

## MARY ELIZABETH ANDERSON

Department of Chemistry  
Hope College  
35 E. 12<sup>th</sup> St, Holland, MI 49423

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### EDUCATION

- 2006 (July) **The Pennsylvania State University – University Park, PA**  
Ph.D. in Chemistry, GPA: 3.94/4.00  
Dissertation Title: *Chemically Advanced Nanolithography*
- 2001 (May) **Samford University – Birmingham, AL**  
B.S. in Chemistry, GPA: 3.89/4.00

### RESEARCH EXPERIENCE

- 2010 – present **Assistant Professor of Chemistry, Hope College**  
Research focus on nanomaterial synthesis, assembly, and characterization employing surface chemistry, solid-state synthesis, scanning probe microscopy, scanning electron microscopy with energy dispersive x-ray spectroscopy, powder x-ray diffraction, Rutherford backscattering spectrometry, contact angle goniometry, and ellipsometry
- 2007 – 2010 **Postdoctoral Researcher, The Pennsylvania State University**  
Advisor: Prof. Raymond E. Schaak  
Integrated solution-phase solid-state synthesis techniques with nanofabrication methods
- 2006 – 2007 **Postdoctoral Faculty Fellow, Boston University**  
Advisor: Prof. Rosina M. Georgiadis  
Characterized assembly using surface plasmon resonance spectroscopy and imaging
- 2001 – 2006 **Research Assistant, The Pennsylvania State University**  
Advisors: Prof. P. S. Weiss and Prof. M. W. Horn  
Designed, created, and characterized nanoscale structures fabricated by self-assembly and conventional lithographic techniques  
**NSF Research Experience Undergraduate Fellow**
- 2000 The Pennsylvania State University, Advisor: Prof. P. S. Weiss  
1999 University of Florida, Gainesville, Advisors: Prof. A. G. Rinzler and Prof. R. S. Duran

### AWARDS AND HONORS

- Towsley Research Scholar, Hope College, 2013-present  
Excellence in Mentoring, Advising and Teaching Award – NAS Division, Hope College, 2013  
National Research Council Fellowship, 2006, declined  
Apple Fellowship, The Pennsylvania State University, 2004  
Roberts Graduate Fellowship, The Pennsylvania State University, 2001-2002  
Materials Research Interdisciplinary Program Fellow, The Pennsylvania State University, 2001  
American Institute of Chemists - Outstanding Senior Award, Samford University, 2001

### SERVICE AND PROFESSIONAL ACTIVITIES

- Panelist for Postdoc to PUI Professor Workshop, Hope College, 2011, 2013, 2015  
Session Moderator at American Chemical Society National Meeting, 2008, 2015  
Panelist for Midstates Consortium New Faculty Workshop, Holland, MI, 2011, 2012  
Materials Research Science & Engineering Center Outreach Projects, Penn State University, 2003-2006  
President of Student Affiliates of the ACS, Samford University, 1999-2001  
Member of the American Chemical Society and Material Research Society, 2001-present  
Review for *ACS Nano*, *Langmuir*, *ACS Applied Materials and Interfaces*, *Journal of Chemical Education*  
Reviewer for ACS-PRF, DOE  
Hope College: Search Committee for Director of Kruienza Art Museum, Search Committee for Campus Ministries Worship Director, Religious Life Committee
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## TEACHING EXPERIENCE

2011 – 2013, 2015 **Inorganic Chemistry Lab, Hope College**, enrollment: ~10  
2012, 2013 **Advanced Materials Characterization, Hope College**, enrollment: ~15  
2010 – 2015 **General Chemistry Lecture, Hope College**, enrollment: ~50  
2010 – 2015 **General Chemistry Lab, Hope College**, enrollment: ~20  
2009 **General Chemistry Lecture, Penn State University**, enrollment: ~375  
2006 – 2007 **General Chemistry Discussion, Boston University**, 5 sections/semester  
2006 – 2007 **General Chemistry Lab, Boston University**, enrollment: ~20, 2 sections/semester  
2002 **General Chemistry Recitation, Penn State University**, 4 sections

## Research Mentor

2010 – present **Hope College**, 16 undergraduate students mentored  
– 8 of the 9 graduates attending graduate school; 6 in science and 2 in education  
– Advised 6 senior research reports for the ACS-certified degree  
– Students presented externally: 8 talks, 11 posters and internally: 21 talks, 42 posters  
2001 – 2010 **Penn State University**, 6 undergraduate students mentored

