

Lon A. Porter, Jr., Ph.D.

Associate Professor of Chemistry & Chair
Director, Wabash College 3D Printing & Fabrication Center (3D-PFC)
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Objective:

Successfully meet the multifaceted challenges of facilitating learning in the undergraduate chemistry curriculum, both in the classroom and in the research laboratory. Cardinal goals include the development of an engaging learning environment, aggressive undergraduate research program, new courses (*i.e. Chemical Nanotechnology, Industrial Inorganic Chemistry, Materials Chemistry, Forensic Chemistry, and Chemistry, Business, and Public Policy*), and evolving established classes to keep pace with the rapidly expanding scope of chemistry, with emphasis on the wider, significant interaction of chemistry with other realms of science, technology, business, and public policy.

Education:

Purdue University (1999-2003)

- Research advisor: Jillian M. Buriak, Associate professor of chemistry
- presently Professor & Senior Research Officer (NINT), University of Alberta, Canada
- Support provided by a National Science Foundation Graduate Research Fellowship
- Graduated in August 2003 with a Ph. D. in chemistry; Doctoral thesis: ***Intrinsic and Compound Semiconductor Surface Chemistry: Intelligent Interfacial Design Facilitated through Novel Functionalization and Deposition Strategies***
- Cumulative graduate GPA: 3.86

University of Houston (1995-1999)

- Research advisor: T. Randall Lee, Associate professor of chemistry
- Graduated (Summa Cum Laude) in May 1999 with a B.S. in chemistry, university honors, and honors in chemistry; Minor: Philosophy
- Membership in the Honors College
- Senior honors thesis: ***Metal Nanoparticles Functionalized by the Adsorption of Thiols and Disulfides***
- Cumulative undergraduate GPA: 3.86 (Cumulative chemistry GPA: 3.89)

Research Experience:

Associate Professor, Dept. Chair, & Undergraduate Research Advisor: Department of Chemistry, Wabash College (Summer 2003-present); Mentor to ~30 undergraduate research students (3-4/summer)

- Developed strategies for integrating novel classroom and laboratory content into undergraduate curricular (*e.g.* nanotechnology and various instrumental analytical methods)
- Authored several articles and presentations on integrating nanotechnology and instrumentation into undergraduate courses
- Developed several “hybrid learning” technologies for preparing YouTube based instructional tutorials and problem solving guides to chemical concepts

- Adapted microwave radiation methods for undergraduate laboratories, silicon surface functionalization methods, & comparative studies of porous silicon functionalization reactions

Graduate Research: Jillian M. Buriak Research Group (Jburiak@ualberta.ca), Department of Chemistry, Purdue University (Summer 1999-2003)

- Preparation and characterization of precious metal nanostructured materials on semiconductor and base metal surfaces
- Development of novel micro/nanopatterned metal structures on semiconductor substrates

Undergraduate Research: T. Randall Lee Research Group (Trlee@uh.edu), Department of Chemistry, University of Houston (Summer 1995 - 1999)

- Synthesis, isolation, and characterization of gold and silver nanoparticles functionalized by the adsorption of dialkyl disulfides and partially fluorinated alkanethiols and dialkyl disulfides

Teaching Experience:

- Instructor, CHE 441: *Advanced Inorganic Chemistry*, Wabash College – F'03 - present
- Instructor, CHE 211: *Structure & Reactivity*, Wabash College – S'09 - present
- Instructor, CHE 231: *Quantitative Chemistry*, Wabash College – S'04 - S'08
- Instructor, CHE 241: *Descriptive Chemistry*, Wabash College – S'04 - S'08
- Instructor, COL 401: *Important Books (Sr. Coll.)*, Wabash College – F'04 - present
- Instructor, CHE 471: *Materials Chemistry*, Wabash College – S'08
- Instructor, C&T 202: *Cultures & Traditions*, Wabash College – S'07
- Instructor, CHE 111: *General Chemistry*, Wabash College – F'03, F'05, & F'07 - present
- Instructor, CHE 101: *Survey of Chemistry*, Wabash College – F'04, S'05, S'06, F'06, & F'08
- Instructor, CHE/PHY 302: *Scanning Electron Microscopy*, Wabash College – S'11 - present
- Instructor, BIO 202: *Electron Microscopy*, Wabash College – S'05 & S'06
- Instructor, CHE 102: *Forensic Chemistry*, Wabash College – S'06
- Freshman Tutorial Instructor, FT M: *Life Lessons from the Undead*, Wabash College – F'11
- Freshman Tutorial Instructor, FT J: *Survival Horror & SciFi*, Wabash College – F'08
- Freshman Tutorial Instructor, FT Q: *Nanoscience and Nanohype*, Wabash College – S'05
- Instructor, CHE 171: *Chemical Nanotechnology*, Wabash College – S'04
- Teaching Assistant, CHM 641: *Advanced Inorganic Chemistry*, Purdue University – 2000
- Teaching Assistant, CHM 266: *Synthetic Organic Chemistry*, Purdue University – 1999
- Teaching Assistant, CHEM 1132: *Problem Solving in General Chemistry*, University of Houston – 1999
- Teaching Assistant, CHEM 1131: *Problem Solving in General Chemistry*, University of Houston – 1998

