

Joseph A. Teprovich Jr., Ph.D

22010 Del Valle St.
Woodland Hills, CA 91364

(570) 578-7842
joseph.teprovich@csun.edu

EDUCATION

Lehigh University (8/2003 - 5/2008)

- Ph.D. Chemistry; Dissertation Title: "The Reactivity of Samarium(II) Complexes"

DeSales University (8/1999 - 5/2003)

- B.S. Chemistry, B.S. Environmental Science; Cum Laude
-

TEACHING EXPERIENCE

California State University, Northridge: Northridge, CA

8/2017 - Present

Assistant Professor (Department of Chemistry & Biochemistry)

- Courses Taught: *General Chemistry I* Lecture and Lab (CHEM 101/L); *General Chemistry II* Lecture and Lab (CHEM 102/L); *Chemical Analysis I* Lecture and Lab (CHEM 321/L)
- Courses Developed and Taught: Chemistry of Energy Lecture (CHEM 543) and Lab (CHEM 543L)
- Courses coordinated: for *General Chemistry I* and *II* lecture Laboratory (CHEM 101/L and CHEM 102/L); *Chemical Analysis I* Laboratory (CHEM 321L)

University of South Carolina - Aiken: Aiken, SC

8/2014 – 5/2017

Adjunct Professor (Department of Chemistry)

- Adjunct Professor for the undergraduate chemistry course “*Introduction to Chemistry*” (CHEM 101) for students in the nursing, healthcare, and exercise science programs.

DeSales University: Center Valley, PA

8/2008 - 5/2009

Adjunct Professor (Department of Chemistry)

- Adjunct Professor for two semesters of undergraduate chemistry courses “*Fundamentals of General Chemistry*” and “*Introduction to Organic and Biological Chemistry*” (CHEM 103 and CHEM 104).

Lehigh University: Bethlehem, PA

8/2003 - 5/2007

Teaching Assistant (Department of Chemistry)

- Teaching assistant for labs and recitations associated with upper division physical chemistry courses and introductory general chemistry courses.

RESEARCH AND EMPLOYMENT EXPERIENCE

DOE - Savannah River National Laboratory (SRNL): Aiken, SC

Principal Scientist (Clean Energy Directorate)

6/2015 – 7/2017

Senior Scientist A (Clean Energy Directorate)

9/2011 - 5/2015

Post-Doctoral Researcher (Energy Security and Engineering Directorate)

6/2009 - 8/2011

- Recipient of the 2015 Laboratory Director’s Award for Early Career Exceptional Achievement. Served as a mentor for undergraduate, graduate, post-doctoral researchers, and entry level scientists leading to 14 peer reviewed publications since 2012 with them as co-authors.
- Mentor in the SRNL University Scholar Program to prepare students for careers in STEM majors
- Team member and co-author of funded research proposals that been awarded by US-DOE supported programs in the Office of Science - Basic Energy Sciences, SunShot Initiative, Vehicle Technologies, and the Hydrogen and Fuel Cells Program. Principal investigator for a fuel cell powered unmanned underwater (UUV) with the Navy.
- Research and development projects include the synthesis and evaluation of composite and hybrid materials for use in novel energy storage and conversion devices that involve hydrogen storage, alkali-ion battery component development (anode and electrolyte), concentrated solar power thermal energy storage (CSP-TES), and electrolysis.

- Developed new methods to synthesize and isolate aluminum hydride (AlH_3) for large scale production via chemical and electrochemical methods for use in a portable power system.

Lehigh University: Bethlehem, PA

Post-Doctoral Researcher (Dr. Robert Flowers' group)

6/2008 - 5/2009

Research Fellow/Graduate Assistant (Dr. Robert Flowers' group)

5/2004 - 5/2008

- Applied a physical-organic approach to understand the mechanistic roles of proton donors and coordinating additives in the SmI_2 -mediated reductions of alkyl halides, carbonyls, and alkenes.
- Developed highly luminescent materials based on divalent samarium complexes that have long-luminescent lifetimes and emit in the near-IR range with potential applications as chemical probes.
- Utilized high-intensity ultrasound as a rapid and efficient methodology for the generation of known and previously unreported divalent samarium reductants.

Centre Ingredient Technology: McAdoo, PA

5/2003 - 1/2004

Chemist

- Utilized a variety of instrumentation to monitor product formation in small-scale fermentation reactions for the production of flavors and fragrances. This data was used for scaled-up production batches.

