

CURRICULUM VITAE  
**Dr. Brian Hale Northrop**

Wesleyan University  
Hall-Atwater Laboratories  
52 Lawn Ave  
Middletown, CT 06457 USA

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**Employment**

Associate Professor (2015 – Present)  
Assistant Professor (2009 – 2015)  
Wesleyan University  
Department of Chemistry

2006 – 2009  
NIH Postdoctoral Fellow  
University of Utah  
Department of Chemistry  
Advisor: Peter J. Stang

**Education**

2002 – 2006  
Doctor of Philosophy  
University of California, Los Angeles  
Department of Chemistry and Biochemistry  
Advisors: K. N. Houk and J. Fraser Stoddart

1997 – 2001  
Bachelor of Arts, with Honors  
Middlebury College  
Major: Chemistry, Minors: Physics, Math  
Advisor: J. H. Byers

**Awards**

- Thieme Chemistry Journal Award, 2015
- NSF CAREER Award, 2014-2019
- ACS PRF Doctoral New Investigator, 2010-2012
- NIH NRSA Postdoctoral Fellowship, 2007–2010
- IUPAC Prize for Young Chemists, Honorable Mention, 2007
- Thomas L. and Ruth Jacobs Organic Dissertation Award, 2006
- ACS Division of Organic Chemistry Graduate Fellowship, 2005–2006
- NSF IGERT: Materials Creation Training Program Graduate Fellowship, 2003–2005

**Publications** (in reverse chronological order, undergraduate coauthors are underlined)

57. Chavez, A. D.; Smith, B. J.; Smith, M. K.; **Northrop, B. H.**; Dichtel, W. R. The Self-Assembly and Aggregation Behavior of Discrete, Hexagonal Boronate Ester Macrocycles Resembling COF-5. *In Preparation*.
56. Goldberg, A. R.; **Northrop, B. H.** Spectroscopic and Computational Investigations of the Thermodynamics of Boronate Ester and Diazaborole Self-Assembly. *In Preparation*.
55. **Northrop, B. H.**; Frayne, S. H.; Choudhary, U. Thiol-Maleimide “Click” Chemistry: Evaluating the Influence of Solvent, Initiator, and Thiol on the Reaction Mechanism, Kinetics, and Selectivity. *Polym. Chem.* **2015**, *6*, 3415-3430.
54. Smith, M. K.; Goldberg, A. R.; **Northrop, B. H.** The Dynamic Assembly of Covalent Organic Polygons: Finding the Optimal Balance of Solubility, Functionality, and Stability. *Eur. J. Org. Chem.*, **2015**, 2928-2941.
53. Smith, M. K.; Angle, S. R.; **Northrop, B. H.** Preparation and Analysis of Cyclodextrin-Based Metal-Organic Frameworks (CD-MOFs): Laboratory Experiments Adaptable for High School through Advanced Undergraduate Laboratories. *J. Chem. Educ.* **2015**, *92*, 368-372.
  - Featured on the cover of the February issue of *J. Chem. Educ.*
52. Smith, M. K.; Powers-Riggs, N. E.; **Northrop, B. H.** Rational Synthesis of Bis(hexyloxy)-Tetra(hydroxy)-Triphenylenes and their Derivatives. *RSC Adv.* **2014**, *4*, 38281-38292.

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51. Smith, M. K.; **Northrop, B. H.** Vibrational Properties of Boroxine Anhydride and Boronate Ester Materials: Model Systems for the Diagnostic Characterization of Covalent Organic Frameworks. *Chem. Mater.* **2014**, *26*, 3781-3795.
50. Choudhary, U.; **Northrop, B. H.** Allyl-Functionalized Dioxynaphthalene[38]Crown-10 Macrocycles: Synthesis, Self-Assembly, and Thiol-Ene Functionalization. *Chem.–Eur. J.* **2014**, *20*, 999-1009.
49. Stolz, R. M.; **Northrop, B. H.** Experimental and Computational Studies of Selective Thiol-Ene and Thiol-Yne Click Chemistry Involving *N*-Substituted Maleimides. *J. Org. Chem.* **2013**, *78*, 8105-8116.
48. Smith, M. K.; Powers-Riggs, N. E., **Northrop, B. H.** Discrete, Soluble Covalent Organic Boronate Ester Rectangles. *Chem. Commun.* **2013**, *49*, 6167-6169.
47. **Northrop, B. H.**; Coffey, Roderick N. Thiol-Ene Click Chemistry: Computational and Kinetic Analysis of the Influence of Alkene Functionality. *J. Am. Chem. Soc.* **2012**, *134*, 13804-13817.
46. Choudhary, U.; **Northrop, B. H.** Rotaxanes and Biofunctionalized Pseudorotaxanes via Thiol-Maleimide Click Chemistry. *Org. Lett.* **2012**, *14*, 2082-2085.
45. Boutelle, R. C.; **Northrop, B. H.** Substituent Effects on the Reversibility of Furan-Maleimide Cycloadditions. *J. Org. Chem.* **2011**, *76*, 7994-8002.

