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Experience	Assistant Professor <i>Colorado College, Dept. of Chemistry & Biochemistry</i>	2017 – Present
	Visiting Research Scientist <i>Chinese Academy of Sciences, Institute of Semiconductors, Beijing, CN</i> <i>Electrochemical Preparation of Nano-perovskite solar cells</i>	2016 – 2017
	Engineer <i>Hummingbird Scientific, Lacey, WA</i> <i>Development of In-situ Transmission Electron Microscopy Sample Holders</i>	2010 – 2011
Education	University of Michigan Ph.D., Department of Chemistry Advisor: Dr. Stephen Maldonado Thesis: <i>Electrochemically-modulated semiconductor crystal growth at liquid metal electrodes.</i>	2011 – 2016
	The Evergreen State College B.S. Chemistry, Minor in Chemical Biology	2007 – 2010
Research Summary	We study the non-Faradaic influence of very large static, dynamic, and bipolar electric fields on molecular crystallization, assembly, and environmental sensing. We take a broad and creative approach to solving problems, weaving in aspects of electrochemistry, materials science, environmental chemistry, applied physics, and scientific communication.	
Publications	*Thomas, B., *Humphrey, N., *Monge-Castro, J., Fahrenkrug, E. , Solid-State Luminescence Reporting in Closed Bipolar Electrochemical Sensors for Heavy Metal Ion Analysis. <i>In Preparation.</i>	
	*Mondaca, E., *Freedman, R., Kinney, R., Fahrenkrug, E. , Molecular Imprint Optical Stripping Voltammetry Detection of Fluorinated Contaminants in Water. <i>In Preparation.</i>	
	*Humphrey, N., *Miranda, J., *Thomas, B., *Kinney, R., *Mondaca, E., *Freedman, R., Fahrenkrug, E. , On-chip Optical Anodic Voltammetry with Closed Bipolar Cells and Cathodic Electrochemiluminescence Reporting. <i>ACS Sensors</i> , (6), 11, 4136-4144, (2021).	
	Han, L., Lin, J., Liu, J., Fahrenkrug, E. , Guan, Y., Zhong, H., Chen, C., Jiang, M., Lu, X., Wang, Y., Sun, K., Tan, J., Liu, K., Wang, Z., Wang, Z., Qu, S., Jin, P., Selective Growth of Functional Materials Modulated by Surface States. <i>Nano Lett.</i> , 21 (14), 5931-5937, (2021).	
	*Mondaca, E., *Wright, K., *Chavarria, N., Fahrenkrug, E. , A Design-Based Learning Framework for Introducing Factorial Experimental Design and Lab-on-a-Chip Separations in the Instrumental Analysis Laboratory. <i>J. Chem. Ed.</i> , 97 (5), 1327-1335, (2020).	
	Buckley, P., Fahrenkrug, E. , The Flint, Michigan Water Crisis as a Case Study for Introducing Concepts of Equity and Power into an Analytical Chemistry Curriculum. <i>J. Chem. Ed.</i> , 97 (5), 1327-1335, (2020).	
	Fahrenkrug, E. , Cheek, Q., †Alsem, D. H., †Salmon, N., Maldonado, S. <i>In Situ</i> Transmission Electron Microscopy Measurements of Ge Nanowire Synthesis with Liquid Metal Nanodroplets in Water. <i>ACS Nano</i> , 14 (3), 2869-2879, (2020).	