Awards and Honors:

- Independent Colleges of IN - Ball Brothers Foundation Venture Fund Grant – 2015 (3D Printing Research)
- American Chemical Society Petroleum Research Fund, Type GB Grant (44993-GB5) – 2006
- Camille and Henry Dreyfus Foundation Start-up Award (SU-03-041) – 2003
- National Science Foundation Graduate Research Fellowship – 1999 - 2002
- Indiana Instrumentation Institute (III) Graduate Research Fellowship – 2002 - 2003
- Research Seminar Award, Purdue University Chemistry Dept. – 2003
- New Orleans ACS National Meeting, Div. of Colloid and Surface Chem. Poster Award – 2003
- Purdue Univ. Sigma Xi Research Poster Competition, *First Place* – 2002

- Purdue Univ. Materials Consortium (MatCon) Research Poster Competition, *First Place* – 2002
- Univ. of Houston, Natural Sciences and Mathematics Alumni Association's Distinguished Young Alum – 2000

Major Publications: (* denotes Wabash undergraduate co-authors)

- *A Low-Cost 3D Printed Colorimeter for Student Exploration of Instrument Design and Operation*, Lon A. Porter, Jr., Benjamin M. Washer*, Mazin H. Hakim*, and Richard F. Dallinger; in preparation.
- *Formal NSF Styled Proposal Writing in Preparation for Original Multi-Week Laboratory Projects*, VIPeR (Virtual Inorganic Pedagogical Electronic Resource); 2010.
- *Functionalized Porous Silicon in a Simulated Gastrointestinal Tract: Modeling the Biocompatibility of a Monolayer Protected Nanostructured Material*, Daniel S. Albrecht*, Jacob T. Lee*, Nick Molby*, Steven D. Rhodes*, Hieu Minh Dam*, Jason L. Siegel*, and Lon A. Porter, Jr., *Materials Research Society (MRS) Symposium Proceedings*, Volume 1063, 0006-01 (2008).
- *Introductory Nanoscience and Nanotechnology for Undergraduates: A Liberal Arts Approach*, Lon A. Porter, Jr., in Nanoscale Science and Engineering Education: Issues, Trends and Future Directions, edited by Sudipta Seal and Aldrin E. Sweeney, (American Scientific, New York, 2008). –Invited
- *Chemical Nanotechnology: A Liberal Arts Approach toward a Basic Course in Emerging Interdisciplinary Science and Technology*, Lon A. Porter, Jr., *J. Chem. Educ.*, **84**, 259 (2007).
- *Nanotechnology and the Future of Bioanalytical Methods*, Lon A. Porter, Jr., in Immunoassay and Other Bioanalytical Techniques, edited by Jeanette van Emon, (Taylor & Francis, Boca Raton, 2007). –Invited
- *Synthesis and Patterning of Gold Nanostructures on InP and GaAs via Galvanic Displacement*, Mohammad Reza Hormozi Nezhad, Masato Aizawa, Lon A. Porter, Jr., Alexander E. Ribbe, and Jillian M. Buriak, *Small*, **1**, 1076 (2005).
- *It was the Best of Times, it was the Worst of Times: Confessions of a Graduate School Survivor*, Lon A. Porter, Jr., *In Chemistry*, **14**, 16 (2004). –Invited
- *Harnessing Synthetic Versatility Toward Intelligent Interfacial Design: Organic Functionalization of Nanostructured Silicon Surfaces*, Lon A. Porter, Jr. and J. M. Buriak, in Chemistry of Nanostructured Materials, edited by Peidong Yang, (World Scientific, New York, 2003). –Invited
- *Metallic Nanostructures via Static Plowing Lithography*, Lon A. Porter, Jr., Alexander E. Ribbe, and J. M. Buriak, *Nano Letters*, **3**, 1043 (2003).
- *New Pairs of Inks and Papers for Photolithography, Microcontact Printing, and Scanning Probe Nanolithography*, Lon A. Porter, Jr., Hee Cheul Choi, J. M. Schmeltzer, Alexander E. Ribbe, and J. M. Buriak, *Materials Research Society (MRS) Symposium Proceedings*, **737**, 341 (2003).
- *Functionalization of Porous Silicon with Alkenes and Alkynes via Carbocation-Mediated Hydrosilylation*, J. M. Schmeltzer, Lon A. Porter, Jr., Michael P. Stewart, Carmen M. Lopez, and J. M. Buriak, *Materials Research Society (MRS) Symposium Proceedings*, **737**, 561 (2003).
- *Electroless Deposition and Patterning of Morphologically Complex Precious Metal Films on Semiconductor Surfaces*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, and J. M. Buriak, *Materials Research Society (MRS) Symposium Proceedings*, **737**, 575 (2003).
- *Electroless Nanoparticle Film Deposition Compatible with Photolithography, Microcontact Printing, and Dip-Pen Nanolithography Patterning Technologies*, Lon A. Porter, Jr., Hee Cheul Choi, J. M. Schmeltzer, Alexander E. Ribbe, Lindsay C. C. Elliott, and J. M. Buriak, *Nano Letters*, **2**, 1369 (2002).
 - See: NBC News, Feb. 2003, "Bio Detector"
 - See: Materials Today, Feb. 2003, "Nanoparticles by Accident"

