# Pin Lyu, Ph.D.

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## PROFESSIONAL APPOINTMENTS

07/2023-Present — **Assistant Professor** in Physical Chemistry
Department of Chemistry and Biochemistry
*University of North Carolina Asheville, North Carolina, United States*

## EDUCATION

08/2019-05/2023 — **Doctor of Philosophy,** Physical Chemistry
*University of California, Merced, California, United States*
Advisor: Prof. Son. C. Nguyen
Dissertation*: Mechanistic Insights into Interband Transitions of Metallic Nanoparticles for Photocatalysis*

08/2019-06/2021 — **Master of Science,** Physical Chemistry
*University of California, Merced, California, United States*
Advisor: Prof. Son. C. Nguyen

09/2016-07/2019 — **Master of Science,** Physical Chemistry
(Recommended Graduate without Examination)
*Shanghai Normal University, Shanghai, P.R. China*
Advisors: Prof. Hexing Li and Prof. Jian Zhu
Thesis*: Research on Molecular Oxygen Activation by $TiO_{2-x}$@C Materials Based on Interfacial Engineering*

09/2011-07/2015 — **Bachelor of Science,** Applied Chemistry
*Shanghai Normal University, Shanghai, P.R. China*
Advisor: Prof. Jian Zhu
Thesis*: Investigation on $Mn_3O_4$: Preparation and Performance on Pollutant Purification*

## RESEARCH AND PUBLICATIONS

*Focus: Interfacial Engineering, Molecular Catalysis, Photocatalysis Mechanism*
***At UNC Asheville (underlined for undergraduates,* for corresponding authors):***

(14) Delaney J. Hennes,† Luke T. Coward,† Chase G. Thurman, Oksana Love* and Pin Lyu*. Mechanochemical-Aging Synthesis of Bismuth Oxide Nanosheets for Photocatalysis. *ACS Mater. Au*., **2025,** 5, 6, 1009–1017 (Selected as Supplemental Cover) [Link] (†, these authors contributed equally)

(13) Luke T. Coward, Thu T. M. Chu, Xiaotong Li, Pin Lyu*, and Oksana Love*. Surface or Bulk? Mechanistic Insights into $Ni^{2+}$-Doped Brookite $TiO_2$ Photocatalysts. *ACS Nanosci. Au,* **2025**, 5, 4, 324–336. (Selected as Supplemental Cover) [Link]

(12) Lauren M. Hoffman, Delaney J. Hennes, and Pin Lyu*. Deciphering the Photocatalysis Mechanism of Semimetallic Bismuth Nanoparticles. *J. Phys. Chem. C.,* **2024,** 128, 47, 20118–20128. (Selected as Supplemental Cover) [Link]

(11) Pin Lyu*, Lauren Hoffman, Daniel Valenzuela Cahua, and Son C. Nguyen*. From Precious to Earth-Abundant Metallic Nanoparticles: A Trend of Interband Transitions in Photocatalyzed Nitrobenzene Reduction. *J. Phys. Chem. C.*, **2024,** 128, 35, 14674–14682. *(Selected as Supplemental Cover)* [Link]

***Before UNC Asheville (* for corresponding authors):***

(10) ***Pin Lyu,*** Randy Espinoza, and Son C. Nguyen*. Photocatalysis of Metallic Nanoparticles: Interband vs Intraband Induced Mechanisms. *J. Phys. Chem. C.*, **2023,** *127, 32, 15685–15698.* (Invited Featured Article and Selected as Supplemental Cover) [Link]

(9) Duy Nguyen, ***Pin Lyu,*** and Son C. Nguyen*. Experimental and Thermodynamic Viewpoints on Claims of a Spontaneous $H_2O_2$ Formation at the Air-Water Interface. *J. Phys. Chem. B.* **2023,** 127, 11, 2323–2330 (Invited Perspective article and Selected as Supplemental Cover) [Link]

(8) ***Pin Lyu,*** Randy Espinoza, Md. Imran Khan, William C. Spaller, Sayantani Ghosh, Son C. Nguyen*., Mechanistic insight into deep holes from interband transitions in Palladium nanoparticle photocatalysts. *iScience.,* **2022**, 25, 2, 103737. [Link]