PUBLICATIONS - Author *h-index* of 23; Total citations: 1400+ (via Google Scholar)

Since joining CSUN

41. "Nanoconfinement of High Hydrogen-to-Metal Ratio Lanthanum Hydrides in Functionalized Carbon Hosts" M. Shivanna, T.A. Elmslie, C.D. Spataru, S. Duwal, N. Porcellino, + S. Mouzaya, # C.P. Pakhanyan, # F. El Gabaly, S. Kawaguchi-Imada, J. Guo, Z. Zhuo, M-J. Kim, B.T. Sturtevant, J.A. Teprovich Jr., M.D. Allendorf, P.A. Sharma, V. Stavila, *ACS Applied Energy Materials*, 2025,
40. "Pressure dependent phase behavior of chemically synthesized ytterbium hydride nanoparticles and confinement in CMK-3" N. Porcellino, + C. Pakhanyan, # T. Elmslie, M. Shivanna, S. Duwal, C.D. Spataru, R. Lindvall, # M. Somayazulu, P.A. Ward, S.I. Kawaguchi, V. Stavila, P.A. Sharma, * J.A. Teprovich Jr., * *ACS Applied Energy Materials*, 2024, 7, 9608-9615.
39. "Synthesis and Characterization of Amorphous Lawsone Polymer Dots for Fluorescent Applications" J. Hernandez, + A. Robb, S. Servera, # N. Bedrosian, # O. Gomez, + Z. Duca, M.B. Thomas, D. Tamae, P.L. Fischhaber, S.J. Garrett, P.A. Ward, * J.A. Teprovich Jr., * *ACS Applied Nano Materials*, 2023, 6, 20639-20651.
38. "Closoborate gel polymer electrolytes with remarkable electrochemical stability and a wide operating temperature window" M. Green, + K. Kaydanik, + M. Orozco, # L. Hanna, M. Marple, A. Fessler, W.B. Jones, V. Stavila, P.A. Ward, * J.A. Teprovich Jr., * *Advanced Science*, 2022, 9, 2106032.
37. "Spectroscopic Investigation of the Electronic and Excited State Properties of Para-Substituted Tetraphenyl Porphyrins and Their Electrochemically Generated Ions" L. Hanna, E. Movsesian, # M. Orozco, # A. Bernot, + M. Asadinamin, L. Shenje, S. Ullrich, Y. Zhao, N. Marshall, J. Weeks, M. Thomas, J.A. Teprovich Jr., * P. Ward * *Spectrochimica Acta Part A*, 2022, 78, 121300.
36. "Influence of Solvent System on the Electrochemical Properties of a *closoborate* Electrolyte Salt" M. Green, + H. Simonyan, # K. Kaydanik, + J.A. Teprovich, Jr., * *Applied Science*, 2022, 12, 2273.
35. "Synergistic effect of nanoionic destabilization and partial dehydrogenation for enhanced ionic conductivity in $\text{MBH}_4\text{-C}_{60}$ ($\text{M} = \text{Li}^+, \text{Na}^+$) nanocomposites" J. Santos, # P. Simon, # A. Bernot, + C. Babasi, # S. Hwang, P.A. Ward, R. Zidan, J.A. Teprovich Jr., * *J. Solid State Electrochem.* 2021, 25, 1440-1452.
34. "Time-Resolved Shadowgraph Photography of Laser-Heated Plasmonic Gold Nanoparticles in Water" D. Stavich, B. Nestoiter, D. Gonzalez, A. Freund, X. Buelna, K. Wang, J.A. Teprovich, Jr., J. Eloranta, *J. Phys Chem C*, 2020, 124, 14022-14029.

Published while at CSUN with the majority of the work performed at another institution without CSUN students

33. "Hydrogenated C_{60} as high-capacity stable anode materials for Li-ion batteries", J.A. Teprovich Jr., * J.A. Weeks, P.A. Ward, S.C. Tinkey, C. Huang, J. Zhou, R. Zidan, P. Jena, *ACS Applied Energy Materials*, 2019, 2, 6453-6460

32. "Electrochemical extraction of hydrogen isotopes from Li/LiT mixtures", J.A. Teprovich Jr., H.R. Colon Mercado, L. Olson, P. Ganesan, D. Babineau, B. L. Garcia-Diaz, **Fusion Eng. Des.**, 2019, 139, 1-6.
31. "Stability and Phase Formation in the (Li/Na)₆C₆₀-H Systems Studied by Neutron Scattering" S. Sartori, M.N. Guzik, K.D. Knudsen, M.H. Sørby, J.A. Teprovich, Jr., R. Zidan, B.C. Hauback, **J. Phys. Chem. C**, 2018, 122, 18346-18355.
30. "High temperature thermal energy storage in the CaAl₂ system" P.A. Ward, J.A. Teprovich Jr, Y. Liu, J. He, R. Zidan, **J. Alloys Compd.** 2018, 735, 2611-2615.
29. "Investigation of the Reversible Lithiation of an Oxide Free Aluminum Anode by a LiBH₄ Solid State Electrolyte" J.A. Weeks, S.C. Tinkey, P.A. Ward, R. Lascola, R. Zidan, J.A. Teprovich,* **Inorganics**, 2017, 5, 83.