- Bower, N., Brasuel, M., **Fahrenkrug, E.**, Cooney, M., Insights into Geographic and Temporal Variation in Fatty Acid Composition of Croton Nuts using ATR-FTIR. *Int. J. Anal. Chem.*, 1-8, (2018).
- Fahrenkrug, E.**, †Alsem, D. H., †Salmon, N., Maldonado, S., Electrochemical Measurements during In Situ Liquid-Electrochemical TEM Experiments. *Microscopy and Microanalysis*, 23(S1), 938-939, (2017).
- Fahrenkrug, E.**, DeMuth, J.; Ma, L.; Shodiya, T.; Deitz, J. I.; Grassman, T. J.; and Maldonado, S., Electrochemical Liquid Phase Epitaxy (ec-LPE): A New Methodology for the Synthesis of Crystalline Group IV Semiconductor Epifilms. *J. Am. Chem. Soc.*, 139, 6960-6968, (2017).
- Fahrenkrug, E.**, Rafson, J., Lancaster, M., Maldonado, S., Concerted Electrodeposition and Alloying of Antimony on Indium Electrodes for Selective Formation of Crystalline Indium Antimonide *Langmuir*, 33, 9280-9287, (2017).
- Ma, L., **Fahrenkrug, E.**, *Gerber, E., Maldonado, S., High-Performance Ge Microwire Li-ion Battery Anodes As-Prepared by the Electrochemical Liquid-Liquid-Solid Deposition Process. *ACS Energy Letters*, 2, 238-243 (2017).
- Fahrenkrug, E.**, †Alsem, D. H., †Salmon, N., Maldonado, S., Electrochemical Measurements in In Situ TEM Experiments. *J. Electrochem. Soc.*, 164, H358-H364 (2017).
- DeMuth, J., **Fahrenkrug, E.**, Maldonado S. Controlling Nucleation and Crystal Growth of Ge in a Liquid Metal Solvent. *Cryst. Growth Des.*, 16, 7130-7138 (2016).
- Zhang, T., **Fahrenkrug, E.**, Maldonado, S., Electrochemical Liquid-Liquid-Solid Growth of Crystalline Ge at Hg Microdroplet Ultramicroelectrodes. *J. Electrochem. Soc.* 163, D500-D505 (2016).
- Lee S., Bielinski, A., **Fahrenkrug, E.**, Dasgupta, N., Maldonado S. Macroporous p-GaP Photocathodes Prepared by Anodic Etching and Atomic Layer Deposition Doping. *ACS Appl. Mater. Inter.* 8, 16178-16185 (2016).
- DeMuth, J.; Ma, L.; **Fahrenkrug, E.**, Maldonado, S. Electrochemical Liquid-Liquid-Solid Deposition of Crystalline Gallium Antimonide. *Electrochim. Acta*, 197, 353-362 (2016).
- Fahrenkrug, E.**, Maldonado, S., Electrochemical Liquid-Liquid-Solid (ec-LLS) Crystal Growth: A Low-Temperature Strategy for Covalent Semiconductor Crystal Growth. *Acc. Chem. Res.*, 48 (7), 1881-1890, (2015).
- Fahrenkrug, E.**, *Biehl J., Maldonado S. Electrochemical Liquid-Liquid-Solid Crystal Growth of Germanium Microwires on Hard and Soft Conductive Substrates at Low Temperature in Aqueous Solution. *Chem. Mater.* 27, 3389-3396 (2015).
- Lee S., **Fahrenkrug, E.**, Maldonado S. Synthesis of photoactive ZnSnP₂ semiconductor nanowires. *J. Mater. Res.* 30, 2170-2178 (2015).
- Gu J, **Fahrenkrug, E.**, Maldonado S. Analysis of the Electrodeposition and Surface Chemistry of CdTe, CdSe, and CdS Thin Films through Substrate-Overlayer Surface-Enhanced Raman Spectroscopy. *Langmuir* 30, 10344-10353 (2014).
- Fahrenkrug, E.**, Gu, J. & Maldonado, S. Electrochemically-Gated Alloy Formation of Crystalline InAs Thin Films at Room Temperature in Aqueous Electrolytes. *Chem. Mat.*, 26, 4535-4543 (2014).
- Ma, L.; Gu, J.; **Fahrenkrug, E.**; Maldonado, S., Electrochemical Liquid-Liquid-Solid Deposition of Crystalline Ge Nanowires as a Function of Ga Nanodroplet Size. *J. Electrochem. Soc.* 161, D3044-D3050 (2014).

Fahrenkrug E., Gu J, Jeon S, Veneman PA, Goldman RS, Maldonado S. Room-Temperature Epitaxial Electrodeposition of Single-Crystalline Germanium Nanowires at the Wafer Scale from an Aqueous Solution. *Nano Lett.* 14, 847-852 (2014).

Gu J, **Fahrenkrug E.**, Maldonado S. Direct Electrodeposition of Crystalline Silicon at Low Temperatures. *J. Am. Chem. Soc.* 135, 1684-1687 (2013).

Fahrenkrug E., Gu, J. & Maldonado, S. Electrodeposition of Crystalline GaAs on Liquid Gallium Electrodes in Aqueous Electrolytes. *J. Am. Chem. Soc.* 135, 330-339 (2012).

*Undergraduate students

†Industrial collaborators

Patents

Fahrenkrug, E., Optical Stripping Voltammetry, Provisional Patent App.