## Selected Student Awards

Best student poster award in the COLL Division at National ACS Meeting in Denver, CO, March 2015  
Hope College's Beckman Scholar 2014-2015; NSF Graduate Fellowship Honorable Mention 2014&2015  
ND Connect National Undergraduate Nanotech Research Competition Finalist 2014  
Woodrow Wilson Teaching Fellowship, 2014; Teach for America, 2014

## RESEARCH SUPPORT

NSF-RUI: *Enabling Rational Design of Smart Interfaces Incorporating Metal-Organic Coordinated Assemblies*, \$209,012, 2015-2018.

ACS PRF: *Assembly and Characterization of Metal-Organic Coordinated Thin Films with Designed Catalytic Sites*, \$50,000, 2014-2016.

Hope College Towsley Research Scholar Award: *Nanomaterial Synthesis, Assembly, and Characterization*, Spring 2014 Pre-Tenure Sabbatical, \$4,000/summer, 2013-2017.

Hope College Nyenhuis Cooperative Faculty/Student Research Award: *Investigation and Characterization of Self-Assembled Hierarchical Architectures*, Summer 2012. \$7,200.

Howard Hughes Medical Institute, Hughes Research Scholar – Alexandra Benson. *Investigation of Hierarchical Self-Assembled Structures using Scanning Probe Microscopy*, Summer 2012. \$5,100.

National Science Foundation – Major Research Instrumentation: *Acquisition of an Atomic Force Microscope at Hope College*, 2011 – 2014. \$214,750.

## PUBLICATIONS \*indicates undergraduate student authors

24. “Metal-Organic Coordinated Multilayer Film Formation: Quantitative Analysis of Composition and Structure”, Alexandra S. Benson,\* Meagan B. Elinski,\* Monica L. Ohnsorg,\* Christopher K. Beaudoin,\* Kyle Alexander,\* Graham F. Peaslee, Paul DeYoung, **Mary E. Anderson**, *Thin Solid Films*, 590, 103, **2015**.
23. “Cyclic Voltammetric and Spectroelectrochemical Studies of Electropolymerized Films Based on (3,4-Ethylenedioxythiophene)-Substituted 3,6-Dithiophen-2-yl-2,5-dihydropyrrole[3,4-c]pyrrole-1,4-dione”, E. M. Sanford, M. G. Tori,\* T. M. Smeltzer,\* C. K. Beaudoin,\* **M. E. Anderson**, and K. L. Brown, *accepted with revision to Electrochemistry: The Electrochemical Society of Japan*.
22. “Fundamentals of MOF Thin Film Growth via Liquid-Phase Epitaxy: Investigating the Initiation of Deposition and the Influence of Temperature”, Monica L. Ohnsorg,\* Christopher K. Beaudoin,\* **Mary E. Anderson**, *Langmuir*, 31, 6114, **2015**.