- See: MICRO Magazine, Jan. 2003, "Worth Their Weight"
- See: Science News, Dec. 21, 2002, "Gold Deposits: Scientists Design Nanoparticle Films"
- ***Controlled Electroless Deposition of Noble Metal Nanoparticle Films on Germanium Surfaces***, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, and J. M. Buriak, *Nano Letters*, **2**, 1067 (2002).
- ***Hydride Abstraction Initiated Hydrosilylation of Terminal Alkenes and Alkynes on Porous Silicon***, J. M. Schmeltzer, Lon A. Porter, Jr., M. P. Stewart, and J. M. Buriak, *Langmuir*, **18**, 2971 (2002).
- ***Gold and Silver Nanoparticles Functionalized by the Adsorption of Dialkyl Disulfides***, Lon A. Porter, Jr., David Ji, Sarah L. Westcott, Michael Graupe, Roman S. Czernuszewicz, Naomi J. Halas, and T. Randall Lee, *Langmuir*, **14**, 7378 (1998).
- ***Metal Nanoparticles Functionalized by the Adsorption of Thiols and Disulfides***, Lon A. Porter, Jr., *Senior Honors Thesis*, (Advisor, T. Randall Lee - Dept. of Chemistry, Univ. of Houston)
- ***As Big as Texas: The American Chemical Society Affiliates in Dallas***, Lon A. Porter, Jr., *In Chemistry*, **8**, 19 (1998). –Invited

Presentations:

- ***3D Printing at Wabash: Initial Efforts on Campus and New Directions in Teaching, Research, and Beyond***, Lon A. Porter, Jr., oral presentation, Ides of August Faculty Symposium, Wabash College, IN (2015).
- ***YouTube chemistry: Online problem solving walkthroughs as supplemental learning tools***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Indianapolis, IN (2013).
- ***Putting YouTube to work for the liberal arts: Online problem solving walkthroughs as student learning tools!***, Lon A. Porter, Jr., oral presentation, Ides of August Faculty Symposium, Wabash College, IN (2013).
- ***Science without Borders: Piloting a New Module for the Summer Ecuador Program***, Maureen E. McColgin and Lon A. Porter, Jr., oral presentation, Ides of August Faculty Symposium, Wabash College (2011).
- ***Alkyl-functionalization of porous silicon via multimode microwave-assisted hydrosilylation: Results of an undergraduate research program exploring inorganic materials chemistry***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Salt Lake City, UT (2009).
- ***Connecting kids, chemistry, and the community: An innovative outreach collaboration with college mentors with kids***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Salt Lake City, UT (2009).
- ***Some Nano Giants: Wabash Student Research in Silicon Surface Chemistry***, Lon A. Porter, Jr., oral presentation, Ides of August Faculty Symposium, Wabash College (2008).
- ***Organic Functionalization of Porous Silicon via Hydrosilylation Pathways: Probing Monolayer Stability through Degradation Studies***, Lon A. Porter, Jr., oral presentation, Purdue University, West Lafayette, IN (2008). –Invited
- ***Using Nanoscience in a Supporting Role: Introducing Nanoscience into an Upper-Level Undergraduate Materials Chemistry course***, Lon A. Porter, Jr., oral presentation, Biennial Conference on Chemical Education (BCCE), Indiana University, Bloomington, IN (2008).
- ***Using Popular Media References to Nanoscience in the Chemistry Classroom: Read, Watch, and Play On!***, Lon A. Porter, Jr., oral presentation, Biennial Conference on Chemical Education (BCCE), Indiana University, Bloomington, IN (2008). –Invited