Maldonado, S.; Demuth, J.; **Fahrenkrug, E.**; Devices and Methods for Electrochemical Liquid Phase Epitaxy. US Patent 20180195203, United States, 2018.

Funding

National Endowment for the Humanities (NEH), Connections Implementation Grant, “Changing How Incoming Students Relate to the Humanities”, 2022 – *part of collaborative team with Prof. Aaron Stoller as Project Director*

Associated Colleges of the Midwest (ACM) Faculty Career Enhancement (FaCE) Program, “in³STEM: Interdisciplinary & Inclusive Introductory STEM”, 2021-2022 (\$18,000) – *Co-PI on interdisciplinary proposal with faculty from Physics, Molecular Biology, and Education at Colorado College.*

NSF MRI, “Acquisition of a Confocal Raman Microscope to Advance Research and Undergraduate Teaching in Southern Colorado”, 2021-2024 (\$199k) – *PI on interdisciplinary proposal with faculty from Chemistry, Biology, and Physics from four institutions in Colorado.*

ACS PRF UNI, “Selective Polymorph Crystallization within the Electrical Double Layer”, 2021-2023 (\$72k). *Sole PI on proposal.*

Society for Analytical Chemists of Pittsburgh, UARP Award, “Optical Anodic Stripping Voltammetry”, 2020-2021 (\$10k). *Sole PI on proposal.*

Cottrell Teacher-Scholar Award, “Selective Polymorph Crystallization in Custom Electrostatic Environments and Plug-and-Play Inclusive Chemistry Pedagogy”, 2020, *not awarded (\$100k)*

NSF DRK, Collaborative Research: Science Teachers as Architects of Their Own Professional Growth (STAT-PG),” 2019, *not awarded (\$3.5M). Collaborative proposal between Chemistry, Environmental Science, and Education at Colorado College, University of Colorado, and Northern Colorado U.*

Awards

Kasmir Fajans Award	2020
Society for Analytical Chemists of Pittsburgh, UARP Award	2020
Jackson Family Fellowship	2019
Exemplary Achievement in Community-Engaged Research Award, <i>nominee</i>	2019
National Nanotechnology Infrastructure Network Postdoc. Fellowship	2017
Rackham Predoctoral Fellowship	2015
Karle Research Symposium Award	2015
Sokol Fellowship	2013
Rackham Centennial Fellowship	2013
NSF GRFP Honorable Mention	2013
Rackham Travel Award	2011 – 2016
Rackham Merit Fellowship	2011 – 2013
Dean’s Scholar Award	2008 – 2011

