KIMBERLY A. SEE

Professor of Chemistry
Division of Chemistry and Chemical Engineering
California Institute of Technology

email: ksee@caltech.edu
website: https://www.seegroup.caltech.edu

POSITIONS

Current **Professor of Chemistry,** Division of Chemistry and Chemical Engineering
California Institute of Technology, Pasadena, CA

2017 – 2025 **Assistant Professor of Chemistry,** Division of Chemistry and Chemical Engineering
California Institute of Technology, Pasadena, CA

2014 – 2017 **St. Elmo Brady Future Faculty Postdoctoral Fellow,** Department of Chemistry
University of Illinois at Urbana-Champaign, Urbana, IL

EDUCATION

2014 **University of California,** Santa Barbara, CA
Ph.D. in Chemistry
Advisors: Professors Ram Seshadri and Galen Stucky
Thesis title: *Hybrid Architectures for Next Generation Batteries*

2009 **Colorado School of Mines**, Golden, CO
B.S. in Chemistry, *cum laude*

RESEARCH EXPERIENCE

2014 - 2017 **St. Elmo Brady Future Faculty Postdoctoral Fellow** University of Illinois, Urbana-Champaign, IL
Advisor: Prof. Andrew A. Gewirth
Characterization of the bulk and surface speciation in Mg and Zn battery electrolytes

2011-2014 **Graduate student researcher** University of California, Santa Barbara, CA
Advisors: Profs. Ram Seshadri and Galen D. Stucky
Synthesis and characterization of materials for use in the Li-S battery; development and understanding of Ca-based battery systems; investigation of charge storage mechanisms in organic electrode materials

2013, Oct-Nov **Visiting researcher** University of Cambridge, Cambridge, UK
Advisor: Prof. Clare P. Grey
In-situ ^{7}Li NMR during the discharge of a Li-S battery to evaluate the behavior of the discharge products and gain a fundamental understanding of the discharge mechanism

2010-2011 **R&D Chemist I** NuSil Technology, Carpinteria, CA
Synthesis, characterization, and development of silicone materials for application in photonics devices and implantable inks

2009-2010 **Graduate student researcher** University of Colorado, Boulder, CO
Advisor: Prof. Gordana Dukovic
Synthesis and characterization of oxy(nitride) photocatalytic nanocrystals

2008-2010 **Undergraduate research intern** National Renewable Energy Lab, Golden, CO
Advisors: Drs. John Turner and Todd Deutsch
Characterization of thin film $CuGaSe_2$ for photoelectrochemical water splitting and development of photo-assisted electrodeposition of catalytic Pt clusters

EDITORIAL ROLES

2022 - 2023 Topic Editor, *ACS Energy Letters*

2023-present Advisory Board Member, *Sustainable Energy & Fuels*
2023-present Young Editorial Board Member, *Battery Energy*
2022-present Early Career Advisory Board, *Chemical Reviews*
2023-2025 Editorial Advisory Board Member, *Journal of Physical Chemistry C*

Awards and Recognitions

2025	ACS Buck-Whitney Award
2024	NSF CAREER Award
2023	Camille Dreyfus Teacher-Scholar Award
2023	Sloan Research Fellow
2022	EPA Green Chemistry Challenge Award
2022	Office of Naval Research Young Investigator Award
2020	Packard Fellowship for Science and Engineering
2019	VW/BASF Science Award Electrochemistry
2019	Beckman Young Investigator Award
2019, 2022	Kavli Fellow, selected by the National Academy of Sciences
2018	The Electrochemical Society Toyota Young Investigator Award
2017	The Electrochemical Society Battery Division Postdoctoral Associate Research Award
2017 - 2019	Research Corporation Scialog Fellow, Advanced Energy Storage Program
2014 - 2017	UIUC St. Elmo Brady Future Faculty Postdoctoral Fellowship
2012 - 2014	NSF ConvEne IGERT Fellowship
2013	UCSB Outstanding Service to K-12 Education Outreach Program
2009	CSM Engineering Days Engineer: Chemistry

Patents

Note: My legal name, "Kimberly A. Robb," is used for patents

Issued

1. Martinolich, Andrew J., Robb, Kimberly A. "Solid State Ion Conduction in $ZnPS_3$" U. S. Patent No. 11,749,825, issued September 5, 2023.