- ***Organic Functionalization of Porous Silicon via Hydrosilylation Pathways: Probing Monolayer Stability through Degradation Studies***, Lon A. Porter, Jr., oral presentation, University of Notre Dame, Notre Dame, IN (2008). –*Invited*
- ***Engaging and Challenging Undergraduates via Interdisciplinary Coursework: A New Learner-Centered Approach to Materials Chemistry***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, New Orleans, LA (2008).
- ***Comparing Hydrosilylation Routes to Functionalized Porous Silicon***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Boston, MA (2007).
- ***Fostering Student Engagement via Interdisciplinary Themes: A Liberal Arts Approach to Chemistry for Non-Majors***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Boston, MA (2007).
 - See: **CHEMICAL & ENGINEERING NEWS**, Sept. 2007, Vol. 85, No. 38, pp. 38-40, " Chemistry Isn't Just For Majors"
- ***Engaging Non-Majors Beyond Introductory Chemistry: A Liberal Arts Science Course in Forensic Chemistry***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Boston, MA (2007).
- ***Functionalized Porous Silicon in a Simulated Gastrointestinal Tract: Modeling the Biocompatibility of a Monolayer Protected Nanostructured Material.***, Lon A. Porter, Jr., oral presentation, Materials Research Society (MRS) National Meeting, Boston, MA (2007).
- ***Discerning Science from Hype: A Liberal Arts Science Course in Forensic Chemistry.***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) Central Regional Meeting, Covington, KY (2007).
- ***All Monolayers are Not Created Equal: Functionized Porous Silicon Stability Studies***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Chicago, IL (2007).
- ***Tabula Rasa: Tablet PCs in the Classroom and Beyond***, Lon A. Porter, Jr., oral presentation, Tech Talk, Wabash College (2006).
- ***An "Investigator-centered" Approach to a Capstone Laboratory Experience: Undergraduate Proposal Writing and Collaborative Research (CHE 441L)***, Lon A. Porter, Jr., oral presentation, Biennial Conference on Chemical Education (BCCE), Purdue University, West Lafayette, IN (2006). –*Invited*
- ***Forensic Chemistry and the Educated Citizen: A Liberal Arts Approach***, Lon A. Porter, Jr., oral presentation, Biennial Conference on Chemical Education (BCCE), Purdue University, West Lafayette, IN (2006).
- ***Exploring Nanoscience and Nanohype: A Liberal Arts Approach to Emerging Interdisciplinary Science and Technology***, Lon A. Porter, Jr., oral presentation, Biennial Conference on Chemical Education (BCCE), Purdue University, West Lafayette, IN (2006).
- ***Discerning Science from Hype: A Liberal Arts Science Course in Forensic Chemistry***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Atlanta, GA (2006).
- ***Degradation of Alkyl Functionalized Porous Silicon in Simulated Acellular Plasma (blood)***, Benjamin T. Edquist, Trayton B. White, Gregory R. Fulmer, Daniel R. Thornberry, and Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, Atlanta, GA (2006).
- ***Nanoscience-fiction Resources for the Chemistry Classroom: Read, Watch, and Play On!***, Lon A. Porter, Jr., poster presentation, American Chemical Society (ACS) National Meeting, San Francisco, CA (2006).
- ***Functionalized Porous Silicon: Tunable Platforms for Bioanalytical Sensor Design***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, San Francisco, CA (2006). –*Invited*

