

**Bart J. Dahl**

Department of Chemistry  
University of Wisconsin-Eau Claire  
Eau Claire, WI 54702  
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**EDUCATION**

- 2002-2006      **University of Oregon**, Eugene, OR  
Ph.D. in Organic Chemistry  
Graduate Dissertation: *The Design and Synthesis of Prototypical Artificial Molecular Motors: Studies of Directed Bond Rotation in Chiral Biaryls*  
Advisor: Bruce P. Branchaud
- 1995-2001      **University of Wisconsin-Oshkosh**, Oshkosh, WI  
B.S. in Chemistry *Magna cum Laude*  
Undergraduate Thesis: *Probing Molecular Surface Adsorption with Electrochemical Pb Underpotential Deposition on Polycrystalline Au Surfaces*  
Advisor: Xiangqun Zeng

**PROFESSIONAL EXPERIENCE**

- 2010-present      **University of Wisconsin-Eau Claire**, Eau Claire, WI  
Assistant Professor of Chemistry
- 2009-2010      **University of Saint Thomas**, Saint Paul, MN  
Assistant Professor of Chemistry
- 2008-2009      **Trinity University**, San Antonio, TX  
Visiting Assistant Professor of Chemistry
- 2007-2008      **Trinity University**, San Antonio, TX  
Postdoctoral Research Associate  
Advisor: Nancy S. Mills
- 2001-2002      **Sigma-Aldrich Fine Chemicals**, Sheboygan Falls, WI  
Associate Chemist, Pyrophoric Chemical Division

## **PROFESSIONAL MEMBERSHIPS**

American Chemical Society, Organic Division  
Council on Undergraduate Research

## **TEACHING EXPERIENCE**

- 2010-present      **University of Wisconsin-Eau Claire**  
Organic Chemistry I and II Lecture and Laboratory  
General Chemistry I Lecture and Laboratory
- 2009-2010      **University of Saint Thomas**  
Organic Chemistry I and II Lecture and Laboratory
- 2008-2009      **Trinity University**  
Organic Chemistry I and II Lecture and Laboratory  
2007-2008      Organic Chemistry Laboratory and General Chemistry Laboratory
- 2004-2006      **University of Oregon**  
Teaching Assistant for Advanced Organic Synthesis Summer Laboratory  
2002-2003      Teaching Assistant for Green Organic Chemistry Laboratory

## **EXTERNALLY-FUNDED RESEARCH GRANTS**

- 2012      \*R21CA157395 NIH/NCI CA10-005: Innovative Molecular Analysis Technologies for Cancer. "Label-free, real-time detection of kinase activity in vitro and in single cells using surface-enhanced Raman spectroscopy." PI: Laurie Parker, Purdue University, West Lafayette, IN. Role: Key Collaborator (synthesis of deuterated amino acid monomers). Funding: \$10,612. 7/2012-6/2013.
- 2011      \*American Chemical Society PRF-51259-UNI1. "The Design, Synthesis, and Characterization of "Smart" Donor-Acceptor Biaryls." Role: PI. University of Wisconsin-Eau Claire, Eau Claire, WI. Funding: \$50,000. 9/2011-8/2013
- 2010      \*National Science Foundation CHE-0959322. "MRI-R2: Acquisition of a 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer." Role: Co-PI. University of Saint Thomas, Saint Paul, MN. Funding: \$246,000. 3/2010.

## **INTERNALLY-FUNDED RESEARCH GRANTS**

- 2012 \* Summer Research Experience for Undergraduates Grant, "Synthesis of Redox Switchable Terphenyls." Role: PI. University of Wisconsin-Eau Claire. Funding: \$5,100. 7/2012-5/2013.
- \*Student Travel Grants to attend the 2012 American Chemical Society Spring National Meeting in San Diego, CA for Erick Carlson and Asia Riel. Funding: \$1400. 2/21/2012.
- 2011 \*Faculty-Student Research Collaboration Grant, "Synthesis of Soluble Monodisperse Oligophenyl Ladder Lactones ." Role: PI. University of Wisconsin-Eau Claire. Funding: \$2,800. 9/2011-5/2012.
- \*Summer Research Experience for Undergraduates Grant, "Exploring Donor-Acceptor Bridged Biphenyl Sultine Systems: Synthesis and Characterization." Role: PI. University of Wisconsin-Eau Claire. Funding: \$6,800. 7/2011-5/2012.
- 2010 \*Faculty-Student Research Collaboration Grant, "Exploring Bridged Biphenyl Systems as Molecular Switches: Synthesis and Characterization." Role: PI. University of Wisconsin-Eau Claire. Funding: \$2,800. 11/2010-5/2011.

## **ACADEMIC HONORS AND AWARDS**

### **Trinity University**

- 2008 \*Postdoctoral Workshop for Prospective Chemistry Faculty Travel Grant

### **University of Oregon**

- 2004-2007 \*National Science Foundation IGERT Fellowship (awarded 3 times)  
2003-2004 \*US Department of Education GAANN Fellowship

### **University of Wisconsin-Oshkosh**

- 2000-2001 \*The American Institute of Chemists Foundation and the Northeast Wisconsin Section of the American Chemical Society Outstanding Senior Chemistry Major  
\*UW-Oshkosh Department of Chemistry Alumni Research Award  
\*American Chemical Society Undergraduate Award in Analytical Chemistry
- 1999-2000 \*Gilbert F. and Katherine L. Pollnow Scholarship for Outstanding Achievement in Physical Chemistry

## **PEER REVIEWED PUBLICATIONS**

Mills, Nancy S.; Cheng, Francine E.; Baylan, Joseph M.; Tirla, Cornelia; Hartmann, Jennifer L.; Patel, Kiran C.; Dahl, Bart J.; McClintock, Sean P. "Dications of 3-Phenyl-indenylidene Dibenzo[a,d]cycloheptene: The Role of Charge in the Antiaromaticity of Cationic Systems." *J. Org. Chem.* **2011**, *76*, 645-653.