Provisionals/Nonprovisionals

3. He, Tianyi, Stradley, Steven H., Bruening, Meaghan A., Robb, Kimberly A., Agapie, Theodor "A New Class Of Highly Stable, Halide Free Mg Electrolytes Based On Silicate Anions" U.S. Provisional Application No. 63/547,012, filed on November 2, 2023.

2. Patheria, Eshaan S., Robb, Kimberly, A. "Lithium-Rich Aluminum Iron Sulfide Li-Ion Battery Cathodes" U.S. Application No. 18/369,425, PCT Application No. PCT/US2023/033004, filed on September 18, 2023.

1. Laskowski, Forrest A.L.; McHaffie, Daniel B.; Robb, Kimberly, A. "Si-Substituted Lithium Thioborate Material with High Lithium Ion Conductivity for use as Solid-State Electrolyte and Electrode Additive" U.S. Application No. 18/205,179, PCT Application No. PCT/US2023/024282, filed June 2, 2023.

Book Chapter

1. Zachery W. B. Iton, Seong Shik Kim, Eshaan S. Patheria, Michelle D. Qian, Skyler D. Ware, **Kimberly A. See***, "Battery Materials." In *Comprehensive Inorganic Chemistry III*, P. Shiv Halasyamani, Patrick M. Woodward, Kenneth R. Poeppelmeier, Eds.; Vol. 4, pp. 306-363, Oxford: Elsevier, ©**2023** Elsevier Ltd. [DOI]

Publications

Independent Career

-- Abhiroop Mishra, Victoria K. Davis, Nicholas V. Dulock, Nathan F. Dalleska, **Kimberly A. See**, "High Operating Potentials Induces Conversion in Li-Rich Chalcogenides," *submitted*.

-- Yi-Ting Cheng, Eshaan S. Patheria, Colin D. Morrell, Nathan Szymanski, Kimberly A. See, Christopher Bartel, "Electronic Structure Perspective on Cation and Anion Redox in Li_2FeS_2," *submitted*.

63. Eshaan S. Patheria, Leah S. Soldner, Nayantara Ramakrishnan, Colin T. Morrell, Michelle D. Qian, Victoria K. Davis, **Kimberly A. See**, "Bridging Transition Metal and Anion Redox Processes in Li-Rich Sulfide Cathodes," *Chem. Mater.* **2026**, *accepted*.

62. Kim H. Pham, Kiarash Gordiz, Natan A. Spear, Amy K. Lin, Jonathan M. Michelsen, Hanzhe Liu, Daniele Vivona, Geoffrey A. Blake, Yang Shao-Horn, Asegun Henry, **Kimberly A. See**, Scott K. Cushing*, "Correlated terahertz phonon–ion interactions control ion conduction in a solid electrolyte," *Mater. Horiz.* **2026**, *13*, 3355-3375. [DOI]

61. Daniel B. McHaffie, Jadon M. Bienz, Son-Jong Hwang, Forrest A. L. Laskowski, **Kimberly A. See**, "Substitution of Li_3BS_3: Revealing New Superionic Conductor Phases and the Significance of Crystallinity," *ACS Energy Lett.*, **2026**, *11*, 2677-2686. [DOI]

60. Colin T. Morrell, Victoria K. Davis, Nicholas V. Dulock, Eshaan S. Patheria, **Kimberly A. See***, "The Influence of Metal and Anion Electronic States on the Stability of High Valent Metals," *Coord. Chem. Rev.*, **2025**, *547*, 217070. [DOI]

59. Kim H. Pham, Vijaya Begum-Hudde, Amy K. Lin, Natan A. Spear, Jackson McClellan, Michael W. Zuerch, Andre Schleife*, **Kimberly A. See**, Scott K. Cushing*, "The Dynamical Role of Optical Phonons and Sublattice Screening in a Solid-State Ion Conductor," *J. Am. Chem. Soc.* **2025**, *147*, 26456-26467. [DOI]