Prior to joining CSUN

28. "Fine-tuning the fluorescent properties of Li and Na intercalated C₆₀ with hydrogen" J. A. Teprovich Jr.,* J.A. Weeks, P.A. Ward, A. L. Washington II, R. Zidan, **Int. J. Hydrogen Energy**, 2017, 42, 22511-22517.
27. "Investigation of Hydrogen Induced Fluorescence in C₆₀ and its Potential use in Luminescent Down Shifting Applications" J.A. Teprovich Jr,* A.L. Washington II, J. Dixon, P.A. Ward, J.H. Christian, B. Peters, J. Zhou, S. Giri, D.N. Sharp, P. Jena, R. Zidan **Nanoscale**, 2016, 8, 18760-18770.
26. "Developing Radiation Tolerant Polymer Nanocomposites Using C₆₀ as an Additive" J.H. Christian, J.A. Teprovich Jr., J. Wilson, J.C. Nicholson, T. Truong, M.R. Kesterson, I. Wiedenhöver, L.T. Baby, M. Anastasiou, N. Rijal, A.L. Washington II **RSC Advances**, 2016, 6, 40785-40792.
25. "Technical Challenges of Thermal Energy Storage Using Hydrides" P.A. Ward,@ C. Corgnale, J.A. Teprovich Jr., T. Motyka, B. Hardy, D. Sheppard, C. Buckley, R. Zidan **Applied Physics A: Materials Science**, 2016, 122, 462.
24. "Metal Hydrides for Concentrating Solar Thermal Power Energy Storage" D.A. Sheppard, M. Paskevicius, T.D. Humphries, M. Felderhoff, P.A. Ward,@ J.A. Teprovich Jr., C. Corgnale, R. Zidan, C.E. Buckley **Applied Physics A: Materials Science**, 2016, 122, 395.
23. "Bi-functional Li₂B₁₂H₁₂ for energy storage and conversion applications: solid-state electrolyte and luminescent down-conversion dye" J.A. Teprovich Jr,* H. Colon-Mercado, A.L. Washington II, P.A. Ward,@ H. Hartman,% S. Greenway, D.M. Missimer, J. Velten,@ J.H. Christian,@ R. Zidan **J. Mater. Chem. A**, 2015, 3, 22853-22859.
22. "High Performance Metal Hydride Material Based Thermal Energy Storage Systems for Concentrating Solar Power Plants" P. Ward⁺, C. Corgnale, J.A. Teprovich Jr., T. Motyka, B. Hardy, B. Peters[#], R. Zidan **J. Alloys Compd.**, 2015, 645, S374-S378.
21. "Li-driven Electrochemical Conversion Reaction of AlH₃, LiAlH₄, and NaAlH₄" J.A. Teprovich Jr, J. Zhang, H. Colón-Mercado, F. Cuevas, B. Peters[#], S. Greenway, M. Latroche, R. Zidan, **J. Phys. Chem. C**, 2015, 119, 4666-4674.
20. "Evaluation of the Physi- and Chemisorption of Hydrogen in Alkali (Na, Li) Doped Fullerenes" P. Ward⁺, J.A. Teprovich Jr., R.N. Compton, V. Schwartz, G. Vieth, R. Zidan **Int. J. Hydrogen Energy**, 2015, 40, 2710-2716.
19. "Experimental and Theoretical Analysis of Fast Lithium Ion Conduction in a LiBH₄-C₆₀ Nanocomposite" J.A. Teprovich Jr., H. Colon-Mercado, P. Ward⁺, B. Peters[#], S. Greenway, S. Giri, J. Zhou, P. Jena, R. Zidan, **J. Phys. Chem. C**, 2014, 118, 21755-21761.
18. "Screening Analysis of Metal Hydride Based Thermal Energy Storage Systems for Concentration Solar Power Plants" C. Corgnale, B. Hardy, T. Motyka, R. Zidan, J.A. Teprovich Jr., B. Peters[#], **Renewable and Sustainable Energy Reviews**, 2014, 38, 821-833.
17. "Reversible Hydrogen Storage in a LiBH₄-C₆₀ Nanocomposite" P. Ward⁺, J.A. Teprovich Jr., B. Peters[#], J. Wheeler, R. Compton, R. Zidan, **J. Phys Chem. C**, 2013, 117, 22569-22575.
16. "Comparative Study of Reversible Hydrogen Storage in Alkali-Doped Fullerenes" J.A. Teprovich Jr., D.A. Knight, B. Peters[#], R. Zidan, **J. Alloys Compd.** 2013, 580, S364-S367.
15. "A Spectroscopic Investigation of Hydrogenated Li Doped Fullerane" A. Paolone, O. Palumbo, F. Leardini, R. Cantelli, D.A. Knight, J.A. Teprovich Jr., R. Zidan, **J. Alloys Compd.** 2013, 580, S67-S69.
14. "Synthesis, Characterization, and Reversible Hydrogen Sorption Study of a Sodium-doped Fullerene" D.A. Knight, J.A. Teprovich Jr., B. Peters[#], A. Summers*, P. Ward⁺, R. Compton, R. Zidan, **Nanotechnology**, 2013, 24, 455601.
13. "Synthesis and Calorimetric, Spectroscopic, and Structural Characterization of Isocyanide Complexes of Trialkylaluminum and Tri-*tert*-butylgallium" N.B. Kingsley, K. Kirschbaum, J.A. Teprovich Jr., R.A. Flowers II, M.R. Mason. **Inorg. Chem.**, 2012, 51, 2494-2502.