Dahl, Bart J.; Mills, Nancy S. "Antiaromaticity in Distal Bisfluorenyl Dications Separated by Multiple Discrete Spacer Units." *Org. Lett.* **2008**, *10*, 5605-5608

Dahl, Bart J.; Mills, Nancy S. "Antiaromatic Spacer-Bridged Dications Generated by Superacid Induced Ionization." *J. Am. Chem. Soc.* **2008**, *130*, 10179-10186.

Dahl, Bart J.; Branchaud, Bruce P. "180° Unidirectional Bond Rotation in a Biaryl Lactone Artificial Molecular Motor Prototype." *Org. Lett.* **2006**, *8*, 5841-5845.

Lin, Ying; Dahl, Bart J.; Branchaud, Bruce P. "Net Directed 180° Aryl-Aryl Bond Rotation in a Prototypical Achiral Biaryl Lactone Synthetic Molecular Motor." *Tetrahedron Lett.* **2005**, *46*, 8359-8362.

Dahl, Bart J.; Branchaud, Bruce P. "Synthesis and Characterization of a Functionalized Chiral Biaryl Capable of Exhibiting Unidirectional Bond Rotation." *Tetrahedron Lett.* **2004**, *45*, 9599-9602.

### **PRESENTATIONS**

Riel, Asia M. S.; Dahl, Bart J. "A "Smart" Biphenyl Lactone Containing a Nitro Acceptor and Methoxy Donor." 20th Annual UWEC Student Research Day, Eau Claire, WI, April 30-May 2, 2012. Poster Presentation.

Sortedahl, Nicholas J.; Dahl, Bart J. "A "Synthesis and Study of Monodispersed Oligophenyl Lactones." 20th Annual UWEC Student Research Day, Eau Claire, WI, April 30-May 2, 2012. Poster Presentation.

Wiltgen, Hilary, E.; Dahl, Bart J. "Synthesis and Characterization of "Smart" Biaryl Sultines." 20th Annual UWEC Student Research Day, Eau Claire, WI, April 30-May 2, 2012. Poster Presentation.

Carlson, Erick J.; Dahl, Bart J. "Synthesis and Study of Methoxy-Donor/Cyano-Acceptor Biphenyl and Terphenyl Lactones." 20th Annual UWEC Student Research Day, Eau Claire, WI April 30-May 2, 2012. Poster Presentation.

Carlson, Erick J.; Dahl, Bart J. "Synthesis and study of methoxy-donor cyano-acceptor biphenyl and terphenyl lactones." Abstracts of Papers, 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-March 29, 2012, ORGN-109. Poster Presentation.

Riel, Asia M.; Dahl, Bart J. "Smart biphenyl lactone containing a nitro acceptor and methoxy donor capable of pH-driven dihedral angle switching." Abstracts of Papers, 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-March 29, 2012, ORGN-108. Poster Presentation.

Dahl, B. J. "Flat to Fun: Making Molecules with Shapes that Influence Function" UWEC Faculty Forum Series, *Eau Claire, WI, November 16, 2011*. Invited Oral Presentation.

Carlson, E.; Riel, A.; Dahl B. J. "The Design, Synthesis, and Characterization of "Smart" Donor-Acceptor Biaryls" 19th Annual UWEC Student Research Day, *Eau Claire, WI May 2-4, 2011*. Poster Presentation.

Dahl, B. J.; Lin, Y.; Branchaud, B. P. "Unidirectional Aryl-Aryl Bond Rotation in Biaryl Lactone Prototypical Synthetic Molecular Motors" *Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006*, ORGN-665. Oral Presentation

Dahl, B. J.; Branchaud, B. P. "Toward Synthetic Molecular Motors: Studies of Chiral Biaryls Designed to Exhibit Unidirectional Bond Rotation" *Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17, 2005*, ORGN-217. Poster Presentation.

Dahl, B. J.; Lin, Y.; James, Z.; Schwenger, T.; Branchaud, B. P. "In Pursuit of Chiral Biaryl Synthetic Molecular Motors and Ratchets" *University of Oregon Materials Science Institute Annual Retreat, Skamania Lodge, WA, United States, September 2005*. Poster Presentation.

Dahl, B. J.; Lin, Y.; Branchaud, B. P. "The Design and Synthesis of Functionalized Chiral Biaryls Capable of Exhibiting Molecular Motor Properties" *University of Oregon Materials Science Institute Annual Retreat, Timberline Lodge, OR, United States, September 2004*. Invited Oral Presentation.

Dahl, B. J.; Linke, H.; Branchaud, B.P. "Nanomachines" *Oregon Nanoscience and Microtechnologies Institute Open House Meeting, Corvallis, OR, United States, April 2004*. Poster Presentation.

Dahl, B. J.; Branchaud, B. P. "Toward single molecule motors: Exploring unidirectional bond rotation" *Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004*, ORGN-351. Poster Presentation.

Dahl, B. J.; Branchaud, B. P. "Synthetic Molecular Motors" *University of Oregon Materials Science Institute Annual Retreat, Timberline Lodge, OR, United States, September 2003*. Poster Presentation.