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21. “Comparative Growth Mechanism Study for Two Thermoelectric Compounds”, Cameron F. Holder,\* Evan E. Rugen,\* **Mary E. Anderson**, *Nanomaterials and Energy*, 3, 206, **2014**.
  20. “X-ray Crystallographic Studies of a Bimetallic cis-Mo(CO)<sub>4</sub>(PPh<sub>2</sub>NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N=CHC<sub>6</sub>H<sub>4</sub>-o-O)<sub>2</sub>Cu Complex, the Starting Material, cis-Mo(CO)<sub>4</sub>(PPh<sub>2</sub>Cl)<sub>2</sub>, and the Reaction Intermediates cis-Mo(CO)<sub>4</sub>(PPh<sub>2</sub>NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> and cis-Mo(CO)<sub>4</sub>(PPh<sub>2</sub>NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N=CHC<sub>6</sub>H<sub>4</sub>-o-OH)<sub>2</sub>,” C. Duffey, S. Stepleton, **M. E. Anderson**, D. Cox, M. Ready, H. Byrd, C. A. Bloomfield, J. L. Freeman, G. M. Gray, *Journal of Chemical Crystallography*, 41, 1560, **2011**.
  19. “Modified Polyol Synthesis of Bulk-Scale Nanostructured Bismuth Antimony Telluride,” **M. E. Anderson**, S. S. N. Bharadwaja, R. E. Schaak, *Journal of Materials Chemistry*, 20, 8362, **2010**.
  18. “Orthogonal Reactivity of Metal and Multi-Metal Nanostructures for Selective, Stepwise, and Spatially-Controlled Solid State Modification,” B. M. Leonard, **M. E. Anderson**, K. D. Oyler, T.-H. Phan, R. E. Schaak, *ACS Nano*, 3, 940, **2009**.
  17. “On-Wire Conversion Chemistry: Engineering Solid-State Complexity into Striped Metal Nanowires using Solution Chemistry Reactions,” **M. E. Anderson**, M. R. Buck, I. T. Sines, K. D. Oyler, R. E. Schaak, *Journal of the American Chemistry Society*, 130, 14042, **2008**.
  16. “Quantitative Surface Plasmon Resonance Imaging: A Simple Approach to Automated Angle Scanning,” J. A. Ruemmele, M. S. Golden, Y. Gao, E. M. Cornelius, **M. E. Anderson**, L. Postelnicu, R. M. Georgiadis, *Analytical Chemistry*, 80, 4752, **2008**.
  15. “Biospecific Recognition of Tethered Small Molecules Diluted in Self-Assembled Monolayers,” M. J. Shuster, A. Vaish, M. E. Szapacs, **M. E. Anderson**, P. S. Weiss, and A. M. Andrews, *Advanced Materials*, 20, 164, **2008**.
  14. “Sub-30-Nanometer Patterning on Quartz for Nanolithography Imprint Templates,” C. Srinivasan, J. N. Hohman, **M. E. Anderson**, P. S. Weiss, and M. W. Horn, *Applied Physics Letters*, 93, 083123, **2008**.
  13. “Scanning Electron Microscopy of Nanoscale Chemical Patterns,” C. Srinivasan, T. J. Mullen, J. N. Hohman, **M. E. Anderson**, A. A. Dameron, A. M. Andrews, E. C. Dickey, M. W. Horn, and P. S. Weiss, *ACS Nano*, 1, 191, **2007**.
  12. “Nanostructures Using Self-Assembled Multilayers as Molecular Rulers and Etch Resists,” C. Srinivasan, J. N. Hohman, **M. E. Anderson**, P. S. Weiss, and M. W. Horn, *Journal of Vacuum Science and Technology B*, 26, 1985, **2007**.
  11. “Combining Conventional Lithography with Molecular Self-Assembly for Chemical Patterning,” **M. E. Anderson**, C. Srinivasan, J. N. Hohman, E. M. Carter, M. W. Horn, P. S. Weiss, *Advanced Materials*, 18, 3258, **2006**.
  10. “Photolithographic Structures with Precise Controllable Nanometer-Scale Spacings Created by Molecular Rulers,” **M. E. Anderson**, L. P. Tan, M. Mihok, H. Tanaka, M. W. Horn, G. S. McCarty, P. S. Weiss, *Advanced Materials*, 18, 1020, **2006**.
  9. “Electrically Isolated Nanostructures Fabricated using Self-Assembled Multilayers and a Novel Bi-layer Resist Stack,” C. Srinivasan, **M. E. Anderson**, R. Jayaraman, P. S. Weiss, M. W. Horn, *Microelectronic Engineering*, 83, 1517, **2006**.
  8. “Extensions of Molecular Ruler Technology for Nanoscale Patterning,” C. Srinivasan, **M. E. Anderson**, E. M. Carter, J. N. Hohmann, S. S. N. Bharadwaja, S. Trolier-McKinstry, P. S. Weiss, M. W. Horn, *Journal of Vacuum Science and Technology B*, 24, 3200, **2006**.
  7. “Utilizing Self-Assembled Multilayers in Lithographic Processing for Nanostructure Fabrication: Initial Evaluation of the Electrical Integrity of the Nanogaps,” **M. E. Anderson**, C. Srinivasan, R. Jayaraman, P. S. Weiss, M. W. Horn, *Microelectronic Engineering*, 78-79, 248, **2005**.