	NSF S-STEM Scholar	2007 – 2011
	Rackham Travel Award	2011 – 2016
Invited Talks	Fajans Lecture, University of Michigan, Dept. of Chemistry <i>Democratizing Chemical Diagnostics</i>	2023
	Seminar, Grinnell College, Dept. of Chemistry <i>Democratizing Chemical Diagnostics</i>	2022
	Seminar, Amherst College, Dept. of Chemistry <i>Democratizing Chemical Diagnostics</i>	2022
	Seminar, Colorado College, Alumni Club <i>Democratizing Chemical Diagnostics</i>	2022
	Seminar, University of Colorado, Colorado Springs, Dept. of Engineering <i>Large Solution-based Electric Fields for Crystal Growth and Sensing</i>	2022
	Seminar, University of Colorado, Colorado Springs, Dept. of Chemistry <i>Large Solution-based Electric Fields for Crystal Growth and Sensing</i>	2021
	Colorado School of Mines, Chemistry Graduate Students (CGA) Group <i>An Unconventional Path to Academe</i>	2021
	Seminar, Colorado School of Mines, Department of Chemistry <i>Polymorph Crystallization in Large Custom Electrostatic Environments</i>	2020
	Kasmir Fajan's Award Reception, University of Michigan (cancelled due to COVID-19) <i>Polymorph Crystallization in Custom Electrostatic Environments</i>	2020
	Pike's Peak Environmental Forum <i>PFAS Contamination in Southern Colorado Springs</i>	2020
	Environmental Podfest, Panelist <i>PFAS Contamination in Southern Colorado Springs</i>	2019
	Alum NUM University of Michigan, Panelist <i>The Academic Job Search</i>	2019
	Peak Alliance for a Sustainable Future, SIP <i>PFAS Contamination in Southern Colorado Springs</i>	2019
	Environmental Action Summit, Panelist <i>Fountain Valley Water Project and Environmental Justice</i>	2019
	Nucleation and Growth Research, Kyoto, Japan <i>Electron Beam Induced Electrochemical Liquid Liquid Solid Growth of Ge Nanowires</i>	2016
	Chinese Academy of Sciences, Institute of Semiconductors <i>Electrochemically-modulated semiconductor crystal growth at liquid metals</i>	2016
	Chinese Academy of Sciences, Institute of Chemistry <i>Electrochemically-modulated semiconductor crystal growth at liquid metals</i>	2016
	Northwestern University, Dept. of Chemistry <i>Electrochemically-Modulated Semiconductor Crystallization at the Liquid Metal-Liquid Electrolyte Interface</i>	2016
	Stanford University, Dept. of Materials Science <i>Electrochemically-Modulated Semiconductor Crystallization at the Liquid Metal-Liquid Electrolyte Interface</i>	2016
	PittCon, First Annual Student Symposium in Electroanalysis <i>In-situ Spectroelectrochemical Investigation of the Reactive Aqueous Electrodeposition of Crystalline III-V Semiconductor Thin Films</i>	2014
	Evergreen State College, Hummingbird Scientific <i>Correlating Properties and Microstructure of Materials Using in-situ TEM</i>	2011
Talks	Biennial Conference on Chemical Education (BCCE) <i>The Flint, Michigan Water Crisis as a Case Study to Introduce Concepts of Equity and Power into an Analytical Chemistry Curriculum</i> (cancelled due to COVID-19)	2020
	ECS Spring National Meeting, Montreal <i>Cheap and Simple Optical Anodic Stripping Voltammetry with Closed-Cell Bipolar Electrodes for sub-ppb Detection of Lead in Drinking Water</i> (accepted but conference cancelled due to Covid-19)	2020
	Colorado College Faculty Lunch Talk	2020

<i>New Tools for Improving Access to Community Water Quality: Development of Economic Sensors and The Fountain Valley Water Project</i>	
ECS Spring National Meeting, Dallas	2019
<i>On-Chip Optical Anodic Stripping Voltammetry</i>	
Thesis Defense, University of Michigan	2016
<i>Electrochemically-modulated semiconductor crystal growth at liquid metal electrodes</i>	
ECS Spring National Meeting, Chicago	2015
<i>Direct Electrochemical Synthesis of Epitaxial Nano- and Micro-wire Arrays at Room Temperature in Water</i>	
Ohio Inorganic Weekend	2014
<i>Room Temperature Aqueous Electrochemical Synthesis of Epitaxial Germanium Nano- and Micro-wire Arrays</i>	
ACS, Central Regional Meeting, Fall	2014
<i>Epitaxial Electrodeposition of Single Crystal Germanium Nanowire Arrays at Room Temperature in Water</i>	
PittCon Conference	2014
<i>In-situ Spectroelectrochemical Investigation of the Reactive Aqueous Electrodeposition of Crystalline III-V Semiconductors</i>	
<i>*Invited, First Annual Society of Electroanalytical Chemists</i>	
Materials Research Society Spring Meeting, San Francisco	2014
<i>Aqueous Electrochemical Synthesis of Crystalline III-V Thin Films and Group IV Nanowires at or Near Room Temperature</i>	
ACS, Central Regional Meeting, Spring	2013
<i>Non-innocent Group III Metal Electrodes for Aqueous Electrodeposition of Crystalline III-V Semiconductors</i>	

Posters

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Electrochemical Synthesis of Epitaxial Germanium Nano- and Micro-wire Arrays at Room Temperature in Water*, Gordon Research Symposium & Conference, Electrochemistry, 2016

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Low Temperature Electrochemical Synthesis of Covalent Semiconductor Crystals from Liquid Metal Electrodes*, Karle Research Symposium, U. of Michigan, 2015

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Liquid Metal Electrodes for Direct Electrodeposition of Crystalline Ge Nano- and Microwires*, Gordon Research Symposium & Conference: Electrodeposition, 2014

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Epitaxial Electrodeposition of Single Crystal Germanium Nanowire Arrays at Room Temperature in Water*, Gordon Research Symposium & Conference: Electrochemistry, 2014

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Bench-top Electrochemical Growth of Nanostructured Crystalline Inorganic Semiconductors*, Michigan Green Chemistry and Engineering Conference, 2013