### Publications prior to Wesleyan University:

44. Brocker, E. R.; Anderson, S. E.; **Northrop, B. H.**; Stang, P. J.; Bowers, M. T. Structures of Metallosupramolecular Coordination Assemblies Can Be Obtained by Ion Mobility Spectrometry-Mass Spectroscopy. *J. Am. Chem. Soc.* **2010**, *132*, 13486-13494.
43. Zhao, G.-J.; **Northrop, B. H.**; Han, K.-L.; Stang, P. J. The Effect of Intermolecular Hydrogen Bonding on the Fluorescence of a Bimetallic Platinum Complex. *J. Phys. Chem. A* **2010**, *114*, 9007-9013.
42. Zhao, G.-J.; **Northrop, B. H.**; Stang, P. J.; Han, K.-L. Photophysical Properties of Coordination-Driven Self-Assembled Metallosupramolecular Rhomboids: Experimental and Theoretical Investigations. *J. Phys. Chem. A* **2010**, *114*, 3418-3422.
41. Flynn, D. C.; Ramakrishna, G.; Yang, H.-B.; **Northrop, B. H.**; Stang, P. J.; Goodson, T. Ultrafast Optical Excitations in Supramolecular Metallacycles with Charge Transfer Properties. *J. Am. Chem. Soc.* **2010**, *132*, 1348-1358.
40. Chen, T.; Pan, G.-B.; Wettach, H.; Frizsche, M.; Hoger, S.; Wan, L.-J.; Yang, H.-B.; **Northrop, B. H.**; Stang, P. J. 2D Assembly of Metallacycles on HOPG by Shape-Persistent Macrocyclic Templates. *J. Am. Chem. Soc.* **2010**, *132*, 1328-1333.
39. Maag, R.; **Northrop, B. H.**; Butterfield, A.; Linden, A.; Zerbe, O.; Lee, Y. M.; Chi, K.-W.; Stang, P. J.; Siegel, J. S. Synthesis and X-Ray Structural Analysis of Platinum and Ethynyl-Platinum Corannulenes: Supramolecular Tectons. *Org. Biomol. Chem.* **2009**, *7*, 4881-4885.
38. **Northrop, B. H.**; Zheng, Y.-R.; Chi, K.-W.; Stang, P. J. Self-Organization in Coordination-Driven Self-Assembly. *Acc. Chem. Res.* **2009**, *42*, 1554-1563.
37. Yang, H.-B.; **Northrop, B. H.**; Zheng, Y.-R.; Ghosh, K. Stang, P. J. Facile Self-Assembly of Neutral Dendritic Metalloacycles via Oxygen-to-Platinum Coordination. *J. Org. Chem.* **2009**, *74*, 7067-7074.
36. Ghosh, K.; Hu, J.; Yang, H.-B.; **Northrop, B. H.**; White, H. S.; Stang, P. J. Introduction of Heterofunctional Groups onto Molecular Hexagons via Coordination-Driven Self-Assembly. *J. Org. Chem.* **2009**, *74*, 4828-4833.
35. Zheng, Y.-R.; **Northrop, B. H.**; Yang, H.-B.; Zhao, L.; Stang, P. J. Geometry Directed Self-Selection in the Coordination-Driven Self-Assembly of Irregular Supramolecular Polygons. *J. Org. Chem.* **2009**, *74*, 3554-3557.