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6. “Super Precise Nanolithography using Self-Assembled Multilayer (in Japanese),” H. Tanaka, **M. E. Anderson**, L. Tan, M. Mihok, M. Horn and P. S. Weiss, *Journal of Surface Science Society of Japan*, 25, 650, **2004**.
  5. “Position-Selected Molecular Ruler,” H. Tanaka, **M. E. Anderson**, M. W. Horn, P. S. Weiss, *Japanese Journal of Applied Physics*, 43, L950, **2004**.
  4. “Nanofabrication Using Self-Assembled Monolayers — Precise Nanolithography Using Intermolecular Interactions and Self-Assembly,” H. Tanaka, **M. E. Anderson**, R. K. Smith, Z. J. Donhauser, A. Hatzor, P. A. Lewis, L. P. Tan, M. W. Horn, and P. S. Weiss, *Japanese Society of Applied Physics: Thin Film and Surface Physics Division*, 118, 10, **2003**. (in Japanese)
  3. “Advances in Nanolithography Using Molecular Rulers,” **M. E. Anderson**, L. P. Tan, H. Tanaka, M. Mihok, H. Lee, M. W. Horn, P. S. Weiss, *Journal of Vacuum Science and Technology B*, 21, 3116, **2003**.
  2. “Exploiting Intermolecular Interactions and Self-Assembly for Ultrahigh Resolution Nanolithography,” **M. E. Anderson**, R. K. Smith, Z. J. Donhauser, A. Hatzor, P. A. Lewis, L. P. Tan, H. Tanaka, M. W. Horn, P. S. Weiss, *Journal of Vacuum Science and Technology B*, 20, 2739, **2002**.
  1. “Length Sorting *Cut* Single Wall Carbon Nanotubes by High Performance Liquid Chromatography,” E. Farkas, **M. E. Anderson**, Z. Chen, A. G. Rinzler, *Chemical Physics Letters*, 363, 111, **2002**.

## ORAL PRESENTATIONS

39. “Investigating the Bottom-up Formation of Nanomaterials: Metal-Organic Coordinated Thin Films and Thermoelectric Nanomaterials” **M.E. Anderson**, *Analytical Division Chemistry Departmental Seminar*, Michigan State University, Lancaster, MI, May **2015**.
38. “Assembly of Surface-Anchored Metal-Organic Frameworks: Controlling Deposition Conditions to Tune Film Morphology” **Mary E. Anderson**, 249<sup>th</sup> *American Chemical Society National Meeting*, Denver, CO, March **2015**.
37. “Investigating the Bottom-up Formation of Nanomaterials: Metal-Organic Coordinated Thin Films and Thermoelectric Nanomaterials” **M.E. Anderson**, *Inorganic Division Chemistry Departmental Seminar*, Wayne State University, Detroit, MI, March **2015**.
36. “Investigating the Bottom-up Formation of Nanomaterials: Metal-Organic Coordinated Thin Films and Thermoelectric Nanomaterials” **M.E. Anderson**, *Chemistry Departmental Seminar*, Oakland University, Rochester, MI, September **2014**.
35. “Determining the chemical formula of unknown crystals as a semester-long inquiry theme for general chemistry lab” **Mary E. Anderson**, Brent Krueger, Amanda Schuiling, Tod Gugino, 2014 *Biennial Conference on Chemical Education*, Grand Valley State University, Allendale, MI, August **2014**.
34. “Thermoelectric material synthesis and characterization in upper-level laboratory classes” **Mary E. Anderson**, 2014 *Biennial Conference on Chemical Education*, Grand Valley State University, Allendale, MI, August **2014**.
33. “Layer-by-layer assembly and characterization of metal-organic coordinated thin films” Monica L. Ohnsorg,\* Christopher K. Beaudoin,\* Alexandra S. Benson,\* and **Mary E. Anderson**, 2014 *Materials Research Society Spring Meeting*, San Francisco, CA, April **2014**.
32. “Thermoelectric material synthesis and characterization in upper-level laboratory classes” **Mary E. Anderson**, 2014 *Materials Research Society Spring Meeting*, San Francisco, CA, April **2014**.