- ***Read, Watch, and Play on! Nanoscience Fiction Resources for the Chemistry Classroom***, Lon A. Porter, Jr., oral presentation and faculty session, Annual Meeting of the Midwestern Association of Chemistry Teachers in Liberal Arts Colleges (MACTLAC), Lawrence University, Appleton, WI (2005). **-Invited**
- ***Applications of Symmetry and Group Theory in Bonding and Vibrational Spectroscopy***, Lon A. Porter, Jr., oral presentation, Math/CS Colloquium, Wabash College (2005). **-Invited**
- ***From the PC to the ER: Wabash Student Research toward Silicon BioChip Technology***, Lon A. Porter, Jr., oral presentation,
 - Northeastern Illinois University, Chicago, IL (2005) **-Invited**
 - Wabash College, Ides of August (2005).
- ***Utilizing Learning Centered Approaches toward an Interdisciplinary Course in Chemical Nanotechnology***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, San Diego, CA (2005).
- ***Degradation of Alkyl Functionalized Porous Silicon in Simulated Acellular Plasma (blood)***, Daniel R. Thornberry, Gregory R. Fulmer, Steven D. Rhodes, and Lon A. Porter, Jr., poster presentation, American Chemical Society (ACS) National Meeting, San Diego, CA (2005).
- ***Utilizing Learning Centered Approaches toward an Interdisciplinary Course in Chemical Nanotechnology***, Lon A. Porter, Jr., oral presentation, American Chemical Society (ACS) National Meeting, San Diego, CA (2005).
- ***Undergraduate Proposal Writing and Collaborative Investigation: A Learning Centered Approach to a Capstone Laboratory Experience***, Lon A. Porter, Jr., poster presentation, American Chemical Society (ACS) National Meeting, San Diego, CA (2005).
- ***Discerning Science from Hype: A New Course in Chemical Nanotechnology***, Lon A. Porter, Jr., oral presentation, 18th Biennial Conference on Chemical Education (BCCE), Ames, IA (2004).
- ***Chemical Nanotechnology: A Balanced Course Approach toward Emerging Science and Technology***, Lon A. Porter, Jr., oral presentation,
 - American Chemical Society (ACS) National Meeting, Anaheim, CA (2004).
 - American Chemical Society (ACS) Great Lakes Central Regional Meeting, Peoria, IL (2004).
 - American Chemical Society (ACS) Central Regional Meeting, Indianapolis, IN (2004).
- ***Chemical Nanotechnology: A Liberal Arts Approach toward a Basic Course in Emerging Science and Technology***, Lon A. Porter, Jr., poster presentation,
 - 18th Biennial Conference on Chemical Education (BCCE), Ames, IA (2004).
 - American Chemical Society (ACS) National Meeting, Anaheim, CA (2004).
 - American Chemical Society (ACS) Central Regional Meeting, Indianapolis, IN (2004).
- ***Nanopatterning Noble Metals onto Semiconductor Substrates via Scanning Probe Nanolithography***, Lon A. Porter, Jr., Alexander E. Ribbe, and Jillian M. Buriak, oral presentation, American Chemical Society (ACS) National Meeting, Anaheim, CA (2004). **-Invited**
- ***Noble Metal Nanostructures on Semiconductor Substrates: Fabrication via Scanning Probe Nanolithography***, Lon A. Porter, Jr., Alexander E. Ribbe, and Jillian M. Buriak, poster presentation, American Chemical Society (ACS) National Meeting, Anaheim, CA (2004). **-Invited**
- ***Electroless Deposition of Noble Metal Nanoparticle Films: Facile Routes to Patterned Surfaces via Photolithography, Microcontact Printing, and Scanning Probe Nanolithography***, Lon A. Porter, Jr., Hee Cheul Choi, J. M. Schmeltzer, Alexander E. Ribbe, and Jillian M. Buriak, oral presentation, American Chemical Society (ACS) National Meeting, New Orleans, LA (2003). **-Invited**