58. Jessica L. Andrews, Michael J. Brady, Colin T. Morrell, Kenneth K. Jew, Sophia Sloan, **Kimberly A. See**, Brent C. Melot*, "On the Structural Origin of Fast Li-Ion Cycling in Tetragonal Bronze-Type $Nb_8W_9O_{47}$," *Chem. Mater.* **2025,** *37*, 5158-5166. [DOI]

57. Daniel B. McHaffie, Zachery W. B. Iton, Jadon M. Bienz, Forrest A. L. Laskowski and **Kimberly A. See***, "Classification of (Dis)ordered Structures as Superionic Lithium Conductors with an Experimental Structure-Conductivity Database," *Digital Discovery* **2025**, *4*, 1518-1533. [DOI]

56. Shaoyang Lin, Yuval Fishler, Soonho Kwon, Annette E. Böhme, Weixuan Nie, Matthias H. Richter, Moon Young Yang, Jesse E. Matthews, Zachery W. B. Iton, Brian C. Lee, Thomas F. Jaramillo, Harry A. Atwater, William A. Goddard III*, Wilson A. Smith*, **Kimberly A. See***, "Cooperative Effects Associated with High Electrolyte Concentrations in Driving the Conversion of CO_2 to C_2H_4 on Copper," *Chem Catal.* **2025**, *5*, 101338. [DOI and ChemRxiv]

55. Eshaan S. Patheria, Pedro Guzman, Leah S. Soldner, Michelle D. Qian, Colin T. Morrell, Seong Shik Kim, Kyle Hunady, Elena R. Priesen Reis, Nicholas V. Dullock, James R. Neilson, Johanna Nelson Weker, Brent Fultz, **Kimberly A. See***, "High Energy Density Li-Ion Battery Cathode Using Only Industrial Elements," *J. Am. Chem. Soc.* **2025,** *147*, 9786-9799. [DOI]

54. Tim Bernges*, Lukas Ketter, Bianca Helm, Marvin A. Kraft, Kimberly A. See, Wolfgang Zeier*, "Transport characterization of solid-state Li_2FeS_2 cathodes from a porous electrode theory perspective," *EES Batteries*, **2025**, *1*, 172-184. [DOI]

53. Zachery W. B. Iton, Zion Irving-Singh, Son-Jong Hwang, Amit Bhattacharya, Sammy Shaker, Tridip Das, Raphaële J. Clément, William A. Goddard III, **Kimberly A. See***, "Modular MPS_3-Based Frameworks for Superionic Conduction of Monovalent and Multivalent Ions," *J. Am. Chem. Soc.* **2024**, *146*, 24398-24414. [DOI]

52. Michelle D. Qian, Eshaan S. Patheria, Nicholas V. Dulock, Colin T. Morrell, **Kimberly A. See***, "Alkali-Independent Anion Redox in $LiNaFeS_2$," *Chem. Mater.* **2024**, *36*, 7953-7966. [DOI]

51. Seong Shik Kim, Daniil A. Kitchaev, Eshaan S. Patheria, Colin T. Morrell, Michelle D. Qian, Jessica L. Andrews, Qizhang Yan, Shu-Ting Ko, Jian Luo, Brent C. Melot, Anton Van der Ven, **Kimberly A. See***, "Cation Vacancies Enable Anion Redox in Li Cathodes," *J. Am. Chem. Soc.* **2024**, *146*, 20951–20962. [DOI]

50. Seong Shik Kim, David N. Agyeman-Budu, Joshua J. Zak, Jessica L. Andrews, Jonathan Li, Brent C. Melot, Johanna Nelson Weker, **Kimberly A. See***, "The Effect of Metal *d* Band Position on Anion Redox in Alkali-Rich Sulfides," *Chem. Mater.* **2024**, *36*, 6454-6463. [DOI]

49. Steven H. Stradley, John-Pual Jones, Ratnakumar V. Bugga, **Kimberly A. See***, "Investigating Capacity Fade Mechanisms in Mg-MCl_x Batteries," *J. Electrochem. Soc.* **2024**, *171*, 060501. [DOI and ChemRxiv]