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Bench-top Electrochemical Growth of Nanostructured Crystalline Inorganic Semiconductors*, Vaughan Research Symposium, U. of Michigan, 2013

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Electrodeposition of c-GaAs on Sacrificial Ga(I) Cathodes: Insight into the Electrochemical-Liquid-Liquid-Solid Growth Model*, Gordon Research Symposium & Conference: Electrodeposition, 2012

***elected as chair by my peers for this conference**

Fahrenkrug, E.; Gu, J.; Maldonado, S.; *Electrodeposition of Crystalline GaAs on Liquid Gallium Electrodes*, ECS Regional Conference, Detroit, 2012

Fahrenkrug, E.; Wiley, T.; Arruda, B.; McKinstry, L.; *Synthesis of Metallocene-Bridged Diphosphines as Suzuki Reaction Catalysts* ACS Regional Conference, Puget Sound, 2010

Fahrenkrug, E.; Wiley, T.; Arruda, B.; McKinstry, L.; *Ferrocenyl Phosphine Derivatives as Suzuki Reaction Catalysts* U. Washington Undergraduate Research Symposium, 2010

Fahrenkrug, E.; Barlow, C.; *Correlating Chemical Composition and Physical Morphometry Depth Profiles with Meromictic Lake Stability in Two Eastern Washington Lakes*, The Evergreen State College Research Symposium, 2009

Skills

Sensors, electrochemistry, analytical chemical methods, *operando* S/TEM, SEM, FIB, Raman spectroscopy, X-ray methods, Auger Spectroscopy, Microfabrication, 3D CAD design, fabrication/machining, electronics assembly & interfacing, metrology.

Teaching

My pedagogical interests focus on the creation of contemporary case studies and course-based undergraduate research experiences (CUREs) as inclusive conduits for teaching chemistry via environmental justice, climate, power, and equity. Courses taught at Colorado College include:

CH104: *Snow Science* – field and project-based class focused on relating the molecular scale chemical and physical processes that drive microscale formation of snow in the atmosphere and metamorphism on the ground which leads to macroscale properties of snowpack stability and avalanche formation.

CH107: *General Chemistry I* – Student-centered flipped classroom discussion and laboratory focused on skill-based learning outcomes in atomic structure, stoichiometry, aqueous chemical reactions, thermochemistry, and gas laws. Extensive use of active and experiential exercises.

CH108: *General Chemistry II* – Lecture, laboratory, and discussion/problem solving sessions. Engage students in kinetics, thermodynamics, and electrochemistry through active and experiential methods.

CH117: *General Chemistry I with an Environmental Emphasis* – Uses an environmental lens to contextualize general chemistry principles including atomic structure, periodic properties, molecular structure and bonding, reaction types, and stoichiometry. Chemical concepts will be discussed within environmental themes like global climate change, aquatic chemistry, and anthropogenic impacts to the chemistry of the atmosphere, hydrosphere, and cryosphere.

CH275: *Foundations of Inorganic Chemistry* – Atomic structure, models and theories of bonding, bond types underlying metals, semiconductors, ionic solids and materials. Lewis acid-base interactions, coordination complexes, associated reaction mechanisms, and other aspects of transition metal chemistry.

CH241: *Introduction to Analytical Chemistry* – Project-based introduction to experimental design, error, aqueous equilibria, and analytical methodology. Typically taught through environmental chemistry and justice lens using local water systems, the Flint, MI water crisis, and other examples.

CH342: *Instrumental Chemistry* – Course-based Undergraduate Research (CURE) architecture emphasizing skill-based outcomes in electronics/interfacing, multivariate statistical methods, and sensor development.

CH490: *Senior Seminar in Chemistry & Biochemistry*

CH201/301/401: *Mentored undergraduate research.*

Research Advising

Delia Freliech '23, *Optical MIP-BPE Sensors for Rapid PFAS Detection*, CC, 2022.

Cathy Xiao '25, *Electric Field Polymorph Nucleation*, CC, 2022.

Matthew Silverman '23, *Benchtop Snow Nucleation*, CC, 2022.

Aidan Powell '22, *Benchtop Snow Nucleation*, CC, 2022.

Sammy Ries '24, *Electric Field Polymorph Nucleation*, CC, 2022.

Will Zagrodzky '23, *Electric Field Polymorph Nucleation*, CC, 2022.