(7) ***Pin Lyu*** and Son C. Nguyen*., Effect of Photocharging on Catalysis of Metallic Nanoparticles. *J. Phys. Chem. Lett.* **2021,** 12, 51, 12173–12179. [Link]

(6) ***Pin Lyu,*** Jian Zhu*, Chongchong Han, Lei Qiang, Linlin Zhang, Bingbao Mei, Jiehong He, Xiaoyan Liu, Zhenfen Bian and Hexing Li*., Self-Driven Reactive Oxygen Species Generation via Interfacial Oxygen Vacancies on Carbon-Coated $TiO_{2-x}$ with Versatile Applications. *ACS Appl. Mater. Interfaces.,* **2021**, 13, 1, 2033–2043. [Link]

(5) Jiehong He[†], ***Pin Lyu[†](co-first author),*** Can Cheng , Shaoshuai Chang , Liansheng Qin , Chengjin Zheng., Bio-alcohol induced self-assembly of heterojunctioned $TiO_2/WO_3$ composites into a hierarchical yolk–shell structure for photocatalysis. *Chem. Commun*., **2021,** 57, 6883-6886. [Link]

(4) Jiehong He, ***Pin Lyu,*** Bo Jiang, Shaoshuai Chang, Haoran Du, Jian Zhu* and Hexing Li*., A novel amorphous alloy photocatalyst ($NiB/In_2O_3$) composite for sunlight-induced $CO_2$ hydrogenation to HCOOH. *Appl. Catal. B: Environ.*, **2021,** 298, 120603. [Link]

(3) Jiehong He, ***Pin Lv,*** Jian Zhu* and Hexing Li*., Selective $CO_2$ reduction to HCOOH on a $Pt/In_2O_3/g\text{-}C_3N_4$ multifunctional visible-photocatalyst. *RSC Adv.*, **2020,** 10, 22460-22467. [Link]

(2) Bin Wu, ***Pin Lyu****,* Kaixuan Wang, Xiaoyan Qiu, Fang Zhang, Taifeng Liu, Hexing Li, Shengxiong Xiao*., Graphyne-like Porous Carbon-rich Network Supported Pd Nanoparticles as an Efficient Catalyst for Suzuki-Miyaura Couplings under Aerobic Conditions. *Curr. Nanosci.,* **2018**, 14, 6, 503-510. [Link]

(1) Bin Wu, ***Pin Lyu,*** Kaixuan Wang, Xiaoyan Qiu, Taifeng Liu, Fang Zhang, Hexing Li*, and Shengxiong Xiao*.,Graphyne-oxide supported Pd catalyst with ten times higher nitrobenzenes reduction activity than Pd/C., *Res. Chem. Intermed.,* **2018**, 44, 6327-6337. [Link]

## PATENTS

***Before UNC Asheville***

(1) Jianzhu, ***Pin Lyu,*** Jiehong He and Hexing Li., Preparation method and application of molecular oxygen activation catalyst constructed based on surface oxygen defects., ***Granted and Published in 2021****,* C.N. Patent, CN108380195B.

(2) Jianzhu, Zuotian Xie, Jiehong He, ***Pin Lyu,*** Chongchong Han, Hexing Li., Multistage eggshell structure g-$C_3N_4$/$TiO_2$ composite material and preparation method and application., ***Granted and Published in 2021***, C.N. Patent, CN109092344B.
(3) Jianzhu, Jieqiong Qiao, Zuotian Xie, ***Pin Lyu,*** Jiehong He and Hexing Li., A kind of $Mn_3O_4$/g-$C_3N_4$ photo-thermal concerted catalysis composite material and preparation method and application., ***Pending since 2018,*** C.N. Patent, CN109078647A.