48. Xiaotong Li, Seong Shik Kim, Michelle D. Qian, Eshaan S. Patheria, Jessica L. Andrews, Colin T. Morrell, Brent C. Melot, **Kimberly A. See***, "Reducing Voltage Hysteresis in Li-rich Sulfide Cathodes by Incorporation of Mn," *Chem. Mater.* **2024**, *36*, 5687-5697. [DOI and ChemRxiv]

47. Skyler D. Ware, Wendy Zhang, Weiyang Guan, Song Lin, **Kimberly A. See***, "A Guide to Troubleshooting Metal Sacrificial Anodes for Organic Electrosynthesis," *Chem. Sci.* **2024**, *15*, 5814-5831. [DOI]

46. Brian C. Lee, **Kimberly A. See***, "A Mg-In Alloy Interphase for Mg Dendrite Suppression," *J. Electrochem. Soc.* **2024**, *171*, 010513. [DOI]

45. Wendy Zhang, Weiyang Guan, Yi Wang, Song Lin, **Kimberly A. See***, "Enhancing Al Sacrificial Anodes in Tetrahydrofuran Electrolytes for Reductive Electrosynthesis," *Chem. Sci.* **2023**, *43*, 13108-13118. [DOI]

44. Lingxiang Wang, Yi Wang, Wendy Zhang, Wen Zhang, **Kimberly A. See**, Song Lin*, "Three-Component Cross-Electrophile Coupling: Regioselective Electrochemical Dialkylation of Alkenes," *J. Am. Chem. Soc.* **2023**, *145*, 22298-22304. [DOI]

43. Wendy Zhang, Chaoxuan Gu, Yi Wang, Skyler D. Ware, Lingxiang Lu, Song Lin, Yue Qi, **Kimberly A. See***, "Improving the Mg Sacrificial Anode in Tetrahydrofuran for Synthetic Electrochemistry by Tailoring Electrolyte Composition," *JACS Au* **2023**, *3*, 2280-2290. [DOI]

42. Skyler D. Ware, Wendy Zhang, David J. Charboneau, Channing K. Klein, Sarah E. Reisman, **Kimberly A. See***, "Electrochemical Preparation of Sm(II) Reagent Facilitated by Weakly Coordinating Anions," *Chem. Eur. J.* **2023**, *29*, e202301045. [DOI]

41. Zachery W. B. Iton, Brian C. Lee, Abigail Y. Jiang, Seong Shik Kim, Michael J. Brady, Sammy Shaker, **Kimberly A. See***, "Water Vapor Induced Superionic Conductivity in $ZnPS_3$," *J. Am. Chem. Soc*., **2023**, 145, 13312-1325. [DOI]

40. Forrest A. L. Laskowski, Daniel B. McHaffie, **Kimberly A. See***, "Identification of Potential Solid-State Li-Ion Conductors with Semi-Supervised Learning," *Energy Environ. Sci*, **2023**, *16*, 1264-1276. [DOI, ChemRxiv, github]

39. Michelle D. Qian, Forrest A. L. Laskowski, Skyler D. Ware, **Kimberly A. See***, "Effect of Polysulfide Speciation on Mg Anode Passivation in Mg-S Batteries," *ACS Appl. Mater. Interfaces,* **2023**, *15*, 9193-9202. [DOI]

38. Joshua J. Zak, Mateusz Zuba, Zachary W. Lebens-Higgins, Heran Huang, Matthew J. Crafton, Bryan D. McCloskey, Louis F. J. Piper, **Kimberly A. See***, "Irreversible Anion Oxidation and Dynamically Changing Charge Compensation in Low-Ru, Li-Rich Cathode $Li_2Ru_{0.3}Mn_{0.7}O_3$," *ACS Energy Lett.,* **2023**, *8,* 722-730. [DOI]

37. Joshua J. Zak, Seong Shik Kim, Forrest A. L. Laskowski, **Kimberly A. See***, "An Exploration of Sulfur Redox in Lithium Battery Cathodes," *J. Am. Chem. Soc.* **2022**, *144*, 10119-10132. [DOI]