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31. "Investigating the Formation of Metal-Organic Coordinated Thin Films and Thermoelectric Nanomaterials" **M.E. Anderson**, *Physical & Analytical Division Chemistry Departmental Seminar*, Notre Dame University, South Bend, IN, April **2014**.
  30. "Nanomaterial Synthesis, Assembly, and Characterization" **M.E. Anderson**, *Student Invited - Chemistry Departmental Seminar*, Ferris State University, Big Rapids, MI, April **2014**.
  29. "Investigating the formation of thermoelectric nanomaterials synthesized by modified polyol process" Evan E. Rugen,\* Cameron F. Holder,\* and **Mary E. Anderson**, *247<sup>th</sup> American Chemical Society National Meeting*, Dallas, TX, March **2014**.
  28. "Thermoelectric material synthesis and characterization in upper-level laboratory classes" **Mary E. Anderson**, *247<sup>th</sup> American Chemical Society National Meeting*, Dallas, TX, March **2014**.
  27. "Layer-by-layer assembly and characterization of metal-organic coordinated thin films" Monica L. Ohnsorg,\* Christopher K. Beaudoin,\* Alexandra S. Benson,\* and **Mary E. Anderson**, *247<sup>th</sup> American Chemical Society National Meeting*, Dallas, TX, March **2014**.
  26. "No Small Wonder" **M.E. Anderson**, *Center for Science and Religion Seminar*, Samford University, Birmingham, AL, March **2014**.
  25. "Nanomaterial Synthesis, Assembly, and Characterization" **M.E. Anderson**, *Chemistry Departmental Seminar*, Samford University, Birmingham, AL, March **2014**.
  24. "Thermoelectric Nanomaterial Synthesis and Characterization: Particle Formation" **M.E. Anderson**, *Research Meeting*, Pennsylvania State University, State College, PA, January **2014**.
  23. "Nanomaterial Synthesis, Assembly, and Characterization" **M.E. Anderson**, *American Chemical Society Western Michigan Section Seminar Series*, Grand Valley State University, Allendale, MI, October **2013**.
  22. "Nanomaterial Synthesis, Assembly, and Characterization" **M.E. Anderson**, *Calvin College Departmental Seminar*, Grand Rapids, MI, September **2012**.
  21. "Metal-Organic Coordinated Multilayer Films: Quantitative Analysis of Composition and Structure by PIXE, RBS, and SPM" M. B. Elinski\* and **M.E. Anderson**, *244<sup>th</sup> American Chemical Society National Meeting*, Philadelphia, PA, August **2012**.
  20. "Reading and Writing on the Nanoscale: Imaging and Manipulating Atoms, Molecules, and Nanoparticles" **M.E. Anderson** and J.R. Hampton, *Winter Happenings Event*, Hope College, Holland MI, January **2012**.
  19. "Solution-Phase Solid-State Chemistry for Nanomaterial Synthesis and Nanowire Patterning" **M.E. Anderson**, *Andrews University Departmental Seminar*, Berrien Springs MI, October **2010**.
  18. "Benchtop Chemical Patterning of Nanostructures: from Surfaces to Nanowires to Circuits..." **M.E. Anderson**, *Seminar Series*, Gentex Corporation, Zeeland MI, September **2010**.
  17. "Directing the Assembly of Nanomaterials from the Bottom-Up" **M.E. Anderson**, *Hope College Departmental Seminar*, Holland, MI, September **2010**.

#### **ORAL PRESENTATIONS PRIOR TO HOPE**

16. "Orthogonal Reactivity of Multimetal Nanostructures by Solid-State Chemical Conversions" **M.E. Anderson**, B. M. Leonard, K. D. Oyler, T.-H. Phan, R. E. Schaak, *238<sup>th</sup> American Chemical Society National Meeting*, Washington D.C., August **2009**.
15. "Engineering Solid-State Complexity into Striped Metal Nanowires using Solution Chemistry Reactions" **M. E. Anderson**, R. E. Schaak, *236<sup>th</sup> American Chemical Society National Meeting*, Philadelphia, PA, August **2008**.