Ian Huelsbeck '24, *Optical MIP-BPE Sensors for Rapid PFAS Detection*, CC, 2022.

Adam Keim '23, *Electric Field Polymorph Nucleation*, CC, 2021.
*Presented: SCoRE 2021

Mir Qi '23, *Electric Field Polymorph Nucleation*, CC, 2021.
*Presented: SCoRE 2021

Nicole Chavarria '23, *Fountain Valley Water Project*, CC, 2019 - 2021.
*Presented: SCoRE 2019, 2020; Midstates Conference 2021.

Anna Sofia Vera '23, *Optical Bipolar Electrochemical PFAS Sensors*, CC, 2020.

Rowan Kinney '23, *Optical Bipolar Electrochemistry of Metal Ions in Water*, CC, 2019-Present.
*Presented: SCoRE 2020

Ryan Freedman '22, *Bipolar Electrochemical Environmental Sensing*, CC, 2021.
*Presented: SCoRE 2021

Westly Joseph '21, *Optical Bipolar Electrochemical PFAS Sensors*, CC, 2020.

Camilla Gardner '21, *Optical Bipolar Electrochemical PFAS Sensors*, CC, 2020.

Elias Mondaca '22, *Bipolar Electrochemical Sensors*, CC, 2020-2021.
*Presented: National Electrochemical Society (ECS) Meeting 2021: SCoRE 2020 & 2021; Midstates Conference 2020 & 2021.

Cecelia Mweka '20, *Electric Field Control of Crystal Polymorphism*, CC, 2019.
*Presented: SCoRE 2019

Halle White '20, *Molecular Imprint Polymer Sensing of GenX in a Bipolar Electrochemical Format*, CC, 2019.

Mags Vlasimsky '19, *Molecular Imprint Polymer Sensing of GenX in a Bipolar Electrochemical Format*, CC, 2019.

Cameron McDonald '20, *Developing a Virtual Reality Course Companion for Organic Chemistry*, CC, 2019.

Max Kronstadt '20, *Fountain Valley Water Project*. CC, 2019
*Presented: SCoRE 2019, Pike's Peak Environmental Forum (invited), Pike's Peak Library district panel (invited).

Sam Sanson '20, *Fountain Valley Water Project*. CC, 2019
*Presented: SCoRE 2019, Pike's Peak Environmental Forum (invited), Pike's Peak Library district panel (invited).

Karina Grande '20, *Fountain Valley Water Project*. CC, 2019

*Presented: SACNAS 2019, SCoRE 2019, Pike's Peak Environmental Forum (invited), Pike's Peak Library district panel (invited).

Keenan Wright '19. *Fountain Valley Water Project*. CC 2018 – 2019

*Presented: SCoRE 2018, Peak Alliance for a Sustainable Future PIPS 2019, CSURF 2019.

Jose Monge-Castro '21. *Finite Element Analysis of Closed Bipolar Electrochemical Cells for Metal Ion Quantification*, CC, 2018.

*Presented: 2018 Associated Colleges of the Midwest Conference, Invited 2019 CC IGNITE, 2019 Colorado College Big Idea Innovation Awards (2nd place, \$10,000), 2020 PittCon National Conference on Analytical Chemistry (Best Undergraduate Poster Award), 2020 COMSOL Conference North America

Riley O'Sullivan '19. *Optical Bipolar Electrochemistry of Metal Ions in Water*, CC 2019

Bradley Thomas '19. *BPE Metal Ion Sensor LED Project*. Colorado College, CC 2018

Nick Humphrey '19. *Optical Bipolar Electrochemistry of Metal Ions in Water*. CC 2018-2019

*Presented: 2019 PittCon National Conference on Analytical Chemistry (Best Undergraduate Poster Award), 2018 SCoRe Symposium, 2019 Colorado College Big Idea Innovation Awards (2nd Place, \$10,000).

Prakhar Gautam '20. *Electric Field Control of Crystal Polymorphism*, CC 2018 – 2019 and *VR Platforms for Chemical Education*, 2019

*Invited presentation: 2018 CC IGNITE, 2019 Colorado College Big Idea Innovation Awards (semi-finalist), 2019 ACS Southwest Regional Conference.

Jeronimo Miranda '18. *BPE Metal Ion Electrochemiluminescence Project*, CC 2018

*Presented: 2019 Colorado College Big Idea Innovation Awards (2nd place, \$10,000).