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34. Yang, H.-B.; **Northrop, B. H.**; Zheng, Y.-R.; Ghosh, K.; Lyndon, M. M.; Muddiman, D. C.; Stang, P. J. Synthesis of Six-Component Metallodendrimers via [3+3] Coordination-Driven Self-Assembly. *J. Org. Chem.* **2009**, *74*, 3524-3527.
33. Li, S.-S.; **Northrop, B. H.**; Yuan, Q.-H.; Wan, L.-J.; Stang, P. J. Surface Confined Metallosupramolecular Architectures: Formation and STM Characterization. *Acc. Chem. Res.* **2009**, *42*, 249-259.
32. **Northrop, B. H.**; Houk, K. N.; Maliakal, A. Photostability of Pentacene and 6,13-Disubstituted Pentacene Derivatives: A Theoretical and Experimental Mechanistic Study. *Photochemical and Photobiological Sciences* **2008**, *7*, 1463-1468.
31. **Northrop, B. H.**; Yang, H.-B.; Stang, P. J. Exploring the Limits of Self-Organization in the Self-Assembly of Supramolecular Metallacycles. *Inorg. Chem.* **2008**, *47*, 11257-11268.
30. **Northrop, B. H.**; Yang, H.-B.; Stang, P. J. Coordination-Driven Self-Assembly of Functionalized Supramolecular Metallacycles. *Chem. Commun.* **2008**, 5896-5908.
29. Ghosh, K.; Zhao, Y.; Yang, H.-B.; **Northrop, B. H.**; White, H. S.; Stang, P. J. Synthesis of a New Family of Hexakisferrocenyl Hexagons and Their Electrochemical Behavior. *J. Org. Chem.* **2008**, *73*, 8553-8557.
28. **Northrop, B. H.**; Chercka, D.; Stang, P. J. Self-Assembly of Carbon-Rich Supramolecular Metallacycles and Metallacages. *Tetrahedron* **2008**, *64*, 11495-11503.
27. Wang, L.; Chen, Q.; Pan, G.-B.; Wan, L.-J.; Zhang, S.; **Northrop, B. H.**; Stang, P. J. Nanopatterning of Donor/Acceptor Hybrid Supramolecular Architectures on HOPG: An STM Study. *J. Am. Chem. Soc.* **2008**, *130*, 13433-13441.
26. Zhao, L.; **Northrop, B. H.**; Stang, P. J. Supramolecule-to-Supramolecule Transformations of Coordination-Driven Self-Assembled Polygons. *J. Am. Chem. Soc.* **2008**, *130*, 11886-11888.
25. Zhao, L.; **Northrop, B. H.**; Zheng, Y.-R.; Yang, H.-B.; Lee, H. J.; Lee, Y. M.; Park, J. Y.; Chi, K.-W.; Stang, P. J. Self-Selection in the Self-Assembly of Isomeric Supramolecular Squares from Unsymmetrical Bis(4-pyridyl)acetylene Ligands. *J. Org. Chem.* **2008**, *73*, 6580-6586.
24. Yuan, Q.-H.; Yan, C.-J.; Yan, H.-J.; Wan, L.-J.; **Northrop, B. H.**; Jude, H.; Stang, P. J. An STM Investigation of a Supramolecular Self-Assembled 3-Dimensional Chiral Prism on a Au(111) Surface. *J. Am. Chem. Soc.* **2008**, *130*, 8878-8879.
23. Zheng, Y.-R.; Yang, H.-B.; **Northrop, B. H.**; Ghosh, K.; Stang, P. J. Size Selective Self-Sorting in Coordination-Driven Self-Assembly of Finite Ensembles. *Inorg. Chem.* **2008**, *47*, 4706-4711.
22. Ghosh, K.; Yang, H.-B.; **Northrop, B. H.**; Lyndon, M. M.; Zheng, Y.-R.; Muddiman, D. C.; Stang, P. J. Coordination-Driven Self-Assembly of Cavity-Cored Multiple Crown Ether Derivatives and Poly[2]pseudorotaxanes. *J. Am. Chem. Soc.* **2008**, *130*, 5320-5334.
21. Yang, H.-B.; Ghosh, K.; Zhao, Y.; **Northrop, B. H.**; Lyndon, M. M.; Muddiman, D. C.; White, H. S.; Stang, P. J. A New Family of Multiferrrocene Complexes with Enhanced Control of Structure and Stoichiometry via Coordination-Driven Self-Assembly and their Electrochemistry. *J. Am. Chem. Soc.* **2008**, *130*, 839-841.
20. **Northrop, B. H.**; Glöckner, A.; Stang, P. J. Functionalized Hydrophobic and Hydrophilic Self-Assembled Supramolecular Rectangles. *J. Org. Chem.* **2008**, *73*, 1787-1794.
19. Yang, H.-B.; Ghosh, K.; **Northrop, B. H.**; Zheng, Y.-R.; Lyndon, M. M.; Muddiman, D. C.; Stang, P. J. A Highly Efficient Approach to the Self-Assembly of Hexagonal Cavity-Cored Tris[2]pseudorotaxanes from Several Components via Multiple Noncovalent Interactions. *J. Am. Chem. Soc.* **2007**, *129*, 14187-14189.

