Atlanta, GA.
- 04/07/15 Peking University Shenzhen Graduate School, Shenzhen, China.
- 04/06/15 Peking University, Beijing, China.
- 04/03/15 Central China Normal University, Wuhan, China.
- 04/02/15 Wuhan University, Wuhan, China.
- 04/01/15 Nanjing University, Nanjing, China.
- 03/31/15 Shanghai Institute of Organic Chemistry, Shanghai, China.
- 03/30/15 East China Normal University, Shanghai, China.
- 01/02/15 24th Inter-American Photochemical Society Winter Conference, Sarasota, FL.
- 11/13/14 Yale University, New Haven, CT.
- 10/16/14 University of California, Berkeley, Berkeley, CA.
- 10/15/14 Amgen Young Investigators' Symposium, Thousand Oaks, CA.
- 10/11/14 2014 Pauling Medal Award Symposium for Prof. Stephen Buchwald, Western Washington University, Bellingham, WA.
- 10/08/14 University of Washington, Seattle, WA.
- 09/18/14 Duke University, Durham, NC.
- 09/16/14 University of Michigan, Ann Arbor, MI.
- 09/08/14 Gilead Sciences, Foster City, CA.
- 08/21/14 Boehringer Ingelheim, Ridgefield, CT.
- 08/05/14 Eli Lilly, Indianapolis, IN.
- 05/23/14 Abbvie, North Chicago, IL.
- 04/30/14 Cambridge University, Cambridge, England.
- 04/29/14 Aachen Universität, Aachen, Germany.
- 04/28/14 Firmenich, Geneva, Switzerland.
- 04/25/14 Universität Regensburg, Regensburg, Germany.
- 04/24/14 Technische Universität München, Munich, Germany.

- 04/10/14 Massachusetts Institute of Technology, Cambridge, MA (*Student Invited*).
- 04/03/14 Bristol Myers Squibb, New Brunswick, NJ.
- 04/01/14 *Sigma-Aldrich Lecture*, Princeton University, Princeton, NJ.
- 03/21/14 *Sigma-Aldrich Lecture*, University of Texas at Austin, Austin, TX.
- 03/19/14 Rice University, Houston, TX
- 02/24/14 *Sigma-Aldrich Lecture*, Colorado State University, Fort Collins, CO.
- 01/27/14 Boston University, Boston, MA.
- 01/16/14 University of California, Los Angeles, Los Angeles, CA.
- 01/15/14 The Scripps Research Institute, La Jolla, CA.
- 09/27/13 Eastman Chemical, Kingsport, TN.
- 09/12/13 Packard Fellows Meeting, Denver, CO.
- 07/24/13 Merck, Rahway, NJ.
- 07/15/13 Gordon Research Conference on Photochemistry, Easton, MA.
- 06/06/13 GlaxoSmithKline, Summer Seminar Series, Research Triangle Park, NC.
- 04/07/13 Photocatalysis in Organic Synthesis Symposium, American Chemical Society, National Meeting, New Orleans, LA.
- 02/21/13 Winthrop University, Rock Hill, SC.
- 11/05/10 Berea College, Berea, KY.
- 10/20/08 Merck Rahway, Rahway, NJ.
- 04/15/08 University of North Carolina at Charlotte, Charlotte, NC.

6) Teaching Activities

a) Course Assignments

- | | |
|-------------|-------------------------|
| 2018-Spring | CHEM 467 (14 students) |
| 2017-Fall | CHEM 791 (35 students) |
| 2017-Spring | CHEM 467 (35 students) |
| 2016-Fall | CHEM 469 (20 students) |
| 2016-Spring | CHEM 467 (22 students) |
| 2015-Fall | CHEM 791 (35 students) |
| 2015-Spring | CHEM 467 (21 students) |
| 2014-Fall | CHEM 760 (9 students) |
| 2013-Fall | CHEM 262H (38 students) |
| 2013-Spring | CHEM 468 (8 students) |
| 2012-Fall | CHEM 261 (230 students) |
| 2012-Summer | CHEM 262 (12 students) |
| 2012-Spring | CHEM 262 (172 students) |
| 2011-Fall | CHEM 466 (30 students) |
| 2011-Spring | CHEM 262 (52 students) |

b) Research Group

1) Current Group

i) Graduate Students

Cortney Cavanaugh: B.S. Monmouth University (5th year student)

Cole Cruz: B.S. University of Rochester (5th year student)