36. Seong Shik Kim, David N. Agyeman-Budu, Joshua J. Zak, Andrew Dawson, Qizhang Yan, Miguel Cában-Acevedo, Kamila M. Wiaderek, Andrey A. Yakovenko, Yiyi Yao, Ahamed Irshad, Sri R. Narayan, Jian Luo, Johanna Nelson Weker, Sarah H. Tolbert, and **Kimberly A. See***, "Promoting Reversibility of Multielectron Redox in Alkali-Rich Sulfide Cathodes through Cyromilling,"*Chem. Mater.* **2022**, *34*, 3236-3245. [DOI]

35. Kira E. Wyckoff, Jonas L. Kaufman, Sun Woong Baek, Christian Dolle, Joshua J. Zak, Jadon Bienz, Linus Kautzsch, Rebecca C. Vincent, Arava Zohar, **Kimberly A. See**, Yolita M. Eggeler, Laurent Pilon, Anton Van der Ven, Ram Seshadri, "Metal-Metal Bonding as an Electrode Design Principle in the Low-Strain Cluster Compound $LiScMo_3O_8$," *J. Am. Chem. Soc.* **2022**, *144*, 5841-5854. [DOI]

34. Zachery W. B. Iton, **Kimberly A. See***, "Multivalent Ion Conduction in Inorganic Solids," *Chem. Mater.* **2022**, *34*, 881-898. [DOI]

33. Wen Zhang, Lingxiang Lu, Wendy Zhang, Jose Mondragon, Skyler D. Ware, Jonas Rein, Neil Strotman, Dan Lehnherr, **Kimberly A. See***, Song Lin*, "Electrochemically Driven Transition-Metal-Free Cross-Electrophile Coupling of Alkyl Halides," *Nature*, **2022**, *604*, 292-297. [DOI]

32. Anton Van der Ven*, **Kimberly See**, Laurent Pilon, "Hysteresis in Electrochemical Systems," *Battery Energy*, **2022**, *1*, 20210017. [DOI]

31. Forrest A. L. Laskowski, Steven H. Stradley, Michelle D. Qian, and **Kimberly A. See***, "Mg Anode Passivation Caused by Reaction of Dissolved Sulfur in Mg-S Batteries," *ACS Appl. Mater. Interfaces* **2021**, *13*, 29461. [DOI]

30. Skyler D. Ware, Charles J. Hansen, John-Paul Jones, John Hennessey, Ratnakumar V. Bugga, and **Kimberly A. See***, "Fluoride in the SEI Stabilizes the Li Metal Interface in Li-S Batteries with Solvate Electrolytes," *ACS Appl Mater. Interfaces* **2021**, *13*, 18865. [DOI]

29. Andrew J. Martinolich, Skyler D. Ware, Brian C. Lee, and **Kimberly A. See***, "From Solid Electrolyte to Zinc Cathode: Vanadium Substitution in $ZnPS_3$," *J. Phys. Mater*. **2021**, *4*, 024005. [DOI]

28. Seong Shik Kim and **Kimberly A. See***, "Activating Mg Electrolytes through Chemical Generation of Free Chloride," *ACS Appl. Mater. Interfaces*, **2021**, *13*, 671-680. [DOI]

27. Andrew J. Martinolich†, Joshua J. Zak†, David N. Agyeman-Budu, Seong Shik Kim, Nicholas H. Bashian, Ahamed Irshad, S. R. Narayan, Brent C. Melot, Johanna Nelson Weker, and **Kimberly A. See***, "Controlling Covalency and Anion Redox Potentials through Anion Substitution in Li-rich Chalcogenides," *Chem. Mater.* **2021**, *33*, 378-391 († contributed equally). [DOI]

26. Jacob D. Bagley, Deepan Kishore Kumar, **Kimberly A. See**, Nai-Chang Yeh, "Selective Formation of Pyridinic-Type Nitrogen-doped Graphene and Its Application in Lithium-Ion Battery Anodes," *RSC Advances* **2020**, *10*, 39562-39571. [DOI]