12. "Hydrogen System Using Novel Additives to Catalyze Hydrogen Release from the Hydrolysis of Alane and Activated Aluminum" J.A. Teprovich Jr, T. Motyka, R. Zidan. *Int. J. Hydrogen Energy*, 2012, 37, 1594-1603.
11. "Advances in the Electrochemical Regeneration of Aluminum Hydride" M.J. Martínez-Rodríguez, B.L. García-Díaz, J.A. Teprovich, Jr, D.A. Knight, R. Zidan. *Applied Physics A: Materials Science* 2012, 106, 545-550.
10. "Relaxation Processes and Structural Changes in Li and Na Doped Fullerenes for Hydrogen Storage" A. Paolone, F. Vico, F. Teocoli, S. Sanna, O. Palumbo, R. Cantelli, D. Knight, J.A. Teprovich Jr., R. Zidan. *J. Phys. Chem C*, 2012, 116, 16365-16370.
9. "Synthesis and Characterization of a Lithium Doped Fullerane ($\text{Li}_x\text{-C}_{60}\text{-H}_y$) for Reversible Hydrogen Storage" J.A. Teprovich Jr., M. S. Wellons, R. Lascola, S. Hwang, P. Ward⁺, R. Compton, R. Zidan. *Nano Letters*, 2012, 12, 582-589.
8. "Catalytic Carbon Nanostructures and Novel Nanocomposites for Hydrogen Storage" A.C. Stowe, J.A. Teprovich Jr., D.A. Knight, M.S. Wellons, R. Zidan. *J. SC Acad. Science*, 2011, 9, 13-19. (Invited review article)
7. "Catalytic Effect of Fullerene and Formation of Nanocomposites with Complex Hydrides: NaAlH_4 and LiAlH_4 " J.A. Teprovich Jr., D. Knight, M.S. Wellons, R. Zidan *J. Alloys Compd.*, 2011, 509, S562-S566.
6. "NMR Study of LiBH_4 with C_{60} " D.T. Shane, R. Corey, L. Rayhel, M. Wellons, J.A. Teprovich Jr., R. Zidan, S. Hwang, R. Bowman, Jr., M.S. Conradi. *J. Phys. Chem. C*, 2010, 114, 19862-79866.
5. "Dynamic Ligand Exchange in Reactions of Samarium Diiodide" D.V. Sadasivam, J.A. Teprovich Jr., D. Proctor, R. A. Flowers, II. *Organic Letters*, 2010, 12, 4140-4143.
4. "Selective Monovalent Cation Association and Exchange around Keplerate Polyoxometalate Macroanions in Dilute Aqueous Solutions" J. Pigga, J.A. Teprovich Jr., R.A. Flowers II, M. Antonio, T. Liu. *Langmuir*, 2010, 26, 9449-9456.
3. "Generation of Sm (II) Reductants Using High-Intensity Ultrasound" J.A. Teprovich Jr., P.K.S. Antharjanam, E.N. Pesciotta, E. Prasad, R.A. Flowers II. *Eur. J. Inorg. Chem.*, 2008, 32, 5015-5019. **(Cover of this issue)**
2. "Mechanistic Studies of Proton Donor Coordination to Samarium Diiodide" J.A. Teprovich Jr., M.N. Balili, T. Pintauer, R.A. Flowers, II. *Angewandte Chemie Int. Ed.*, 2007, 46, 8160-8163. (This paper was designated as a Very Important Paper (VIP), a designation given to less than 5% of accepted papers.)
1. "Solvation-Controlled Luminescence of Sm (II) Complexes" J.A. Teprovich Jr., E. Prasad, R.A. Flowers, II. *Angewandte Chemie Int. Ed.*, 2007, 46, 1145-1148. **(VIP Paper)**

Full texts of the above publications are posted on my Researchgate.net profile.