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18. Li, S.-S.; Yan, H.-J.; Wan, L.-J.; Yang, H.-B.; **Northrop, B. H.**; Stang, P. J. The Control of Supramolecular Rectangle Self-Assembly with a Molecular Template. *J. Am. Chem. Soc.* **2007**, *129*, 9268-9269.
17. Yang, H.-B.; Ghosh, K.; **Northrop, B. H.**; Stang, P. J. Self-Recognition in the Coordination-Driven Self-Assembly of Three-Dimensional  $M_3L_2$  Polyhedra. *Org. Lett.* **2007**, *9*, 1561-1564.
16. **Northrop, B. H.**; Spruell, J. M.; Stoddart, J. F. Efficient Routes to Novel Molecular Architectures: Template-Directed Self-Assembly of Mechanically Interlocked Suitanes. *Chimica Oggi CHEMISTRY TODAY.* **2007**, *25*, 38-41.
15. **Northrop, B. H.**; Norton, J. E.; Houk, K. N. On the Mechanism of Peripentacene Formation from Pentacene: Computational Studies of a Prototype for Graphene Formation from Smaller Acenes. *J. Am. Chem. Soc.* **2007**, *129*, 6536-6546.
14. Rogez, G.; Ribera, B. F.; Credi, A.; Ballardini, R.; Gandolfi, M. T.; Balzani, V.; Liu, Y.; **Northrop, B. H.**; Stoddart, J. F. A Molecular Plug-Socket Connector. *J. Am. Chem. Soc.* **2007**, *129*, 4633-4642.
13. **Northrop, B. H.**; Braunschweig, A. B.; Mendes, P. M.; Dichtel, W. R.; Stoddart, J. F. Molecular Machines. In *CRC Handbook of Nanoscience, Engineering, and Technology*, (2<sup>nd</sup> Edition) Iafate, G., Brenner, D., Goddard, W. A. III, S. Lyshevski, Eds.; CRC Press: Boca Raton, Florida, **2007**; 11/1-11/48.
12. Norton, J. E.; **Northrop, B. H.**; Nuckolls, C.; Houk, K. N. Why 6-Methylpentacene Deconjugates but Avoids the Thermally Allowed Unimolecular Mechanism. *Org. Lett.* **2006**, *8*, 4915-4918.
11. Williams, A. R.; **Northrop, B. H.**; Chang, T.; Stoddart, J. F.; White, A. J. P.; Williams, D. J. Suitanes. *Angew. Chem. Int. Ed.* **2006**, *45*, 6665-6669.
10. **Northrop, B. H.**; Aricó, F.; Tangchiavang, N.; Badjić, J. D.; Stoddart, J. F. Template-Directed Synthesis of Mechanically Interlocked Molecular Bundles using Dynamic Covalent Chemistry. *Org. Lett.* **2006**, *8*, 3899-3902.
9. Leung, K. C.-F.; Mendes, P. M.; Magonov, S. N.; **Northrop, B. H.**; Kim, S. Kramer, E. J.; Patel, K.; Flood, A. H.; Tseng, H.-R.; Stoddart, J. F. Supramolecular Self-Assembly of Dendronized Polymers: Reversible Control of the Polymer Architectures through Acid-Base Reactions. *J. Am. Chem. Soc.* **2006**, *128*, 10707-10715.
8. Brough, B.; **Northrop, B. H.**; Schmidt, J. J.; Tseng, H.-R.; Houk, K. N.; Stoddart, J. F.; Ho, C.-M. Evaluation of Synthetic Linear Motor-Molecule Actuation Energetics. *Proc. Natl. Acad. Sci. U.S.A.* **2006**, *103*, 8583-8588.
7. **Northrop, B. H.**; O'Malley, D. P.; Zografos, A. L.; Baran, P. S.; Houk, K. N. The Mechanism of the Vinylcyclobutane Rearrangements of Scepterin to Ageliferin and Nagelamide E. *Angew. Chem. Int. Ed.* **2006**, *45*, 4126-4130.
6. **Northrop, B. H.**; Khan, S. J.; Stoddart, J. F. Kinetically Controlled Self-Assembly of Pseudorotaxanes on Crystallization. *Org. Lett.* **2006**, *8*, 2159-2162.
5. Braunschweig, A. B.; **Northrop, B. H.**; Stoddart, J. F. Structural Control at the Organic-Solid Interface. *J. Mater. Chem.* **2006**, *16*, 32-44.
4. **Northrop, B. H.**; Houk, K. N. The Vinylcyclobutane-Cyclohexene Rearrangement: Theoretical Exploration of Mechanism and Relationship to the Diels-Alder Potential Surface. *J. Org. Chem.* **2006**, *71*, 3-13.
3. Lui, Y.; Flood, A. H.; Bonvallet, P. A.; Vignon, S. A.; **Northrop, B. H.**; Tseng, H.-R.; Jeppesen, J. O.; Huang, T. J.; Brough, B.; Baller, M.; Magonov, S.; Solares, S. D.; Goddard, W. A.; Ho, C.-M.; Stoddart, J. F. Linear Artificial Molecular Muscles. *J. Am. Chem. Soc.* **2005**, *127*, 9745-9759.

