

## Tevye C. Celius

Department of Chemistry and Biochemistry  
Ohio Northern University  
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### Education

Ph.D., Organic Chemistry, Cornell University, 2001  
Advisor: Professor B. K. Carpenter  
Thesis: Synthesis of Labeled 5-Methyl-5-(3-phenylpropyl)bicyclo [2.1.0]pentanes for Dynamic Studies

M.S., Organic Chemistry, Cornell University, 1997  
Advisor: Professor B. K. Carpenter

B.S., Chemistry (*cum laude*), University of Puget Sound, 1995  
Advisor: Professor W. Dasher  
Thesis: Progress Toward the Total Synthesis of Alcedrol

### Experience

#### Teaching

2010-Present Associate Professor of Chemistry at Ohio Northern University  
2005-2010 Assistant Professor of Chemistry at Ohio Northern University  
2003-2005 Visiting Assistant Professor of Chemistry at Bucknell University

#### Research

2012 Visiting Scientist at the Physical Organic Chemistry Centre at Cardiff University

2005-Present Advised twenty-one undergraduate research students at Ohio Northern University

- Design, synthesis, and evaluation of photocontrollable sources of nitric oxide and nitroxyl
- Design and synthesis of long-wavelength photocontrollable protecting groups
- Design, synthesis, and evaluation of solvatochromic dyes
- Computational investigation of excited states of solvatochromic dyes

2003-2005 Advised four undergraduate research students at Bucknell University

- Design, synthesis, and testing of photocontrollable sources of nitroxyl
- Computational investigation of photochemical reactions
- Design and synthesis of long-wavelength photocontrollable protecting groups
- Design and synthesis of solvatochromic dyes

2001-2003 Postdoctoral Fellow with Professor J. P. Toscano, The Johns Hopkins University

- Design, synthesis, and testing of photocontrollable sources of nitroxyl and nitric oxide
- Computational and experimental investigation of reactive intermediates in photochemical reactions
- Supervised undergraduates in the research lab

- 1995-2001 Graduate Research with Professor B. K. Carpenter, Cornell University
- Design and implementation of multi-step syntheses
  - Synthesis of isotopically labeled compounds
  - Investigation of dynamically controlled thermal rearrangements of hydrocarbons
- 1994-1995 Undergraduate Research with Professor W. Dasher, University of Puget Sound
- Synthesis of sesquiterpenoid natural products

## Research Interests

Quadruplex DNA interactive agents  
Synthesis and spectroscopic study of solvatochromic dyes  
Computational investigation of excited states  
Design of novel nitric oxide and nitroxyl delivery systems for use in biological and medical applications  
Long wavelength photolabile protecting groups  
Investigation of the role of conical intersections in the mechanisms and reaction dynamics of organic photochemistry  
Quantum mechanics

## Technical Skills

- Laboratory** Experience with multi-step syntheses, micro-scale methods, isotopic labeling, photochemical reactors, flash vacuum pyrolysis, dry boxes, and Ace-Burlitch vacuum lines
- Experience using FCC, HPLC, GC, GC-MS, Multinuclear-NMR, FTIR, UV-Vis, FL, time resolved IR, time resolved UV-Vis, chemical microscopy, and molecule specific probes
- Computer** Familiar with Macintosh, Windows, Unix, and Linux operating systems
- Experience performing molecular modeling and *ab initio* electronic structure calculations (GAMESS, Gaussian, and Spartan)
- Experience setting up and maintaining computer labs for use in courses

## Training Completed

“NMR New Users Course”, Varian, Palo Alto, California, 2006  
“Polarized Light Microscopy”, McCrone Research Institute, Ithaca, New York, 1995

## Honors

Eleanor H. & Robert W. Biggs Chair in Chemistry 2010-11  
Outstanding Teaching Faculty Award for Chemistry and Biochemistry, 2009  
Department of Education Fellowship, 1998-2001  
Dupont Teaching Award, 1998  
Feldahlt Scholarship in Chemistry, 1994  
Phi Beta Kappa  
Phi Kappa Phi