## CONFERENCE PRESENTATIONS

### *At UNC Asheville*

11/2025 **Invited Talk,** 2025 North Carolina Photochemistry Symposium (NC Photochem), NC State University, Raleigh, NC, United States

06/2025 **Participants and Poster Presentations,** Community of Communities Gathering, Chemistry Communities 2025, Hope College, Holland, MI, United States

03/2025 **Two Oral Presentations,** ACS National Meeting Spring 2025, Pushing Boundaries. Solving global challenges, Division of Colloid and Surface Chemistry, one at PUNC: Nanomaterials Research at Primarily Undergraduate Institutions and one at Nanohybrid Materials From Fundamental Research Towards Applications, San Diego, CA, United States

03/2024 **Oral Presentation & Symposium Presider,** ACS National Meeting Spring 2024, Many Flavors of Chemistry, Division of Colloid and Surface Chemistry, PUNC: Nanomaterials Research at Primarily Undergraduate Institutions, New Orleans, LA, United States

07/2023 **Participant**, 2023 New Faculty Workshop, American Chemical Society, Washington, DC, United States

### *Before UNC Asheville*

03/2023 **Oral Presentation**, ACS National Meeting Spring 2023, Crossroads of Chemistry, Division of Colloid and Surface Chemistry, Frontiers and Challenges in Nanoparticle-Mediated Chemical Transformations, Indianapolis, Indiana, United States

07/2022 **Poster Presentation**, Gordon Research Conference on Plasmonics and Nanophotonics, Nanoscale Light-Matter Interactions for Sustainability, Newry, ME, United States

03/2022 **Flash Talk**, 7th UC Chemical Symposium, University of California System, 2022, online

04/2021 **Oral Presentation**, Division for Catalysis Science and Technology, ACS National Meeting Spring 2021, American Chemical Society, online

03/2021 **Poster Presentation**, 6th UC Chemical Symposium, University of California System, 2021, online

05/2019 **Invited Presentation**, 2019 International Symposium on Resource Chemistry, Chinese Chemical Society, Shanghai Normal University, Shanghai, P.R. China

10/2017 **Poster Presentation**, The 9th National Conference on Environmental Chemistry, Chinese Chemical Society, Zhejiang University, Hangzhou, P.R. China

05/2017 **Oral Presentation with Excellent Research Award,** 2017 China-Japan Bilateral Photocatalysis Symposium, Shanghai Normal University, Shanghai, P.R. China

05/2017 **Attendant,** Resource Chemistry Workshop, ACS Applied Materials & Interfaces and International Joint Laboratory on Resource Chemistry SHNU-NUS-PU, Shanghai, P.R. China

10/2016 **Attendant,** Photocatalysis Young Scholars Forum, Shanghai Normal University, Shanghai, P.R. China

# HONORS AND AWARDS

***At UNC Asheville***

09/2025 **2025 Rising Stars in Nanoscience,** ACS Nanoscience Au, ACS Publications, American Chemical Society, United States

03/2025 **Undergraduate Research Program Award,** Undergraduate Research Council (URC) University of North Carolina System, North Carolina, United States

***Before UNC Asheville***

05/2023 **Dissertation Award,** Chemistry and Biochemistry Department, University of California, Merced, United States

03/2023 **Spring 2023 CBC Travel Award,** Chemistry and Biochemistry Department, University of California, Merced, United States

07/2022 **ORED Core Facilities Seed Grant,** Office of Research and Economic Development, University of California, Merced**,** United States

05/2022 **Spring 2022 CBC Travel Award,** Chemistry and Biochemistry Department, University of California, Merced, United States

08/2021 **2021 Summer Research Fellowship,** Chemistry and Biochemistry Department, University of California, Merced, United States

02/2019, 01/2018 **First Prize in Graduate Scholars,** International Joint Laboratory on Resource Chemistry SHNU-NUS-PU, Shanghai, P.R. China

08/2018, 08/2017 **First Prize in Technology Star,** International Joint Laboratory on Resource Chemistry SHNU-NUS-PU, Shanghai, P.R. China

12/2017 **Outstanding Student,** Shanghai Normal University, Shanghai, P.R. China

05/2014 **Second Prize in Entrepreneurship Competition for college students,** League Committee of Communist Youth of Shanghai Normal University, Shanghai, P.R. China