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2. Caramella, P.; Quadrelli, P.; Toma, L.; Romano, S.; Khuong, K. S.; **Northrop, B.**; Houk, K. N. The Three Corrugated Surfaces of 1,4-Divinyltetramethylene Diradical Intermediates and Their Connections to 1,2-Divinylcyclobutane, 4-Vinylcyclohexene, 1,5-Cyclooctadiene, and Two Butadienes. *J. Org. Chem.* **2005**, *70*, 2994-3008.
1. Williams, A. R.; **Northrop, B. H.**; Houk, K. N.; Stoddart, J. F.; Williams, D. J. The Influence of Constitutional Isomerism and Change on Molecular Recognition Processes. *Chem. Eur. J.* **2004**, *10*, 5406-5421.

### **Conference and Lecture Presentations** (undergraduate coauthors are underlined)

*Williams College, April 10, 2015*

**Northrop, B. H.** The Utility of Thiol-Ene Click Chemistry in Organic Materials Synthesis

*Dartmouth College, January 15, 2015*

**Northrop, B. H.** Mechanochemistry: Forcing Polymers to Behave Differently

*University of Connecticut, October 30, 2014*

**Northrop, B. H.** Selective Thiol-Ene Chemistry: From 1<sup>st</sup> Principles to Organic Materials

*Trinity College, October 10, 2014*

**Northrop, B. H.** The Dynamic Assembly of Boronic Acids into Discrete Framework Materials

*Northwestern University, May 15, 2014*

**Northrop, B. H.** Selective Thiol-Ene Chemistry: From 1<sup>st</sup> Principles to Organic Materials

*University of New Haven, September 27, 2013*

**Northrop, B. H.** Selective Thiol-Ene & Thiol-Yne Reactions: From Mechanism to Materials

*Connecticut College, February 19, 2013*

**Northrop, B. H.** Thiol-Ene Chemistry: From Mechanism to Materials

*244<sup>th</sup> ACS National Meeting, Philadelphia, PA, USA August 19-23, 2012*

Smith, M. K.; Powers-Riggs, N. E.; Kishpaugh, D.; **Northrop, B. H.** "Dynamic assembly of discrete covalent organic polygons" (poster)

*244<sup>th</sup> ACS National Meeting, Philadelphia, PA, USA August 19-23, 2012*

Coffey, R. N.; Wang, G.-J.; **Northrop, B. H.** "Synthesis, characterization, and analysis of mechanically-interlocked polymers" (poster)

*244<sup>th</sup> ACS National Meeting, Philadelphia, PA, USA August 19-23, 2012*

Choudhary, U. U.; **Northrop, B. H.** "New routes to rotaxane and pseudorotaxane synthesis using thiol-ene click chemistry" (poster)