25. Julia M. Stauber, Josef Schwan, Xinglong Zhang, Jonathan C. Axtell, Dahee Jung, Brendon J. McNicholas, Paul H. Oyala, Andrew J. Martinolich, Jay R. Winkler, **Kimberly A. See**, Thomas F. Miller III, Harry B. Gray, Alexander M. Spokoyny*, "A Super-Oxidized Radical Cationic Icosahedral Boron Cluster," *J. Am. Chem. Soc.* **2020**, *142*, 12948-12953. [DOI]

24. Nicholas H. Bashian, Molleigh B. Preefer, JoAnna Milam-Guerrero, Joshua J. Zak, Charlotte Sendi, Suha Ahsan, Rebecca Vincent, Ralf Haiges, **Kimberly A. See**, Ram Seshadri, and Brent C. Melot*, "Understanding the Role of Crystallographic Shear on the Electrochemical Behavior of Niobium Oxyfluorides," *J. Mat. Chem. A* **2020**, *8*, 12623-12632. [DOI]

23. Charles J. Hansen†, Joshua J. Zak†, Andrew J. Martinolich, Jesse S. Ko, Nicholas H. Bashian, Farnaz Kaboudvand, Anton Van der Ven, Brent C. Melot, Johanna Nelson Weker, and **Kimberly A. See***, "Multielectron, Cation and Anion Redox in Lithium-Rich Iron Sulfide Cathodes," *J. Am. Chem. Soc,* **2020**, *142*, 6737-6749 († contributed equally). [DOI]

22. Xiaomei Zeng, Andrew J. Martinolich, **Kimberly A. See**, and Katherine T. Faber*, "Dense Garnet-Type Electrolyte with Coarse Grains for Improved Air Stability and Ionic Conductivity," *J. Energy Storage* **2020,** *27*, 101128. [DOI]

21. Seong Shik Kim, Sarah C. Bevilacqua, and **Kimberly A. See***, "Conditioning-Free Electrolyte by Minor Addition of $Mg(HDMS)_2$," *ACS Appl. Mater. Interfaces* **2019,** *12*, 5226-5233. [DOI]

20. Sarah C. Bevilacqua, Kim H. Pham, and **Kimberly A. See***, "The Effect of Electrolyte Solvent on Redox Processes in Mg-S Batteries," *Inorg. Chem.* **2019**, *58*, 10472-10482. [DOI]

19. Andrew J. Martinolich, Cheng-Wei Lee, I-Te Lu, Sarah C. Bevilacqua, Molleigh B. Preefer, Marco Bernardi, André Schleife, and **Kimberly A. See***, "Solid State Divalent Ion Conductivity in $ZnPS_3$," *Chem. Mater.* **2019**, *31*, 3652-3661. [DOI]

Prior to Caltech

18. Kim Ta, **Kimberly A. See**, and Andrew A. Gewirth*, "Elucidating Zn and Mg Electrodeposition Mechanisms in Nonaqueous Electrolytes for Next-Generation Metal Batteries," *J. Phys. Chem. C* **2018**, *122*, 13790-13796. [DOI]

17. Minjeong Shin, Heng-Liang Wu, Badri Narayanan, **Kimberly A. See**, Rajeev S. Assary, Lingyang Zhu, Richard T. Haasch, Shuo Zhang, Zhengchen Zhang, Larry A. Curtiss, and Andrew A. Gewirth*, "Effect of the Hydrofluoroether Cosolvent Structure in Acetonitrile-based Solvate Electrolytes on Li^+ Solvation Structure and Li–S Battery Performance," *ACS Appl. Mater. Interfaces* **2017**, *9*, 39357-39370. [DOI]

16. **Kimberly A. See**, Yao-Min Liu, Yeyoung Ha, Christopher J. Barile, and Andrew A. Gewirth*, "Effect of Concentration on the Electrochemistry and Speciation of the Magnesium Aluminum Chloride Complex Electrolyte Solution," *ACS Appl. Mater. Interfaces* **2017**, *9*, 35729-35739. [DOI]