# PROFESSIONAL SERVICES

***At UNC Asheville***

05/2025–Present **Site Coordinator,** ACS Project SEED Program at UNC Asheville

12/2024–Present **Reviewer,** for ACS Nano and Journal of Environmental Chemical Engineering

07/2024–Present **Department Seminar co-coordinator**, University of North Carolina Asheville, North Carolina, United States

08/2023–Present **Reviewer,** for ACS Petroleum Research Fund

04/2021–Present **Review Editor**, on the Editorial Board of Photocatalysis (specialty section of *Frontiers in Catalysis*)

***Before UNC Asheville***

08/2022–05/2023 **Graduate Student Representative**, The Committee on Library and Scholarly Communications (LASC), The Merced Division of the Academic Senate, University of California

05/2022–5/2023 **Guest Associate Editor**, on the inaugural Perspectives in Photocatalysis, *Frontiers in Catalysis*

09/2021–05/2022 **GradEXCEL Peer Mentor**, University of California, Merced, California, United States

08/2015–08/2016 **Volunteer Teacher,** Postgraduates Voluntary Teaching Corps of SHNU in Yumen, Gansu Province, Central Committee of Communist Youth League of China, Gansu, P.R. China

09/2014–06/2015 **Internship officer,** Youth League Committee of Shanghai Normal University, Shanghai, P.R. China

09/2013–06/2014 **President of Haitang Poetry Society,** Shanghai Normal University, Shanghai, P.R. China

# TEACHING EXPERIENCE

***At UNC Asheville***

08/2023-Present **Instructor of Record,** University of North Carolina, Asheville, North Carolina

- CHEM 111: General Chemistry Laboratory
- CHEM 132: General Chemistry Lecture
- CHEM 145: Quantitative Chemistry Laboratory
- CHEM 320: Energy Interdisciplinary Chemistry Project Lab
- CHEM 331: Foundations of Physical Chemistry

***Before UNC Asheville***

09/2019–05/2023 **Teaching Assistant,** Chemistry and Biochemistry Department, University of California, Merced

- CHEM-002-General Chemistry I (2019 Fall)-Discussions and labs
- CHEM-010-General Chemistry II (2020 Summer, online)-Discussions and labs
- CHEM-153-Physical Chemistry Laboratory (2021 Spring, online)-Labs
- CHEM-153-Physical Chemistry Laboratory (2022 Spring)-Labs
- CHEM-115-Instrumental Analysis (2020 and 2021 Fall)-Discussions
- CHEM-120-Inorganic Chemistry (2020 and 2021 Fall)-Discussions

08/2015–08/2016 **Volunteer Teacher,** for Mathematics and Physics in Yumen Second Middle School, Gansu Province, P.R. China.

- Hold lectures (45 min) and after-school study centers (2 h) daily, and grade all homework

# MENTORING EXPERIENCE

***At UNC Asheville:***

**Current Lab Members**

- Lauren Hoffman, undergraduate researcher, joined Spring 2024, NSF S-STEM Chemistry Scholar (since Summer 2024), NSF-REU Scholar (Summer 2024)
- Emery Stephens, undergraduate researcher, joined Spring 2025
- Chase Thurman, undergraduate researcher, joined Spring 2025, NSF S-STEM Chemistry Scholar (since Fall 2024)
- Luca Antonescu, undergraduate researcher, joined Summer 2025, co-mentored with Love Lab, North Carolina State University
- Asher Blackwood, high school researcher, joined Summer 2025, co-mentored with Love Lab, ACS Project SEED Internship, Martin L. Nesbitt Discovery Academy
- Daniel Resnick, high school researcher, joined Summer 2025, co-mentored with Love Lab, ACS Project SEED Internship, School of Inquiry and Life Sciences at Asheville

**Previous Lab members:**

- Delaney Hennes, NSF-REU Scholar Summer 2024, St. Norbert College

***Before UNC Asheville:***

**Graduate Students**

- Adekunle Adewole, currently a Ph.D. candidate at UC Merced
- Mohit Saraswat, currently a Ph.D. candidate at UC Merced & Research Fellow at Lawrence Livermore National Laboratory