*244<sup>th</sup> ACS National Meeting, Philadelphia, PA, USA August 19-23, 2012*

**Northrop, B. H.**; Coffey, R. N. "Influence of alkene structure on the mechanism and kinetics of thiol-ene click chemistry: A computational study" (poster)

*42<sup>nd</sup> National Organic Chemistry Symposium, Princeton University, New Jersey, USA June 5-9, 2011*

**Northrop, B. H.**; Boutelle, R. C.; Coffey, R. N.; Stolz, R. M.; White, S. L.; Choudhary, U. The Utility of Maleimide Derivatives in Organic Materials Synthesis. (poster)

*240<sup>th</sup> ACS National Meeting, Boston, MA, USA August 22-August 26, 2010*

Boutelle, R. C.; **Northrop, B. H.** Computational and Spectroscopic Investigations of Reversible Furan-Maleimide Cycloadditions: Parent Reaction and Derivatized Analogues. (poster)

*Northwestern University Department of Chemistry and Center for the Chemistry of Integrated Systems  
"Chemistry for the Next Generation by the Next Generation" May 28-30, 2010*

**Northrop, B. H.** Dynamic Self-Assembly as a Route to New Organic Materials

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### Presentations Prior to Wesleyan:

235<sup>th</sup> ACS National Meeting, New Orleans, LA, USA April 6-April 10, 2008

**Northrop, B. H.**; Glöckner, A.; Stang, P. J. Self-Assembly and Self-Organization of Hydrophobic, Hydrophilic, and Amphiphilic Functionalized Supramolecular Rectangles. (oral presentation)

40<sup>th</sup> National Organic Chemistry Symposium, Duke University, North Carolina, USA June 2-7, 2007

**Northrop, B. H.**; Williams, A. R.; Aricó, F.; Chang, T.; Tangchaivang, N.; Badjić, J. D.; White, A. J. P.; Williams, D. J.; Stoddart, J. F. Efficient Routes to Novel Molecular Architectures: Template-Directed Synthesis of Mechanically Interlocked Suitanes. (poster presentation)

3<sup>rd</sup> Annual Foundations of Nanoscience (FNANO06): Self-Assembled Architectures and Devices Conference, Snowbird, Utah, USA April 22-27, 2006

**Northrop, B. H.**; Brough, B.; Schmidt, J. J.; Tseng, H.-R.; Houk, K. N.; Stoddart, J. F.; Ho, C.-H. Cation-Cation Interactions in Interlocked Molecules: The Actuation Energetics of a Synthetic Linear Motor-Molecule and New [2]Rotaxane Architectures. (poster presentation)

Middlebury College Chemistry & Biochemistry Seminar Series, October 5, 2005

**Northrop, B. H.** Putting Molecules to Work: Mechanically Actuating Interlocked Rotaxanes. (oral presentation)

230<sup>th</sup> ACS National Meeting, Washington, DC, USA August 28-September 1, 2005

**Northrop, B. H.**; Houk, K. N. The Vinylcyclobutane-Cyclohexene and Scepttrin-Ageliferin Rearrangements: Mechanistic Explorations using Density Functional Theory. (oral presentation)

230<sup>th</sup> ACS National Meeting, Washington, DC, USA August 28-September 1, 2005

Brough, B.; **Northrop, B. H.**; Schmidt, J. J.; Tseng, H.-R.; Houk, K. N.; Stoddart, J. F.; Ho, C.-M. Actuation Energetics of a Synthetic Linear Motor-Molecule Evaluated by Atomic Force Spectroscopy and Computational Modeling. (oral presentation)

11<sup>th</sup> International Symposium on Novel Aromatic Compounds (ISNA), St. John's, Newfoundland, Canada August 14-18, 2005

Brough, B.; **Northrop, B. H.**; Schmidt, J. J.; Tseng, H.-R.; Houk, K. N.; Stoddart, J. F.; Ho, C.-M. Mechanochemistry of Rotaxanes: Functional Devices and the Measurements of Single Molecule Actuation Energetics. (poster presentation)

17<sup>th</sup> International Conference on the Chemistry of the Organic Solid State (ICCOSS XVII), University of California, Los Angeles, California, USA July 24-29, 2005