15. **Kimberly A. See**, Margaret A. Lumley, Galen D. Stucky, Clare P. Grey, and Ram Seshadri*, "Reversible Capacity of Conductive Carbon Additives at Low Potentials: Caveats for Testing Alternative Anode Materials for Li-Ion Batteries," *J. Electrochem. Soc*. **2017**, *164*, A327-A333. [DOI]

14. Heng-Liang Wu, Minjeong Shin, Yao-Min Liu, **Kimberly A. See**, and Andrew A. Gewirth*, "Thiol-Based Electrolyte Additives for High-Performance Lithium-Sulfur Batteries," *Nano Energy* **2017**, *32*, 50-58. [DOI]

13. **Kimberly A. See**†, Heng-Liang Wu†, Kah Chun Lau, Mingjeong Shin, Lei Cheng, Mahalingam Balasubramanian, Kevin G. Gallagher, Larry A. Curtiss, and Andrew A. Gewirth*, "Effect of Hydrofluoroether Cosolvent Addition on Li Solvation in Acetonitrile-Based Solvate Electrolytes and Its Influence on S Reduction in a Li-S Battery," *ACS Appl. Mater. Interfaces* **2016**, *8*, 34360-34371 († contributed equally). [DOI]

12. Albert L. Lipson, Sang-Don Han, Baofei Pan, **Kimberly A. See**, Andrew A. Gewirth, Chen Liao, John T. Vaughey, and Brian J. Ingram*, "Practical Stability Limits of Magnesium Electrolytes," *J. Electrochem. Soc.* **2016**, *163*, A2253-A2257. [DOI]

11. **Kimberly A. See**, Karena W. Chapman, Lingyang Zhu, Kamila M. Wiaderek, Olaf J. Borkiewicz, Christopher J. Barile, Peter J. Chupas, and Andrew A. Gewirth*, "The Interplay of Al and Mg Speciation in Advanced Mg Battery Electrolyte Solutions," *J. Am. Chem. Soc.* **2016**, *138*, 328-337. [DOI]

10. Hongmei Zeng, Deyu Liu, Yichi Zhang, **Kimberly A. See**, Young-Si Jun, Guang Wu, Jeffrey A. Gerbec, Xiulei Ji, and Galen D. Stucky*, "Nanostructured Mn-Doped V_2O_5 Cathode Material Fabricated from Layered Vanadium Jarosite," *Chem. Mater.* **2015**, *27*, 7331-7336. [DOI]

9. **Kimberly A. See**, Stephan Hug, Katharina Schwinghammer, Margaret A. Lumley, Yonghao Zheng, Jaya M. Nolt, Galen D. Stucky, Fred Wudl, Bettina V. Lotsch*, and Ram Seshadri*, "Lithium Charge Storage Mechanisms for Cross-Linked Triazine Networks and Their Porous Carbon Derivatives,"*Chem. Mater.* **2015**, 27, 3821-3829. [DOI]

8. Kristin M. Ø. Jensen, Xiaohao Yang, Josefa Vidal Laveda, Wolfgang G. Zeier, **Kimberly A. See**, Marco D. Michiel, Brent C. Melot, Serena A. Corr, and Simon J. L. Billinge*, "X-ray Diffraction Computed Tomography for Structural Analysis of Electrode Materials in Batteries," *J. Electrochem. Soc.* **2015**, 162**,** A1310-A1314. [DOI]

7. **Kimberly A. See,** Michal Leskes, John M. Griffin, Sylvia Britto, Peter D. Matthews, Alexandra Emly, Anton Van der Ven, Dominic S. Wright, Andrew J. Morris,* Clare P. Grey*, and Ram Seshadri*, "Ab initio Structure Search and in situ ^{7}Li NMR Studies of Discharge Products in the Li-S Battery System," *J. Am. Chem. Soc.* **2014**, 136**,** 16368-16377. [DOI]

6. David Vonlanthen, Pavel Lazarev, **Kimberly A. See**, Fred Wudl*, and Alan J. Heeger*, **"**A Stable Polyaniline-Benzoquinone-Hydroquinone Supercapacitor," *Adv. Mater.* **2014**, 26, 5095-5100. [DOI]