**Undergraduate Students**

- Paulina Brambila, currently a Quality Engineer at Wisk Company
- Daniel Valenzuela, currently a Ph.D. candidate at UC Merced
- Rafael Guerrero, currently a Licensed Optician at Walmart
- Can Cheng, currently a graduate student at Shandong University

**High School Students**

- Siena Akira Murillo, through the ACS Project SEED Program

## FUNDING SUPPORT

***At UNC Asheville:***

**External Agency**

(1) PI, current support, ACS-PRF Undergraduate New Investigator (UNI) Grants, Title: "*Tuning the Oxidation Potential of Hot Holes for Selective Photocatalytic Methane Conversion*", Amount: $55,000, Time: 09/01/2025-08/31/2027.

(2) Co-PI, current support, NSF MRI, title: "*MRI: Track 1 Acquisition of a turnkey transient absorption spectrometer for undergraduate research and training*", Amount: $391,455, Time: 07/2024-06/2027.

(3) Leading PI, pending support, Beckman Scholars Program by Arnold and Mabel Beckman Foundation, institutional student scholarship program, Amount: $156,000, Time: 06/2026-06/2029.

(4) PI, pending support, National Science Foundation-Faculty Early Career Development (NSF-CAREER), title: "*CAREER: Mechanistic insight into mechanochemical-aging synthesis of 2D nanosheets: transforming undergraduate research and education with mechanochemistry*" Amount: $507,255, Time: 07/2026-06/2031.

(5) Leading PI, pending support, The Camille and Henry Dreyfus Foundation, Jean Dreyfus Lectureship for Undergraduate Institutions, Amount: $25,000, Time: 01/2026-01/2028.

**Campus-Wide at UNC Asheville**

(1) PI, finished support, Faculty Academic Year (FAY) Grant, Undergraduate Research Program Advisory Council, title: "*Selective Photocatalytic Methane Conversion into Methanol by Metallic Nanoparticles*", Amount: $1,766, Time: 10/10/2023-02/21/2024

(2) Start-up support, Dean of Natural Sciences, Amount: $40,000, Time: 07/01/2023-Present.

**Student-Driven Funding Support**

(1) Co-PI and Research Mentor, finished support, Undergraduate Research and Creative Activity Program Student Driven Proposals (SUM Grants) by University of North Carolina Asheville, title: "*Solventless Mechanosynthesis of Tin Nanoparticles Using a Bottom-Up Approach*" Amount: $8,000, Time: 06/2025-08/2025.

**Finished Support**

(1) Leading PI, FY25 University of North Carolina System Undergraduate Research Program Award, title: "*Expanding the Undergraduate Research Capacity of Interdisciplinary Chemistry Project Lab with Sustainable Energy Materials*", Amount: $35,000, Time: 07/2024-06/2025.

(2) PI and Site Coordinator, ACS Project SEED, *Summer Experiences for the Economically Disadvantaged for local high school students*, Amount: $28,000, Time: 06/2025-08/2025.

## MENTORED STUDENT PRESENTATIONS

***At UNC Asheville (presenters are all undergraduate or high school students):***

11/2025 Stephens, E. (Presenter), Lyu, P. (Author), **poster presentation,** UNCA Undergraduate Research & Creative Activity Symposium Fall 2025, "*Mechanochemical Synthesis of Hexagonal Bismuth Nanosheet*," UNCA Undergraduate Research & Creative Activity Program, Blue Ridge Room, Highsmith Union, Asheville, NC, United States.

11/2025 Thurman, C. (Presenter), Lyu, P. (Author), **poster presentation,** UNCA Undergraduate Research & Creative Activity Symposium Fall 2025, "*Mechanochemical Synthesis of 2D Mixed Lead Halide Perovskite*," UNCA Undergraduate Research & Creative Activity Program, Blue Ridge Room, Highsmith Union, Asheville, NC, United States.