**Northrop, B. H.**; Maliakal, A.; Reichmanis, E.; Houk, K. N. Photostability of Pentacene and 6,13-Disubstituted Pentacene Derivatives: A Theoretical and Experimental Mechanistic Study. (poster presentation)

### Teaching

Principles of Chemistry I, Special Topics	CHEM 145	Fall 2009
Principles of Chemistry I	CHEM 143	Fall 2010 – 2014
Materials Chemistry & Nanoscience	CHEM 378	Spring 2010
Artificial Molecular Machines	CHEM 391	Spring 2011
Nanomaterials Laboratory	CHEM 379	Spring 2012, 2013, 2014
Seminar in Organic & Inorganic Chemistry	CHEM 557/558	Fall/Spring 2009 – 2015

### Graduate Research Advisees

		Currently
▪ Merry K. Smith	2009-2014	Postdoctoral Scholar, Univ. of Houston; Prof. Miljanic
▪ Roderick N. Coffey	2009-present	
▪ Umesh Choudhary	2010-present	

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- Stephen Frayne 2012-present
- Vasileios Drogkaris 2014-present

### **Undergraduate Research Advisees**

- |                                   |  |
|-----------------------------------|--|
|                                   | Currently  |
| ▪ Robert C. Boutelle 2009-2011    | Graduate student, Chemistry, UCLA                          |
| ▪ Sarah White 2009-2011           | Graduate student, Chemistry, UIUC                          |
| ▪ David Kishpaugh 2010-2011       | Graduate student, Materials Science & Engineering, UCLA    |
| ▪ Robert M. Stolz 2010-2013       | Currently at Dow; Graduate student, Dartmouth (fall '15)   |
| ▪ Ging-Ji "Nathan" Wang 2011-2013 | Graduate student, Chemistry, Stanford                      |
| ▪ Natalia Powers-Riggs 2011-2013  | Teach for China; Graduate student, Northwestern (fall '15) |
| ▪ Mathew Younger Summer 2012      |  |
| ▪ Peter Martin 2012-2013          | Graduate student, Geochemistry, Caltech                    |
| ▪ Stuart Pasch 2012-2014          | Medical School, Temple University                          |
| ▪ Samantha Angle Summers 2013/14  | Yale University, class of 2018                             |
| ▪ Alexander Goldberg 2013-2015    | Medical School, Washington University, St. Louis           |
| ▪ Charles Seifer 2012-2015        |  |
| ▪ Dara Lorn 2014-2015             |  |
| ▪ Raghavendra Murthy 2013-present |  |

### **Committee Work**

- Wesleyan Library Advisory Committee (2015 – present)
- Chemistry Department Graduate Admissions Committee (2010 – present, Chair 2014 – present)
- Chemistry Curriculum Committee (2010 – present)
- Member of Wesleyan's Reaccreditation Committee (2011)
- College of Integrated Sciences (CIS) planning committee and chemistry faculty representative
- Faculty mentor for the Wesleyan Mathematics and Science Scholars Program (WesMASS)

**Professional Activities** Reviewer for: *Journal of the American Chemical Society, Nature Chemistry, Polymer Chemistry, Chemical Communications, Journal of Organic Chemistry, Chemistry–A European Journal, Chemistry of Materials, Macromolecules, RSC Advances, Journal of Chemical Education, Inorganic Chemistry, Journal of Polymer Science Part A: Polymer Chemistry, American Chemical Society Petroleum Research Fund.*

### **Outreach**

- Presented in the Wesleyan Summer Science Seminars for Undergraduate Research Students: "An Introduction to Chemical Nanoscience: What's so Special About Small?" summer 2014
- Developed and ran a hands-on polymer workshop for 1<sup>st</sup>-6<sup>th</sup> graders as part of the Project to Increase Mastery of Mathematics and Science (PIMMS) at the Green Street Arts Center, fall 2013 – present
- Ran science demonstrations for 5<sup>th</sup> grader students from the Snow School, summer 2013 – present
- Presented at the Wesleyan Natural Sciences & Mathematics (NSM) Seminar Series, 2009 & 2014
- Guided Science Center Tours for prospective students (WesFest), spring 2011 – present
- Presented in the Wesleyan Physics Departmental Colloquium Series, spring 2010
- Presented at the Wesleyan Molecular Biophysics Retreat, fall 2009