Jeremy Griffin: B.S. Gardner-Webb University (5th year student)
 Natalie Holmberg-Douglas: B.S. California State University Chico (2nd year student)
 Ian MacKenzie: B.S. Geneva College (4th year student)
 Joshua McManus: B.S. University of Michigan (3rd year student)
 Nicholas Onuska: B.S. Kent State University (2nd year student)
 Hudson Roth: B.S. Muhlenberg College (4th year student)
 Megan Schutzbach: B.S. Eastern Illinois University (3rd year student)
 Heqing Sun: B.S. Nanjing University (2nd year student)
 Nicholas Tay: B.S. Messiah College (4th year student)
 Nicholas Venditto: B.S. (1st year student)

ii) Undergraduate Students

None

iii) Postdoctoral Research Associates

Alison Levens: Ph.D. 2016 Monash University
 Michael Mormino: Ph.D. 2017 University of California at Berkeley
 Alex White: Ph.D. 2017 University of California at Irvine

2) Former Students

i) Graduate Students

Alana Kurz: M.S. 2018
 Kaila Margrey: Ph.D. 2018 (currently a research scientist at Merck)
 Nathan Romero: Ph.D. 2017 (currently a postdoc in Swager lab, MIT)
 Mary Zeller: Ph.D. 2016 (currently a consultant)
 Peter Morse: Ph.D. 2015 (currently a research scientist at Pfizer)
 Nathan Gesmundo: Ph.D. 2015 (currently a research scientist at AbbVie)
 Andrew Perkowski: Ph.D. 2014 (currently a postdoc in Aubé lab, UNC)
 Jean-Marc Grandjean: Ph.D. 2014 (currently a research Associate Professor, Institute for Neurodegenerative Diseases, UCSF)
 Tien Nguyen: Ph.D. 2014 (currently a writer at Chemical and Engineering News)
 Michelle Riener: Ph. D. 2014 (currently at Dow, MA)
 David Hamilton: Ph. D. 2014 (currently HS teacher in Brooklyn, NY)
 James Blair: M.S. 2012 (*joint with Prof. Wei You*)

ii) Undergraduate Students

Hunter Ripberger (UNC 2016); Taylor Lammert (UNC 2015); Namita Manohar (UNC 2014); Katie Hounshell (UNC 2013); David Dong (UNC 2013); Collin Price (UNC 2012)

iii) Postdoctoral Research Associates

Kerem Ozboya (currently at Yumanity Therapeutics, Cambridge, MA)
 Dale Wilger (currently an Assistant Professor at Samford University, Birmingham, AL)
 Nicole Torres (currently at Dow, Houston, TX)

iv) Visiting Students

Terry McCallum: University of Ottawa - 2016

c) Awards and Honors of Graduate, Postdoctoral, and Undergraduate Students

2017 – Kaila Margrey – Ernest Eliel Graduate Fellowship (UNC)
 2017 – Joshua McManus – Ledoux Travel Award (UNC)

- 2016 – Alison Levens – Chevron Fellowship, American Australian Association
- 2016 – Nicholas Tay – National Science Foundation Graduate Fellowship
- 2015 – Megan Schutzbach – National Science Foundation Graduate Fellowship
- 2015 – Hudson Roth – Honorable Mention: National Science Foundation Graduate Fellowship
- 2014 – Kaila Margrey – Venable Fellowship (UNC)
- 2014 – Kaila Margrey – Honorable Mention: National Science Foundation Graduate Fellowship
- 2013 – Nathan Romero – Teaching Assistant Award (UNC)
- 2013 – Jean-Marc Grandjean – Dissertation Completion Award (UNC)
- 2013 – Mary Zeller – Honorable Mention: National Science Foundation Graduate Fellowship
- 2012 – Nathan Romero – National Science Foundation Graduate Fellowship
- 2012 – Mary Zeller – Honorable Mention: National Science Foundation Graduate Fellowship