11/2025 Blackwood, A. (Presenter), Resnick, D. (Presenter), Lyu, P. (Author), Love, O. (Author), **poster presentation,** UNCA Undergraduate Research & Creative Activity Symposium Fall 2025, "*Surface Doping Effects on the Photocatalytic Properties of Brookite $TiO_2$ with $Fe^{2+}$ and $Ni^{2+}$ Transition Metal Ions*," UNCA Undergraduate Research & Creative Activity Program, Blue Ridge Room, Highsmith Union, Asheville, NC, United States.

11/2025 Thurman, C. (Presenter), Lyu, P. (Author), S. Dexter Squibb Lectures in Chemistry & Research Symposium, **poster presentation,** "*Mechanochemical Synthesis of 2D Mixed Lead Halide Perovskite*," UNC Asheville Department of Chemistry and Biochemistry, Sherrill Center, UNC Asheville, Asheville, NC, United States.

11/2025 Stephens, E. (Presenter), Lyu, P. (Author), **poster presentation,** S. Dexter Squibb Lectures in Chemistry & Research Symposium, "*Mechanochemical Synthesis of Hexagonal Bismuth Nanosheet*," UNC Asheville Department of Chemistry and Biochemistry, Sherrill Center, UNC Asheville, Asheville, NC, United States.

11/2025 Stephens, E. (Presenter), Lyu, P. (Author), **poster presentation,** 2025 State of North Carolina Undergraduate Research and Creativity Symposium, "*Mechanochemical Synthesis of Hexagonal Bismuth Nanosheet*," Elon University, Elon University, Elon, NC, United States.

11/2025 Stephens, E. (Presenter), Lyu, P. (Author), **poster presentation**, 2025 North Carolina Photochemistry Symposium, "*Photocatalysis Mechanism of Alloyed Bi-Sn Nanoparticles*," NC State University, NC State University, Raleigh, NC, United States.

10/2025 Thurman, C. G. (Presenter), Lyu, P. (Author), **poster presentation**, PUNC-CSENND Undergraduate Poster Session (Virtual),"*Mechanochemical Synthesis of 2D Lead Halide Perovskite*, NSF Center for Single-Entity Nanochemistry and Nanocrystal Design, online.

10/2025 Stephens, E. (Presenter), Hoffman, L. (Author), Lyu, P. (Author), **poster presentation**, PUNC-CSENND Undergraduate Poster Session (Virtual), "*Photocatalysis Mechanism of Alloyed Bi-Sn Nanoparticles*," NSF Center for Single-Entity Nanochemistry and Nanocrystal Design, online.

07/2025 Thurman, C. G. (Presenter), Lyu, P. (Author), **oral presentation,** Primarily Undergraduate Nanomaterials Cooperative Online Summer Research Meetings, "Mechanochemical Synthesis of 2D Lead Halide Perovskite," Primarily Undergraduate Nanomaterials Cooperative, Online.

07/2025 Antonescu, L. (Presenter), Lyu, P. (Author), Love, O. (Author), **oral presentation,** Primarily Undergraduate Nanomaterials Cooperative Online Summer Research Meetings, "*The Effects of Surface Specific-Doping Titanium Dioxide Brookite with Metal Ions*," Primarily Undergraduate Nanomaterials Cooperative, Online.

04/2025 Coward, L. (Presenter), Lyu, P. (Author), Love, O. (Author), **poster presentation** at Research Showcase at Chancellor van Noort's Installation, "*Location-Specific $Ni^{2+}$ Doping in Brookite Titanium Dioxide Nanoparticles: Surface-Bulk, Surface, and Bulk*," UNC Asheville, Zeis Hall at UNC Asheville, Asheville, NC, United States.

04/2025 Hoffman, L. (Presenter), Lyu, P. (Author), **poster presentation**, Research Showcase at Chancellor van Noort's Installation, "*Photocatalysis Mechanism of Alloyed Bi-Sn Nanoparticles*," UNC Asheville, Zeis Hall at UNC Asheville, Asheville, NC, United States.

04/2025 Coward, L. (Presenter), Lyu, P. (Author), Love, O. (Author), **poster presentation** at Western Carolinas ACS Awards Meeting, "*Location-Specific Ni2+ Doping in Brookite Titanium Dioxide Nanoparticles: Surface-Bulk, Surface, and Bulk*," Western Carolinas Section of the American Chemical Society, Younts Conference Center at Furman University, Greenville, SC, United States.