## Professional Affiliations

American Chemical Society  
Council on Undergraduate Research

## Select Activities

American Chemical Society, Northwest Central Ohio Past-Chair 2011  
American Chemical Society, Northwest Central Ohio Chair 2009 and 2010  
American Chemical Society, Northwest Central Ohio Chair Elect and Program Committee Chair, 2007 and 2008  
American Chemical Society, Northwest Central Ohio National Chemistry Week Coordinator, 2007-2011  
American Chemical Society, Northwest Central Ohio Member at Large, 2006  
NSF TUES Program Panel Reviewer, 2010  
ONU University Higher Learning Commission Agenda 1 Committee, 2013-present  
ONU University Phi Beta Kappa Committee, 2010-present  
ONU College of Arts and Sciences Strategic Planning Committee, 2007-2008  
Taught in the chemistry summer honors institute, 2007, 2008, and 2009  
ONU Student Research Colloquium Committee, 2009-2010  
ONU Undergraduate Research Colloquium Committee, 2006-2007  
ONU College of Arts and Sciences *ad hoc* Committee on Undergraduate Research, 2005-2006  
Departmental Assessment Team, 2013-present  
Departmental Seminars Team, 2013-present  
Departmental Networking Team, 2011-2013  
Departmental Students Team, 2006-2011  
Departmental Publicity Team, 2005-2006  
Coordinator for organic laboratories, 2009-2012  
Student Members of the American Chemical Society, Faculty Advisor, 2005-Present  
ONU Outbreak, Faculty Advisor, 2009-2011

## Publications

“Photogeneration and Reactivity of Acyl Nitroso Compounds” Evans, A. S.; Cohen, A. D.; Gurard-Levin, Z. A.; Kebede, N.; Celius, T. C.; Miceli, A. P.; Toscano, J. P. *Can. J. Chem.* **2011**, 89, 130-138.

“Fast Hetero-Diels-Alder Reactions Using 4-Phenyl-1,2,4-triazoline-3,5-dione (PTAD) as the Dienophile” Celius, T. C. *J. Chem. Ed.* **2010**, 87, 1236-1237.

“New Potentials for Old: The Darboux Transformation in Quantum Mechanics” Williams, B. W.; Celius, T. C. *J. Chem. Ed.* **2008**, 85, 576-584.

“The Photochemistry of Diazirines” Celius, T. C.; Toscano, J. P. in *The CRC Handbook of Organic Photochemistry and Photobiology (2nd edition)*; Horspool, W. editor., **2004**.

“The Photochemistry of  $\alpha$ -Diazocarbonyl Compounds” Celius, T. C.; Wang, Y.; Toscano, J. P. in *The CRC Handbook of Organic Photochemistry and Photobiology (2nd edition)*; Horspool, W. editor., **2004**.

“Controlled Photochemical Release of Nitric Oxide from *O*<sup>2</sup>-Naphthylmethyl- and *O*<sup>2</sup>-Naphthylallyl-Substituted Diazeniumdiolates” Bushan, K. M.; Xu, W.; Ruane, R. H.; D'Sa, R. A.; Pavlos, C. M.; Smith, J. A.; Celius, T. C.; Toscano, J. P. *J. Am. Chem. Soc.* **2002**, 124, 12640-12641.

## Presentations

Laila Oudean\* and Tevye C. Celius, ACS National Meeting (poster session), Dallas, Texas, 2014 (Abstract Accepted)

Tevye C. Celius, North West Central Local Section of the American Chemical Society (oral presentation), Ada, Ohio, 2013

Tevye C. Celius, Cardiff Physical Organic Chemistry Centre (oral presentation), Cardiff, Wales, 2012

Mitchel Thayer\*, Lee Zimmerman\*, Elizabeth Crandal\*, Kathrine Kinkelaar\*, Nicole Dickson, and Tevye C. Celius, ACS National Meeting (poster session), San Diego, California, 2012

Lisa Meyers\*, Samuel F. Manzer\*, Jeffrey T. Wilson\*, Emily Middleton\*, and Tevye C. Celius, ACS National Meeting (poster session), Salt Lake City, Utah, 2009