d) Dissertations and Theses

- 10) "Development of Aromatic and Aliphatic C–H Functionalizations via Photoredox Catalysis." Kaila Margrey, 2018.
- 9) "Mechanistic Investigations and the Development of New Transformations in Acridinium-Mediated Photoredox Catalysis." Nathan Romero, 2017.
- 8) "Application of Organic Photoredox Catalysis in New Reaction Methodology: Synthesis of Butyrolactones via Polar Radical Crossover Cycloaddition and Hydrodecarboxylation of Carboxylic Acids." Mary Zeller, 2016.
- 7) "The Development of Complexity Generating Organic Photoredox Transformations and the Application of These Transformations in Complex Molecule Synthesis." Nathan Gesmundo, 2015.
- 6) "The Development of an Enantioselective Cation Radical Diels-Alder Reaction and Other Complexity Generating Transformations." Peter Morse, 2015
- 5) "Direct, Catalytic, Intermolecular Anti-Markovnikov Hydroacetoxylation of Alkenes Enabled via Photoredox Catalysis and Investigations Into the Mechanism of the Polymerization of 4-Methoxystyrene Initiated by Perylium Salts." Andrew Perkowski, 2014.
- 4) "Anti-Markovnikov Addition Reactions of Oxy-Acids to Alkenes Enabled by Photoredox Catalysis." David Hamilton, 2014.
- 3) "Anti-Markovnikov Hydrofluorination, Hydrooxysulfonylation and Hydration of Styrenes; Photoredox Catalytic Polar Radical Crossover Cycloaddition of Olefins and Allylic Nucleophiles." Jean-Marc Grandjean .
- 2) "Synthesis of C₂ Symmetric Cyclobutanes and γ -Butyrolactones via Photoinduced Electron Transfer." Michelle Riener, 2014.
- 1) "Development of Two Organocatalytic Photoredox Transformations: The Enantioselective Cation Radical Diels-Alder Reaction and the Anti-Markovnikov Hydroamination of Alkenes." Tien Nguyen, 2014.

7) Grants

- a) Current Extramural Funding
 - i) "Catalytic Enantioselective Cation Radical-Mediated Transformations." National Institute of General Medical Sciences (R 01 GM098340-06A1), 06/10/2018-05/31/2022, **\$1,281,032** (sole-PI).
 - ii) "Catalytic Methods for Rapid Aromatic Derivatization." National Institute of General Medical Sciences (R 01 GM120186-01), 09/20/2016-07/31/2020, **\$1,107,128** (sole-PI).
 - iii) "CAREER: New Methods for Heterocycle Synthesis via Organic Photoredox Catalysis." National Science Foundation, 07/01/14-06/30/19, **\$600,000** (sole-PI).

- iv) "New Transformations in Synthesis via Organic Photoredox Catalysis." Camille and Henry Dreyfus Foundation, 06/01/15-05/31/20, \$75,000 (sole-PI).
- b) Completed Extramural Funding
 - i) "Catalytic Enantioselective Cation Radical-Mediated Transformations." National Institute of General Medical Sciences (R 01 GM098340-01), 09/01/2011-08/31/2017, **\$1,538,886** (sole-PI).
 - ii) "Solving a Century Old Problem in Chemistry Via Photoredox Catalysis." David and Lucile Packard Foundation, 11/01/12-10/31/17, **\$875,000** (sole-PI).
 - iii) "Development of Novel Catalytic Oligomerization Pathways for New Tackifier Materials via Organic Single Electron Photooxidants." Eastman Chemical, 09/01/13-12/31/16, **\$490,000** (joint with Prof. Wei You).
 - iv) "Boehringer Ingelheim New Investigator Award in Organic Chemistry." Boehringer Ingelheim, 01/01/14-12/31/14, **\$50,000** (sole-PI).
 - v) "Amgen Young Investigators' Award." Amgen, 07/01/14-06/31/15, **\$25,000** (sole-PI).
 - vi) "Eli Lilly Grantee Award." Eli Lilly, 07/01/16-06/31/18, **\$100,000** (sole-PI)

8) Professional Service

- a) Service to Discipline
 - i) Manuscript Reviewer: *ACS Catalysis*, *Angewandte Chemie International Edition*, *Advanced Synthesis and Catalysis*, *Chemical Communications*, *Chemical Science*, *Chemical Society Reviews*, *Journal of the American Chemical Society*, *Journal of Organic Chemistry*, *Nature*, *Nature Chemistry*, *Organic Letters*, *Science*, *Synlett*.
 - ii) Head Organizer, "Photoredox Catalysis in Organic Synthesis," 2015 Pacifichem Conference, Honolulu, HI, 12/15/15 (Co-organizers: Prof. Shunichi Fukuzumi, Osaka University; Prof. Wenjing Xiao, Central China Normal University)
 - iii) Deutschen Forschungsgemeinschaft Proposal Reviewer (2014)
 - iv) Portuguese Foundation for Science and Technology Proposal Reviewer (2012)
 - v) Session Presider, American Chemical Society National Meeting, New Orleans, LA, 04/08/13
 - vi) NSF Proposal Reviewer (2010-present)
 - vii) NIH MIRA Proposal Reviewer (2017)
- b) Advisory Service
 - i) Merck Global Consultant (2015-present)
 - ii) Advisory Board Member, *CHEM* (2016-present)
 - iii) Advisory Board Member, *Organic Letters* (2017-present)
 - iv) Associate Editor, *Synlett* (2018-present)