* corresponding author

Students mentored at CSUN (since August 2017)

undergraduate students: Hailey Pakhanyan, Zaineh Khalifeh, Sergio Mouzaya, Lianna Engoyan, Eliseo Vergara Reyes, Hovnan Simonyan, Lansen Wyke, Cesar Coronado, Nanor Bedrosian, Christopher Pakhanyan, Andrew Fraire, Rachel Lindvall, Erik Quintero, Savannah Servera, Michael Orellana, James Te, Michael Kallas, Edgar Movsesian, Miguel Orozco, Chris Babasi, Conor Barrett, Paulo Melgar, Linda Chan, Jovy Santos, Evan Velarde

+ graduate students: Khoren Movsesyan, Nicholas Porcellino, Matthew Green, Jesus Hernandez, Katty Kandani, Anthony Bernot, Osma Gomez

Note: Normal text are continuing students, and students in light colored text are former students that graduated

MS Thesis

Nicholas Porcellino, Spring 2024: *Synthesis and Characterization of Lanthanide Series Metal Hydride Nanoparticles*

Jesus Hernandez, Spring 2023: *Synthesis and characterization of lawsone based polymer dots for intracellular imaging*

Matthew Green, Spring 2023: *Closo-borate electrolytes for improved performance and safety in next generation battery systems*

Katty Kaydanik, Fall 2021: *Novel Gel Polymer Electrolyte for Lithium-Ion Batteries*

Osma Gomez, Spring 2021: *Carbon Quantum Dots (CQDs) as Probes of Biological Systems*

Anthony Bernot, Spring 2021: *Photophysical Properties of Fullerene Derived Nanostructures*

Students and entry level employees mentored from 2011-2017 prior to CSUN

% undergraduate students (Hope Hartman, Jefferson Dixon, Jason Weeks, Spencer Tinkey, Andrew Summers)
+ graduate student (Patrick Ward)
bachelor level scientist (Brent Peters)
@ post-doctoral researchers (Than-Tam Truong, Josef Velten, Jonathan Christian, Patrick Ward)

PATENTS/INVENTION DISCLOSURES

- [1] J. A. Teprovich, T. Motyka, R. Zidan, “Two Step Novel Hydrogen System Using Additives to Enhance Hydrogen Release from the Hydrolysis of Alane and Activated Aluminum”, *Patent No.: US 9,199,844 B2*; issued December 1, 2015.
 - [2] A. L. Washington II, J. A. Teprovich Jr., R. Zidan “Enhanced Superconductivity of Fullerenes” *Patent No.: US 9,685,600*; issued June 20, 2017.
 - [3] R. Zidan, J. A. Teprovich Jr., A. L. Washington II “Carbon Quantum Dots (CQDs) and a method of making the same” *Patent No.: US 9,738,827*; issued August 22, 2017.
 - [4] R. Zidan, J. A. Teprovich Jr., H. Colon-Mercado, S. Greenway “Solid State Electrolyte Composites Based on Complex Hydrides and Metal Doped Fullerenes/Fulleranes for Batteries and Electrochemical Applications” *Patent No.: US 9,959,949 B2*; issued May 1, 2018
 - [5] A.L. Washington II, M.G. Serrato, J.A. Teprovich Jr. “Reinforced Radiological Containment Bag” *Patent No.: US 10,157,689 B2*; issued December 18, 2018
 - [6] B. L. García-Díaz, H. Colon-Mercado, J.A. Teprovich Jr., D. Babineau, and L. C. Olson, “Recovery of Tritium from a Molten Lithium Blanket,” *US 10,450,660 B2*; issued October 22, 2019
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FUNDING SOURCES

Since joining CSUN:

- (2024) CSUN Research and Sponsored Programs Campus Funding Initiative (\$10K, Project PI)
- (2023) NSF Equipment: Helium Recovery Equipment: Critical Helium Recycling System for CSUN to Preserve NMR Access for Research and Teaching (\$167K; project co-PI with 20% contribution)
- (2021-2024) NSF’s Launching Early Academic Pathways in Mathematical and Physical Sciences (LEAPS-MPS) for a proposal titled: *Investigating ion transport phenomenon and dynamics in composite materials containing large boron-rich anion (LBRA) salts* (\$250K total project budget; Project PI) NSF award number: 2137973
- (2022-2024) Sandia National Laboratory- Lab Directed Research and Development (LDRD) program – Project: *Synthesis of practical high temperature superconductors in hydrogen-rich materials*; (\$105K, Project PI)
- (2022-2023) Savannah River National Laboratory- Lab Directed Research and Development (LDRD) program – Project: *Perovskite support*; (\$60K, Project PI)
- (2021) NSF MRI Acquisition of a GPU/CPU computing cluster for research and education in computational chemistry and materials (\$436K; project co-PI with 20% contribution) NSF award number: 2117956
- (2021) DOE Office of Science Visiting Faculty Program at Sandia National Laboratory (Project PI)
- (2020) CSUN Faculty Success Grant for conference travel to Japan Conference (\$750)
- (2019-2021) Savannah River National Laboratory- Lab Directed Research and Development (LDRD) program – Project: *Nanocomposite Spectroscopy Characterization for Solar Batteries*; (\$60K in total funding received during the two year project, Project PI)
- (2018-2020) Savannah River National Laboratory- Lab Directed Research and Development (LDRD) program – Project Title: *Material Development and Characterization for Energy Storage and Conversion Devices*; (\$50K in total funding received during project, Project PI)
- (2018) CSUN Research, Scholarship, and Creativity Awards (\$5K, Project PI)

Prior to CSUN:

- DOE - Office of Science – Basic Energy Sciences
- DOE - Office of Science – Fusion Energy Sciences
- Naval Undersea Warfare Center (NUWC)

PRESENTATIONS/MEETINGS

Since joining CSUN:

Discussion Leader Hydrogen Metals Systems Gordon Research Conference (Les Diablerets, Switzerland; June 2025)

Invited Speaker Metal Hydrogen Workshop (Spitsbergen, Norway; April 2025)

Poster Presenter Nanomaterials for Applications in Energy Technology Gordon Research Conference (Ventura, CA; March 2025)

Invited Speaker International Conference on Polymers and Advanced Materials "Polymat 2024" (Huatulco, Mexico; October 2024)

Speaker 18th International Symposium on Metal-Hydrogen Systems (Saint Malo, France; May 2024)

Invited Speaker ACS National Meeting (New Orleans, LA; March 2024)

Poster Presenter Batteries Gordon Research Conference (Ventura, CA; February 2024)

Invited Speaker iNano Specialized Lecture (Aarhus University, Denmark; September 2023)

Invited Speaker Hydrogen Metals Systems Gordon Research Conference (Les Diablerets, Switzerland; June 2023)

Invited Speaker 17th International Symposium on Metal-Hydrogen Systems (Perth, Australia; October 2022)

Invited Speaker and Session Chair Hydrides as Energy Materials (Louvain-la-Neuve, Belgium; May 2022)

Session Organizer and Chair TMS 2022 150th Annual Meeting & Exhibition (Anaheim, CA; March 2022)

Invited Speaker Pacifichem, *Hydrogen-Rich Systems: Materials Chemistry for Energy Storage and Delivery symposium* (Honolulu, HI; December 2021)

Invited Speaker SRNL PostDoc Mentoring Series (Virtual, Aiken, SC; June 2021)

Invited Speaker University of Texas – Austin, UT Austin Electrochemical Society Webinar Series (Virtual, Austin, TX; March 2021)

Invited Speaker/Session Chair TMS 2020 149th Annual Meeting & Exhibition (San Diego, CA; February 2020)

Speaker/Session Chair 14th International Symposium Hydrogen & Energy (Sapporo, Japan; January 2019)

Poster Presenter Hydrogen Metals Systems Gordon Research Conference (Barcelona, Spain; July 2019)

Discussion Leader/Panel Member Hydrogen Metals Systems Gordon Research Seminar (Barcelona, Spain; June 2019)

Invited Speaker CSULB Department of Chemistry and Biochemistry Seminar Series (Long Beach, CA; November 2018)

Invited Speaker ACS SERMACS 2018 (Augusta, GA; November 2018)

Invited Speaker CSULA 3rd Annual PREM Retreat (Los Angeles, CA; August 2018)

CSUN Student Presentations

Speaker, Khoren Movsesyan (graduate), Sigma Xi Symposium 2024 (Northridge, CA; November 2024) – Oral presentation won first place in his division