- *Preparation and Characterization of Noble Metal Nanoparticle Films on Semiconductor Substrates*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, and Jillian M. Buriak, poster presentation, American Chemical Society (ACS) National Meeting, New Orleans, LA (2003). **-Poster Award (COLL Division)**
- *Facile Electroless Deposition Routes to Noble Metal Nanoparticle Films: New High-Surface-Area Substrates for Fundamental and Applied Investigations*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, and Jillian M. Buriak, oral presentation, American Chemical Society (ACS) National Meeting, New Orleans, LA (2003).
- *Facile Electroless Deposition Routes to Noble Metal Nanoparticle Films: New High-Surface-Area Substrates for Fundamental and Applied Investigations*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, and Jillian M. Buriak, oral presentation, International Society for Optical Engineering (SPIE) International Symposium on Microlithography, Santa Clara, CA (2003).
- *Electroless Deposition and Patterning of Morphologically Complex Precious Metal Films on Semiconductor Surfaces*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, and Jillian M. Buriak, oral presentation, Materials Research Society (MRS) Fall Meeting, Boston, MA (2002).
- *Nanoscale Patterning of Organic and Inorganic Structures on Silicon Surfaces*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, J. M. Schmeltzer, and Jillian M. Buriak, oral presentation, Materials Research Society (MRS) Fall Meeting, Boston, MA (2002).
- *New Pairs of Inks and Papers for Photolithography, Microcontact Printing, and Scanning Probe Nanolithography*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, J. M. Schmeltzer, and Jillian M. Buriak, poster presentation, Materials Research Society (MRS) Fall Meeting, Boston, MA (2002).
- *Patterned Electroless Deposition of Precious Metal Nanoparticles on Semiconductor Surfaces*, Lon A. Porter, Jr., Hee Cheul Choi, J. M. Schmeltzer, and Jillian M. Buriak, oral presentation, American Chemical Society (ACS) Great Lakes Regional Meeting, Minneapolis, MN (2002).
- *Organic Monolayers on Silicon and Germanium Surfaces: Harnessing Synthetic Versatility Toward Intelligent Interfacial Design*, Lon A. Porter, Jr., J. M. Schmeltzer, and Jillian M. Buriak, oral presentation, Annual Meeting of the American Physical Society (APS), Indianapolis, IN (2002). **-Invited**
- *Noble Metal Nanoparticle Films Compatible with Photolithography, Microcontact Printing, and Dip-Pen Nanolithography Patterning Technologies*, Lon A. Porter, Jr., Hee Cheul Choi, J. M. Schmeltzer, Alexander E. Ribbe, and J. M. Buriak, oral presentation, Purdue-Indiana-Notre Dame Universities (PINDU) Inorganic Chemistry Conference, Bloomington, IN (2002).
- *Electroless Deposition of Morphologically Complex Noble Metal Films on Semiconductor Surfaces*, Lon A. Porter, Jr., Hee Cheul Choi, Alexander E. Ribbe, and J. M. Buriak, poster presentation, Purdue-Indiana-Notre Dame Universities (PINDU) Inorganic Chemistry Conference, Bloomington, IN (2002).
- *Patterned Electroless Deposition of Precious Metal Nanoparticles on Metal and Semiconductor Surfaces*, Lon A. Porter, Jr., J. M. Schmeltzer, Hee Cheul Choi, and Jillian M. Buriak, poster presentation, Purdue Univ. Sigma Xi Graduate Research Poster Symposium, West Lafayette, IN (2002). **-First Place Award**
- *Photopatterned Electroless Deposition of Precious Metal Nanoparticles on Semiconductor Surfaces*, Lon A. Porter, Jr., Hee Cheul Choi, J. M. Schmeltzer, and Jillian M. Buriak, poster presentation, Purdue Univ. Materials Consortium (MatCon) Graduate Research Poster Symposium, West Lafayette, IN (2002). **-First Place Award**
- *Chemical Weapons of Mass Destruction: History, Synthesis, Toxicology, and Detection of Organophosphorous Nerve Agents*, Lon A. Porter, Jr., oral presentation, Inorganic Division Literature Seminar, Purdue Univ., West Lafayette, IN (2002).
- *Bioelectronic Sensor Arrays as Viable Sensing Alternatives for Analytes of Domestic and Defense Interest*, Lon A. Porter, Jr., oral presentation, Ecology Division, Biology Department, Purdue Univ., West Lafayette, IN (2001). **-Invited**

- ***From the Backyard to the Battlefield: Arthropod-Based Neural BioFET Arrays as Viable Sensing Alternatives for Analytes of Domestic and Defense Interest***, Lon A. Porter, Jr., oral presentation, Inorganic Division Original Proposal (OP), Purdue Univ., West Lafayette, IN (2001).
- ***Hydride Abstraction Initiated Hydrosilylation of Terminal Alkenes and Alkynes on Porous Silicon***, M. P. Stewart, Lon A. Porter, Jr., J. M. Schmeltzer, and J. M. Buriak, poster presentation, Purdue-Indiana-Notre Dame Universities (PINDU) Inorganic Chemistry Conference, West Lafayette, IN (2001).
- ***Hydride Abstraction Initiated Hydrosilylation of Terminal Alkenes and Alkynes on Porous Silicon***, M. P. Stewart, Lon A. Porter, Jr., J. M. Schmeltzer, and J. M. Buriak, poster presentation, American Chemical Society (ACS) National Meeting, Chicago, IL (2001).