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14. "Surface Plasmon Resonance Spectroscopy and Imaging of Self-Assembled Hierarchical Structures," **M. E. Anderson**, E. M. Cornelius, Y. Gao, M. S. Golden, L. Postelmicu, J. A. Ruemmele, R. M. Georgiadis, *234<sup>th</sup> American Chemical Society National Meeting*, Boston, MA, August **2007**.
  13. "Combining Conventional Lithography with Molecular Self-Assembly to Build Nanostructures and Pattern Surfaces," **M. E. Anderson**, C. Srinivasan, J. N. Hohman, M. W. Horn, P. S. Weiss, *234<sup>th</sup> American Chemical Society National Meeting*, Boston, MA, August **2007**.
  12. "Fabrication of Molecularly Precise Structures," **M. E. Anderson**, G. N. Taylor, *Materials Research Science and Engineering Center's NSF Site Visit*, Pennsylvania State University, April **2006**.
  11. "Combining Conventional Lithography with Molecular Self-Assembly to Build Nanostructures and Pattern Surfaces," **M. E. Anderson**, C. Srinivasan, J. N. Hohman, M. W. Horn, P. S. Weiss, *2005 Materials Research Society Fall Meeting*, Boston, MA, November **2005**.
  10. "Self-Assembled Multilayers as Building Blocks and Components of Nanoscale Device Structures," **M. E. Anderson**, C. Srinivasan, R. Jayaraman, E. M. Carter, M. W. Horn, P. S. Weiss, *American Vacuum Society 52<sup>nd</sup> International Symposium*, Boston, MA, October **2005**.
  9. "Self-Assembled Multilayers as Building Blocks and Components of Nanoscale Device Structures," **M. E. Anderson**, C. Srinivasan, R. Jayaraman, E. M. Carter, M. W. Horn, P. S. Weiss, *230<sup>th</sup> American Chemical Society National Meeting*, Washington D.C., August **2005**.
  8. "Nanotechnology: Who, What, Where, When, WHY and HOW?" **M. E. Anderson**, M. W. Horn, P. S. Weiss, *Samford University Chemistry Department Seminar*, Birmingham, AL, March **2005**.
  7. "Advances in Molecular Ruler Lithography," **M. E. Anderson**, S. Subramanian, C. Srinivasan, R. Jayaraman, J. M. Catchmark, M.W. Horn, P. S. Weiss, *Materials Research Science and Engineering Center Seminar*, Pennsylvania State University, November **2004**.
  6. "Self-Assembled Monolayers Creating Tailored Resists for Nanostructure Fabrication," **M. E. Anderson**, E. M. Carter, A. R. Kurland, C. Srinivasan, M. W. Horn, P. S. Weiss, *2004 Materials Research Society Fall Meeting*, Boston, MA, November **2004**.
  5. "Self-Assembled Multilayers Creating Tailored Resists for Nanostructure Fabrication," **M. E. Anderson**, E. M. Carter, A. R. Kurland, C. Srinivasan, M. W. Horn, P. S. Weiss, *American Vacuum Society 51<sup>st</sup> International Symposium*, Anaheim, CA, November **2004**.
  4. "Molecular Rulers Overview," **M. E. Anderson**, S. Subramanian, J. M. Catchmark, M. W. Horn, and P. S. Weiss, *Materials Research Science and Engineering Center's NSF Site Visit*, Pennsylvania State University, March **2004**.
  3. "Molecular Rulers," **M. E. Anderson**, L. P. Tan, M. Mihok, H. Tanaka, M. W. Horn, P. S. Weiss, *Materials Research Science and Engineering Center Seminar*, Pennsylvania State University, May **2003**.
  2. "Short Range Spatial Correlations in Binary Self-Assembled Monolayers of Alkanethiolates on Au{111} using Scanning Tunneling Microscopy," **M. E. Anderson**, B. A. Mantooth, L. A. Bumm, P. S. Weiss, *15<sup>th</sup> National Conference on Undergraduate Research*, University of Kentucky, Lexington, March **2001**.
  1. "Separation of Single-Wall Carbon Nanotubes by High-Pressure Liquid Chromatography," **M. E. Anderson**, H. Tashiro, A.G. Rinzler, *14<sup>th</sup> National Conference on Undergraduate Research*, University of Montana, Missoula, April **2000**.

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## HOPE STUDENT PRESENTATIONS

Anderson research group members have presented

- internally: 21 talks and 42 posters
  - externally: 8 talks and 11 posters
  - 3 posters at National ACS meetings, listed below:
3. “Investigating the Foundational Layer Formation of Metal-Organic Coordinated Thin Films”, M.L. Ohnsorg,\* B. Bowser,\* and **M. E. Anderson**, *American Chemical Society Spring 2015 National Meeting*, Denver, CO April **2015**. [selected for Sci-Mix, students won COLL best student poster award]
  2. “Elucidating Reaction Pathways for Thermoelectric Materials Fabricated by Bottom-up Synthesis” C.F. Holder,\* E. E. Rugen,\* D. Stevens,\* and **M. E. Anderson**, *American Chemical Society Spring 2015 National Meeting*, Denver, CO April **2015**.
  1. “Qualitative and Quantitative Analysis of Metal-Organic Coordinated Multilayer Films”, A. S. Benson,\* M. B. Elinski,\* Kyle Alexander,\* Graham Peaslee, Paul DeYoung, and **M. E. Anderson**, *American Chemical Society Spring 2013 National Meeting*, New Orleans, LA, April **2013**. [selected for Sci-Mix]