Poster, Hovnan Simonyan, (undergraduate) ACS National Meeting (Denver, CO; August 2024)

Poster, Hovnan Simonyan, (undergraduate) CSUNPosium (Northridge, CA; April 2024)

Poster, Lansen Wyke and Lianna Engoyan, (undergraduates) CSUNPosium (Northridge, CA; April 2024)

Poster, Hovnan Simonyan (undergraduate), 2nd Annual International Forum on Research Excellence (IFoRE) (Long Beach, CA; November 2023) – Poster won 1st Place in the Chemistry Division

Speaker, Andrew Fraire (undergraduate), CSUNPosium (Northridge, CA; April 2023)

Speaker, Hovnan Simonyan (undergraduate), CSUNPosium (Northridge, CA; April 2023)

Speaker, Matthew Green (graduate), CSUNPosium (Northridge, CA; April 2023)

Poster, Jesus Hernandez (graduate), 2022 Great Minds in STEM Conference (Pasadena, CA; October 2022)

Poster, Jesus Hernandez (graduate), 264th National ACS Meeting (Chicago, IL; August 2022)

Poster, Matthew Green (graduate), 264th National ACS Meeting (Chicago, IL; August 2022)

Speaker, Jesus Hernandez (graduate), CSUNPosium (Northridge, CA; April 2022)

Speaker, Matthew Green (graduate), CSUNPosium (Northridge, CA; April 2022) – Oral presentation won 1st place in his division.

Speaker, Katty Kaydanik (graduate), Sigma Xi Symposium 2021 (Northridge, CA; May 2021) – Oral presentation won first place in her division

Speaker, Jesus Hernandez (graduate), CSUNPosium (Northridge, CA; April 2021) - Oral presentation won 2nd place in his division

Speaker, Jesus Hernandez (graduate), CSUN's MARC/RISE/BRIDGES Presentation Marathon 2021 (Northridge, CA; April 2021)

Speaker, Matthew Green (undergraduate), CSUNPosium (Northridge, CA; March 2020) – Oral presentation won 1st place in his division

Poster, Anthony Bernot (graduate), 10th International Symposium on Clusters and Nanomaterials (Richmond, VA November 2019)

Poster, Osma Gomez (graduate), 31st Annual Great Minds in STEM Conference (Lake Buena Vista, FL; September 2019) – Poster won 1st Place in the Math and Science Division

Poster, Osma Gomez (graduate), Hydrogen Metals Systems Gordon Research Conference (Barcelona, Spain; July 2019)

Poster, Anthony Bernot (graduate), Hydrogen Metals Systems Gordon Research Conference (Barcelona, Spain; July 2019)

Speaker, Osma Gomez (graduate) 2019, CSUNposium (Northridge, CA; April, 2019)

Speaker, Anthony Bernot (undergraduate), CSUN ASBMB Regional Meeting 2018 (Northridge, CA; April 2018)

Prior to CSUN:

Invited Discussion Leader Gordon Research Seminar – Hydrogen-Metals Systems (Boston, MA; July 2017)

Invited Speaker 11th International Symposium of Hydrogen & Energy (Waikoloa, Hawaii; March 2017)

Invited Speaker The Minerals, Metals, & Materials Society (TMS) 146th Annual Meeting & Exhibition (San Diego, CA; February 2017)

Invited Speaker Georgia Southern University – Department of Physics Colloquium (Statesboro, Ga; February 2017)

Invited Speaker SRNL and USC-Aiken Seminar Series (Aiken, SC; November 2016)

Invited Speaker Virginia Commonwealth University – Department of Physics Colloquia Series (Richmond, VA; November 2016)

Invited Participant Basic Energy Sciences – Materials Science and Engineering Division Lab Management Review (Gaithersburg, Md; September 2016)

Speaker 15th International Symposium on Metal-Hydrogen Systems (Interlaken, Switzerland; August 2016)

Invited Speaker Energy Materials and Nanotechnology (EMN) Meeting on Batteries (Orlando, FL; February 2016)

Poster Pacific Chem (Honolulu, HI; December 2015)

Invited Speaker SRNL University Scholars Program Workshop at University of South Carolina – Aiken (Aiken, SC; November 2015)

Invited Speaker Gordon Research Conference – Hydrogen-Metals Systems (Boston, MA; July 2015)

Invited Participant International Energy Agency- Hydrogen Implementing Agreement Task 32 (Boston, MA; July, 2015)

Invited Speaker Clemson University - Chemistry Department Seminar Series (Clemson, SC; November 2014)