Major Wabash Student Presentations:

- ***Functionalization of Photoluminescent N-Type Porous Silicon with Aldehydes via Hydrosilylation Reactions: Oxidation and Degradation Monitored via Transmission Mode Fourier Transform Infrared (FTIR) Spectroscopy***, Austin Althoff, Adam Pagryzinski, Cole Chapman, & Ivan Koutsopatriy, and Lon A. Porter, Jr., graduate poster presentation, Materials Research Society (ACS) National Meeting, San Francisco, CA (2014).
- ***Exploring the stability of organic monolayers covalently bound to hydride-terminated porous silicon surfaces: Degradation studies monitored via transmission mode FTIR***, Anton J. Crepinsek, Adam R Pagryzinski, Austin A Althoff, Taylor A Neal, and Lon A. Porter, Jr., student poster presentation, American Chemical Society (ACS) National Meeting, San Diego, CA (2012).
- ***Bonding organic molecules to silicon surfaces: Hydrosilylation of aldehydes onto hydride-terminated porous silicon***, Anton J. Crepinsek, Taylor A Neal, Austin A Althoff, and Lon A. Porter, Jr., student poster presentation, American Chemical Society (ACS) National Meeting, San Diego, CA (2012).
- ***Microwave functionalization of hydride-terminated porous silicon: Initial steps toward new solid-supported catalysts***, Nathan J Line and Lon A. Porter, Jr., student poster presentation.
-American Chemical Society (ACS) National Meeting, Anaheim, CA (2011)
- ***Oxidation of porous silicon in organic solvents: FTIR and SEM analysis***, Nathan J Line and Lon A. Porter, Jr., student poster presentation.
-American Chemical Society (ACS) National Meeting, San Francisco, CA (2010)
- ***Oxidative degradation of alkyl-functionalized porous silicon in simulated acellular blood plasma monitored via FTIR and SEM***, Chad Sorenson, Lucas Evans, Forrest Craig, and Lon A. Porter, Jr., student poster presentation.
-American Chemical Society (ACS) National Meeting, San Francisco, CA (2010)
- ***Comparing hydrosilylation routes to functionalized porous silicon: Oxidation of functionalized porous silicon in organic solvents***, Nathan J. Line, Matt Roy, and Lon A. Porter, Jr., student poster presentation.
-American Chemical Society (ACS) National Meeting, Salt Lake City, UT (2009)
- ***Organic functionalization of porous silicon via multimode microwave reactor-assisted hydrosilylation***, Jasper Small, and Lon A. Porter, Jr., student poster presentation.
-American Chemical Society (ACS) National Meeting, Salt Lake City, UT (2009)
- ***Functionalized Porous Silicon Oxidation in Simulated Gastric and Intestinal Fluids***, Jake T. Lee, Nick Molby, and Lon A. Porter, Jr., student poster presentation,
-American Chemical Society (ACS) National Meeting, New Orleans, LA (2008)

- American Chemical Society (ACS) Indiana Local Section Poster Session (2007)
- Wabash Celebration of Student Research, Scholarship, and Creative Work (2008)
- ***Degradation Studies of Alkyl-Functionalized Porous Silicon in Organic Solvents***, Nathan J. Line, and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, New Orleans, LA (2008)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2007)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2008)
- ***Controlling Surface Functional Groups on Monolayer Protected Porous Silicon***, Jason L. Siegel, and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, New Orleans, LA (2008)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2007)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2008)
- ***Stability of Functionalized Porous Silicon in a Simulated Gastrointestinal Track***, Daniel S. Albrecht, Hieu Minh (Duncan) Dam, Jason L. Siegel, and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, Chicago, IL (2007)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2006)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2007)
- ***Probing Monolayer Stability via Deterioration of Functionalized Porous Silicon in Alkaline Environments***, Wassim W. Labaki and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, Chicago, IL (2007)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2006)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2007)
- ***Probing Monolayer Stability through Chemical Reactions on Functionalized Porous Silicon***, Steven D. Rhodes, Syud M. Ahmed, and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, Atlanta, GA (2006)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2005)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2006)
- ***Degradation of Long-chain Alkyl Functionalized Porous Silicon in Simulated Acellular Plasma***, Benjamin T. Edquist, Trayton B. White, Gregory R. Fulmer, Daniel R. Thornberry, and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, Atlanta, GA (2006)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2005)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2006)
- ***Degradation of Short-chain Alkyl Functionalized Porous Silicon in Simulated Acellular Plasma***, Trayton B. White, Benjamin T. Edquist, Gregory R. Fulmer, Daniel R. Thornberry, and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, Atlanta, GA (2006)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2005)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2006)