## POSTER PRESENTATIONS PRIOR TO HOPE

13. “Nanostructured Thermoelectric Materials Synthesized by the Polyol Process” **M. E. Anderson**, R. E. Schaak, *238<sup>th</sup> American Chemical Society National Meeting*, Washington D.C., August **2009**.
12. “Conversion Chemistry for Intermetallic Compounds Applied to Nanowire Fabrication” **M. E. Anderson**, M. R. Buck, I. T. Sines, K. D. Oyler, R. E. Schaak, *236<sup>th</sup> American Chemical Society National Meeting*, Philadelphia, PA, August **2008**.
11. “Engineering Solid-State Complexity into Striped Metal Nanowires using Solution Chemistry Reactions,” **M. E. Anderson**, M.R. Buck, I.T. Sines, K.D. Oyler, R.E. Schaak, *Gordon Research Conference on Nanostructure Fabrication*, Tilton, NH, July **2008**.
10. “Precise Proximal Structure Placement at the Nanoscale Using Molecular Ruler Resists and Conventional Lithography,” **M. E. Anderson**, C. Srinivasan, R. Jayaraman, M. W. Horn, P. S. Weiss, *49<sup>th</sup> International Conference on Electron, Ion, and Photon Beam Technology & Nanofabrication*, Orlando, FL, June **2005**.
9. “Advances in Molecular Ruler Lithography,” **M. E. Anderson**, S. Subramanian, C. Srinivasan, J. Raviprakash, M. W. Horn, J. M. Catchmark, P. S. Weiss, *Materials Research Science and Engineering Center’s Advisory Committee Review*, Pennsylvania State University, February **2004**.
8. “Advancing Nanolithography with Molecular Rulers,” **M. E. Anderson**, E. M. Carter, M. W. Horn, P. S. Weiss, *Gordon Research Conference on Nanostructure Fabrication*, Tilton, NH, July **2004**.
7. “Self-Assembled Multilayers Creating Tailored Resists for Nanostructure Fabrication,” **M. E. Anderson**, E. M. Carter, A. R. Kurland, C. Srinivasan, M. W. Horn, P. S. Weiss, *228<sup>th</sup> American Chemical Society National Meeting*, Philadelphia, PA, August **2004**.
6. “Utilizing Self-Assembled Multilayers in Lithographic Processes for Nanostructure Fabrication,” **M. E. Anderson**, M. W. Horn, P. S. Weiss, *48<sup>th</sup> International Conference on Electron, Ion, and Photon Beam Technology & Nanofabrication*, San Diego, CA, June **2004**.
5. “Utilizing Self-Assembled Multilayers in Lithographic Processes for Nanostructure Fabrication,” **M. E. Anderson**, M. W. Horn, P.S. Weiss, *227<sup>th</sup> American Chemical Society National Meeting*, Anaheim, CA, March **2004**.

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4. “Advances in Nanolithography Using Molecular Rulers,” **M. E. Anderson**, S. Subramanian, M. W. Horn, J. M. Catchmark, P. S. Weiss, *Materials Research Science and Engineering Center’s NSF Site Visit*, Pennsylvania State University, March **2004**.
  3. “Photolithographic Structures with Precise Controllable Nanometer-Scale Spacings Created by Molecular Rulers,” **M. E. Anderson**, L. P. Tan, M. Mihok, H. Tanaka, M. W. Horn, P. S. Weiss, *American Vacuum Society 50<sup>th</sup> International Symposium*, Baltimore, MD, November **2003**.
  2. “Photolithographic Structures with Precise Controllable Nanometer-Scale Spacings Created by Molecular Rulers”, **M. E. Anderson**, L. P. Tan, M. Mihok, H. Tanaka, M. W. Horn, P. S. Weiss, *226<sup>th</sup> American Chemical Society National Meeting*, New York, NY, September **2003**.
  1. “Advances in Nanolithography Using Molecular Rulers,” **M. E. Anderson**, L. P. Tan, H. Tanaka, M. Mihok, M. W. Horn, P. S. Weiss, *47<sup>th</sup> International Conference on Electron, Ion, and Photon Beam Technology & Nanofabrication*, Tampa, FL, May **2003**.