Invited Participant Basic Energy Sciences Advisory Committee (Bethesda, MD; July 2014)
Invited Speaker and Session Chair Materials Challenges in Alternative and Renewable Energy (Clearwater, FL; February 2014)
Invited Participant International Energy Agency- Hydrogen Implementing Agreement Task 32 (Key Largo, FL; December 2013)
Poster Gordon Research Conference – Hydrogen-Metals Systems (Lucca, Italy; July 2013)
Speaker 10th Pacific Rim Conference on Ceramic and Glass Technology (San Diego, CA; June 2013)
Speaker Materials Challenges in Alternative and Renewable Energy (Clearwater, FL; February 2012)
Invited Speaker East Paris Institute of Chemistry and Materials Science (Paris, France; December 2011)
Poster Gordon Research Conference – Hydrogen-Metals Systems (Boston, MA; July 2011)
Speaker Materials Challenges in Alternative and Renewable Energy (Cocoa Beach, FL; February 2010)
Poster 39th Middle Atlantic Regional Meeting of the American Chemical Society (Collegeville, PA; May 2007)
Poster 225th American Chemical Society National Meeting (New Orleans, LA; March 2003)

INSTRUMENTATION/SKILLS SUMMARY

UV-VIS, Fluorescence, GC, GC-MS, NMR, FT-IR, ICP-AES, ICP-MS, AAS-AES, TGA-RGA, MALDI-TOF, Sievert's Apparatus, HP-DSC, XRD, SEM, Ion Chromatography, HPLC, Isothermal Titration Calorimetry, Stopped-flow Spectrophotometry, Cyclic Voltammetry, lithium ion battery material testing (anode and electrolyte), glove box operation under inert atmosphere, and crystallization of air-sensitive complexes, and computer software (MS Word, Excel, PowerPoint, Origin).

SERVICE

Thesis Committee Chair: N. Porcellino (Spring 2024)
Thesis Committee Member: J. Cruz (Spring 2024)
Thesis Committee Chair: J. Hernandez (Spring 2023)
Thesis Committee Chair: M. Green (Spring 2023)
Thesis Committee Chair: K. Kaydanik (Fall 2021)
Thesis Committee Member: D. Stavich (Fall 2021)
Thesis Committee Member: Z. Eroglu (Summer 2021)
Thesis Committee Member: D. Khodagholian (Spring 2021)
Thesis Committee Chair: O Gomez (Spring 2021)
Thesis Committee Chair: A. Bernot (Spring 2021)
Thesis Committee Member: M. Ledesma (Fall 2020)
Thesis Committee Member: A. Allehyari (Summer 2020)
Thesis Committee Member: C. Weeks (Spring 2020)
Thesis Committee Member: J. Yoon (Spring 2020)
Thesis Committee Member: A. Nazarian (Spring 2019)
Thesis Committee Member: A. Volkova (Spring 2019)
CSU Student Research Competition: Judge for oral presentations
Sigma Xi Student Research Symposium: Judge for oral presentations
CSUNPosium: Judge for poster session (April 2019)
Chemistry & Biochemistry Department Seminar Series: Coordinator (Spring 2020 – present)

Chemistry & Biochemistry Department Graduate Committee: Committee Member (Fall 2019 - present)

Chemistry & Biochemistry Department Academic Resource Committee: Committee Member (Fall 2020 - Fall 2022)

NIH Bridges to the Ph.D. program: Mentor and student advisor (Fall 2020 – present)

Chemistry 101 Laboratory: Revised the CHEM 101L manual into a hard-bound version with Hayden-McNeil of Macmillan Learning (Fall 2019)

Chemistry 101 and 102 Lecture and Laboratory: Course Coordinator (Fall 2018 – present)

Chemistry 321 Laboratory: Revised the CHEM 321L course for an in-person format for the Spring 2021 and Fall 2021 semesters

Course Development: Developed a Chemistry of Energy Lecture and Lab course for graduate and upper division undergraduate students. (Fall 2020)

SCALACS Tolman Medal: Selection Committee Member (Spring 2018)

CSULA Partnership for Research and Education in Materials (PREM): External Advisory Board Member (Fall 2018)

CSUN Maximizing Access to Research Careers (MARC) and Research Initiative for Scientific Enhancement (RISE) program: Faculty Mentor (Fall 2019 – present)

New Faculty Orientation (NFO): Tech tutor (Fall 2018)

Journal reviewer: Journal of Organic Chemistry, Nano Letters, Journal of Materials Science, Materials Science & Engineering B, International Journal of Hydrogen Energy, Inorganics, Crystals (2018 – present)