Nicole Hume\* and Tevye C. Celius, Central Regional Meeting of the American Chemical Society (poster session), Columbus, Ohio, 2008

Emily Middleton\*, Lisa Meyers\*, and Tevye C. Celius, Central Regional Meeting of the American Chemical Society (poster session), Columbus, Ohio, 2008

Emily Middleton\*, Lisa Meyers\*, Jeffrey Wilson\*, and Tevye C. Celius, Butler Undergraduate Research Conference (poster session), Indianapolis, Indiana, 2008

Nicholas J. Dunn\*, Tevye C. Celius, Jeffrey A. Gray, ACS National Meeting (poster session), New Orleans, Louisiana, 2008

Tevye C. Celius, Sigma Xi Chapter at Ohio Northern University, Ada, Ohio, 2007

Tevye C. Celius, California State University, Stanislaus, Turlock, California, 2005

Tevye C. Celius, Missouri Western State College, St. Joseph, Missouri, 2005

Tevye C. Celius, Ohio Northern University, Ada, Ohio, 2005

Tevye C. Celius, Albright College, Reading, Pennsylvania, 2005

Kristin M. Sandri\*, David, T. Boruta\*, Tevye C. Celius, American Institute of Chemical Engineers Annual Meeting (poster session), Austin, Texas, 2004

Tevye C. Celius, Central College, Pella, Iowa, 2003

Tevye C. Celius, Swarthmore College, Philadelphia, Pennsylvania, 2003

Tevye C. Celius, Bucknell University, Philadelphia, Pennsylvania, 2003

Tevye C. Celius, Thomas H. Peterson, and Barry K. Carpenter, Reaction Mechanisms Conference (poster session), Madison, Wisconsin, 2000

\* Undergraduate collaborators

## Grant Applications

NSF-MRI, "MRI: Acquisition of a 400 MHz Nuclear Magnetic Resonance Spectrometer for Research and Undergraduate Student Training at Ohio Northern University", 2011

NSF-MRI, "MRI: Acquisition of a Spectrofluorometer with Lifetime Measurement Capabilities at Ohio Northern University", 2011

NSF-RUI, "Collaborative Research-RUI: Benzofluorenone Compounds as Quadruplex DNA Interactive Agents", 2010

NSF-MRI, "MRI: Acquisition of a Spectrofluorometer with Lifetime Measurement Capabilities at Ohio Northern University", 2010

NSF-RUI, "Collaborative Research-RUI: Solvatochromic Benzofluorenones as "Self-Reporting" Quadruplex DNA Interactive Agents", 2009

NSF-MRI, "MRI-R2: Acquisition of a 400 MHz Nuclear Magnetic Resonance Spectrometer for Research and Undergraduate Student Training at Ohio Northern University", 2009

Teledyne Isco Organic Synthetic Chemistry Grant, 2008\*

ONU Faculty Development Grant, "Solvatochromic Dyes Based On The Oxazzone Skeleton", 2006\*

Henry and Camille Dreyfus Foundation's Faculty Start-up Awards Program, 2005

NIH postdoctoral fellowship, 2002.

\* Funded ‡ Pending

### **Meetings and Workshops Attended**

ACS National Meeting, Indianapolis, Indiana, 2013

ACS National Meeting, Denver, Colorado, 2011

ACS National Meeting, Anaheim, California, 2011

ACS National Meeting, Salt Lake City, Utah, 2009

Central Regional Meeting of the American Chemical Society, Columbus, Ohio, 2008

Butler Undergraduate Research Conference, Indianapolis, Indiana, 2008

"Innovations in Undergraduate Science Education: Modeling and Computational Science in Biology and Chemistry", Gambier, Ohio, 2007

ACS National Meeting, Chicago, Illinois, 2007

Reaction Mechanisms Conference, College Park, Maryland, 2006

CUR Institute "Initiating and Sustaining Undergraduate Research Programs", Harrisonburg, Virginia, 2006

Reaction Mechanism Conference, Madison, Wisconsin, 2000

ACS National Meeting, Boston, Massachusetts, 1998

ACS National Meeting, San Diego, California, 1994