Eric Gerber. *Germanium Microwires for Lithium Ion Battery Anode Materials*. University of Michigan, 2015-2017.

*Published work in *ACS Energy Mat.* in 2017.

Janel Biehl. *Electrochemical Liquid Liquid Solid Growth of Germanium Microwires*. NSF REU, University of Michigan, Summer 2014.

*Published work in *Chem. Mat.* 2015.

Jessica Rafson. *Electrochemically Induced Alloying of InSb Thin Films*. NSF REU, University of Michigan, Summer 2013.

*Published work in *Langmuir* in 2017.

Scott Su. *Electrodeposition of Single Nanowires on AFM Cantilevers*. High School Student Intern. University of Michigan, 2012.

**College
Service**

Campus Review and Design Board	2022 – Present
Search Committee, Director of Ruth Barton Writing Center	2021 – 2022
General Education Assessment and Review (GEAR) Committee	2021 – 2022
Faculty Panel: Innovation Institute External Advisory Board, <i>presenter</i>	2019
Faculty Lunch Talk, <i>presenter</i>	2019
CSURF Session Chair	2019
Barnes Scholarship Marketing Departmental, <i>subcommittee</i>	2019
Innovation Institute: Big Idea, <i>advisor to two teams</i>	2019
Junior STEM Faculty Workshops on Inclusivity, <i>co-founder</i>	2019 – 2020
Butler Center First Generation Students, <i>mentor</i>	2019 – Present
Community Engaged Research, Fall Conference, <i>panelist</i>	2019
Academic Adviser: <i>15 students</i>	2018 – Present

	Environmental Program, <i>affiliated faculty</i>	2018 – Present
	Search Committee, Tenure Track, Computer Science	2018 – 2019
	CCE Engaged Faculty Luncheons, <i>presenter & participant</i>	2018 – 2019
	First SCoRe Research Program, <i>mentor</i>	2018 – 2019
	Campus Sustainability Council, <i>Faculty Representative</i>	2018 – 2019
	Watson Fellowship Committee	2018 – 2019
	Guest Lecturer: Environmental Studies Capstone, EV421	2018
	Sophomore JUMP Dinner, <i>faculty speaker</i>	2018
	Guest Lecturer: Field Botany, BE202	2018
Departmental Service	Subcommittee on Programmatic Learning Outcomes, <i>co-founder</i>	2021– Present
	Subcommittee on General Chemistry Placement Exams	2021– Present
	Subcommittee on Departmental Faculty Mentorship	2021– Present
	Departmental External Review Data Analysis	2021
	Search Committee, Lecturer, Chemistry & Biochemistry	2020
	Search Committee, Lecturer, Chemistry & Biochemistry	2019 – 2020
	Search Committee, Tenure Track, Chemistry & Biochemistry	2019 – 2020
	DIRECCt: Diversity, Inclusion, Respect, Equity in Chemistry at Colorado College <i>co-founder and co-chair</i>	2018 – Present
	Academic Assessment, <i>Dept. Representative</i>	2018, 2021, 2022
	Search Committee, Lecturer, Chemistry & Biochemistry	2018 – 2019
	Departmental Research Handbook, <i>co-creator</i>	2018
Professional Service	NSF Proposal Reviewer, <i>panelist</i>	2022
	<i>Journal of Semiconductors</i> , Editorial Board Member	2020 – Present
	U. Wisconsin Research Core Proposal Reviewer	2020
	Academic Journal Reviewer (17 articles)	2016 – Present
	<i>J. Chem. Ed.</i> ; <i>Science</i> ; <i>ACS Sensors</i> ; <i>Nanoscale</i> ; <i>J. Electrochem. Soc.</i> ; <i>J. Cryst. Growth</i> ; <i>Int. J. Hydr. Energy</i> ; <i>J. Am. Chem. Soc.</i> ; <i>Hardware X</i>	
Professional Development	Alda Science Communication Workshop, <i>attendee</i>	2020
	Council on Undergraduate Research (CUR): Dialogs Workshop	2020
	Excel@CC: Towards a Daily Anti-Racist Agenda – Workshop, CC	2019
	Workshop on the Past, Present, & Future of Liberal Arts, CC	2018
	Excel@CC: Good to Great – Workshop, CC	2018
	Midstates Early Career Workshop, Gustavus Adolphus College	2017