- ***Degradation of Functionalized Porous Silicon in Simulated Gastric Fluid***, Daniel R. Thornberry, Gregory R. Fulmer, Steven D. Rhodes, and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) National Meeting, San Diego, CA (2005)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2004)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2005)
- ***Degradation of Functionalized Porous Silicon in Simulated Body Fluids***, Gregory R. Fulmer, Daniel R. Thornberry, Steven D. Rhodes, and Lon A. Porter, Jr., student poster presentation, presentation,
 - American Chemical Society (ACS) National Meeting, San Diego, CA (2005)
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2004)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2005)
- ***Organic Synthesis on a Chip: Chemical Reactions on Functionalized Porous Silicon***, Steven D. Rhodes and Lon A. Porter, Jr., student poster presentation, American Chemical Society (ACS) National Meeting, San Diego, CA (2005).
- ***Carbocation Mediated Hydrosilylation of Porous Silicon: A Route toward Organic Synthesis on a Chip***, Steven D. Rhodes and Lon A. Porter, Jr., student poster presentation,
 - American Chemical Society (ACS) Indiana Local Section Poster Session (2004)
 - Wabash Celebration of Student Research, Scholarship, and Creative Work (2005)
- ***Initial Efforts toward the Preparation, Isolation, and Characterization of Polymeric Monolayer Protected Gold Clusters***, Syud M. Ahmed and Lon A. Porter, Jr., student poster presentation, Wabash Celebration of Student Research, Scholarship, and Creative Work (2005).

Affiliations and Leadership Experience:

- American Chemical Society (ACS) – 1998 – present
 - Younger Chemist Committee (National Committee Member) – 2006 - 2008
- Materials Research Society – 2002 - present
 - Academic Affairs Committee (National Committee Member) – 2003 - 2007
- Midwestern Association of Chemistry Teachers in Liberal Arts Colleges – 2005 - present
- Reviewer, *Journal of Chemical Education* – 2003 - present
- Chair and Organizer, *Evolving Nature of Nanoscience in the Undergraduate Chemistry Curriculum*, 20th Biennial Conference on Chemical Education (BCCE), Bloomington, IN. – 2008
- Chair and Organizer, *Forensic Chemistry in the Undergraduate Curriculum*, Chemical Education Division (CHED), 234th Annual National Meeting of the American Chemical Society, Boston, CA. – 2007
- Chair, *Chemical Educators and Nanotechnology Development*, 19th Biennial Conference on Chemical Education (BCCE), West Lafayette, IN. – 2006
- Chair, *Surface Chemistry of Inorganic Materials: Biological Interfaces with Inorganic Materials*, Inorganic Division (INOR), 227th Annual National Meeting of the American Chemical Society, Anaheim, CA. – 2004
- Chair and Organizer, *Award Symposium for Jillian M. Buriak* (2003 ACS Award in Pure Chemistry), Inorganic Division (INOR), 225th Annual National Meeting of the American Chemical Society, New Orleans, LA. – 2002 - 2003
- Chair, *Symposium F: Nanocrystalline Semiconductors Materials and Devices* (Semiconductor Nanowires and Nanotubes I), 2002 Materials Research Society (MRS) Fall Meeting, Boston, MA. – 2002
- American Physical Society (APS) – 2002 - 2003
- International Society for Optical Engineering (SPIE) – 2002 - 2003
- The National Journal of Young Investigators (an undergraduate research journal sponsored by NSF and supervised by *Science* magazine)
 - Associate Editor – Chemistry (Interfacial and Materials Science) – 1999 - 2000