04/2025 Hoffman, L. (Presenter), Lyu, P. (Author), **poster presentation** at Western Carolinas ACS Awards Meeting, "*Photocatalysis Mechanism of Alloyed Bi-Sn Nanoparticles*," Western Carolinas Section of the American Chemical Society, Younts Conference Center at Furman University, Greenville, SC, United States.

11/2024 Coward, L. (Presenter), Lyu, P. (Author), Love, O. (Author), **poster presentation** at NSF S-STEM Scholars and PI Meeting, "*$Ni^{2+}$ Modified Brookite Titanium Dioxide Nanoparticles: Synthesis, Characterizations, and Catalysis*," National Science Foundation and the American Association for the Advancement of Science, Hyatt Regency Chicago, Chicago, IL, United States.

10/2024 Hennes, D. (Presenter), Coward, L. (Author), Love, O. (Author), Lyu, P. (Author), **oral presentation** at Southeastern Regional Meeting of the American Chemical Society, "*Mechanochemical-aging Synthesis of Bismuth Oxide Nanosheets for Efficient Adsorption and Photodegradation of PFOA*," American Chemical Society, AmericasMart Atlanta Convention Center, Atlanta, GA, United States.

10/2024 Coward, L. (Presenter), Lyu, P. (Author), Love, O. (Author), **oral presentation** at Southeastern Regional Meeting of the American Chemical Society, "*$Ni^{2+}$Doped $TiO_2$ Nanoparticles: Synthesis, Characterizations, and Photodegradation Studies*," American Chemical Society, AmericasMart Atlanta Convention Center, Atlanta, GA, United States.

09/2024 Coward, L. (Presenter), Lyu, P. (Author), Love, O. (Author), **poster presentation** at S. Dexter Squibb Lectures in Chemistry & Research Symposium, "*$Ni^{2+}$ Modified Brookite*

*Titanium Dioxide Nanoparticles: Synthesis, Characterizations, and Catalysis*," UNC Asheville, Alumni Hall, Highsmith Student Union, Asheville, NC, United States.

09/2024 Hoffman, L. (Presenter), Lyu, P. (Author), **poster presentation** at S. Dexter Squibb Lectures in Chemistry & Research Symposium, "*Photocatalysis Mechanism of Semi-Metallic Bi Nanoparticles*," UNC Asheville, Alumni Hall, Highsmith Student Union, Asheville, NC, United States.

07/2024 Hennes, D. (Presenter), Coward, L. (Author), Love, O. (Author), Lyu, P. (Author), **poster presentation** at NSF Research Experiences for Undergraduates Poster Section, "*Mechanochemical-aging Synthesis of Bismuth Oxide Nanosheets for Efficient Adsorption and Photodegradation of PFOA*," National Science Foundation, UNC Asheville, Asheville, NC, United States.

07/2024 Hoffman, L. (Presenter), Lyu, P. (Author), **poster presentation** at NSF Research Experiences for Undergraduates Poster Section, "*Photocatalysis Mechanism of Semi-Metallic Bi Nanoparticles*," National Science Foundation, UNC Asheville, Asheville, NC, United States.

07/2024 Hennes, D. (Presenter), Coward, L. (Author), Love, O. (Author), Lyu, P. (Author), **oral presentation** at Primarily Undergraduate Nanomaterials Cooperative Online Summer Research Meetings, "*Mechanochemical-aging Synthesis of Bismuth Oxide Nanosheets for Efficient Adsorption and Photodegradation of PFOA*," Primarily Undergraduate Nanomaterials Cooperative, Online.

07/2024 Hoffman, L. (Presenter), Lyu, P. (Author), **oral presentation** at Primarily Undergraduate Nanomaterials Cooperative Online Summer Research Meetings, "*Photocatalysis Mechanism of Semi-Metallic Bi Nanoparticles*," Primarily Undergraduate Nanomaterials Cooperative, Online.