5. **Kimberly A. See**, Young-Si Jun, Jeffrey A. Gerbec, Johannes K. Sprafke, Fred Wudl, Galen D. Stucky, and Ram Seshadri*, "Sulfur-functionalized Mesoporous Carbons as Sulfur Hosts in Li-S Batteries: Increasing the Affinity of Polysulfide Intermediates to Enhance Performance," *ACS Appl. Mater. Interfaces* **2014**, 6, 10908-10916. [DOI]

4. Kyoung Hwan Kim, Young-Si Jun, Jeffrey A. Gerbec, **Kimberly A. See**, Galen D. Stucky, Hee-Tae Jung*, "Sulfur Infiltrated Mesoporous Graphene-Silica Composite as a Polysulfide Retaining Cathode Material for Lithium-Sulfur Batteries," *Carbon* **2014**, 69**,** 543-551. [DOI]

3. Jihee Park, Young-Si Jun, Woo-ram Lee, Jeffrey A. Gerbec, **Kimberly A. See**, and Galen D. Stucky*, "Bimodal Mesoporous Titanium Nitride/Carbon Microfibers as Efficient and Stable Electrocatalysts for Li-O_2 Batteries," *Chem. Mater.* **2013**, 25, 3779-3781. [DOI]

2. **Kimberly A. See**, Jeffrey A. Gerbec, Young-Si Jun, Fred Wudl, Galen D. Stucky, and Ram Seshadri*, "A High Capacity Calcium Primary Cell Based on the Ca—S System," *Adv. Energy Mater.* **2013**, 8, 1056-1061. [DOI]

1. Luke A. Connal, Nathaniel A. Lynd, Maxwell J. Robb, **Kimberly A. See**, Se Gyu Jang, Jason M. Spruell, and Craig J. Hawker*, "Mesostructured Block Copolymer Nanoparticles: Versatile Templates for Hybrid Inorganic/Organic Nanostructures," *Chem. Mater.* **2012**, 24, 4036-4042. [DOI]

PRESENTATIONS

Invited Oral Presentations – Technical

2026 April MIT-Harvard Inorganic Seminar, *Massachusetts Institute of Technology, Cambridge, MA*
2026 March Department of Materials Science and Engineering, *Northwestern University*, *Evanston, IL*
2026 February Watson Lecture, *California Institute of Technology, Pasadena, CA*
2025 November **Award talk for the ACS Buck-Whitney Award,** *Albany, NY*
2025 April **2025 Workshop on Electrochemistry**, Allen J. Bard Center for Electrochemistry, *UT Austin, TX*
2025 April Chemical and Biological Engineering, *University of Colorado, Boulder, CO*
2024 May Materials Department, *University of California, Santa Barbara, CA*
2024 March **American Chemical Society National Spring Meeting**, *New Orleans, LA*
2024 March **American Chemical Society National Spring Meeting**, *New Orleans, LA*
2024 February Department of Chemistry, *Colorado State University, Fort Collins, CO*
2024 February Department of Chemistry, *Stanford University, Stanford, CA*
2024 January **ACS Periodic Table Talk**, ACS Division of Inorganic Chemistry, Solid State subdivision
2023 October 3rd Symposium on Key Materials for Magnesium Batteries, Chaohu, China (*talk given virtually*)
2023 September Department of Chemistry, *University of California, Berkeley, CA*
2023 September Department of Chemistry and Chemical Biology, *Cornell University, Ithaca, NY*
2023 August **SNS-HFIR User Group Executive Committee Breakthrough Symposium**, *virtual*
2023 August **American Chemical Society National Fall Meeting,** *San Francisco, CA*
2023 May **JCSER Webinar**, virtual
2023 April Chemistry Division, Naval Research Laboratory, virtual
2023 April **SoCal Electrochemistry Conference for Students**, keynote, *Irvine, CA*
2023 February **2023 Nanomaterials for Applications in Energy Technology GRC**, *Ventura, CA*
2023 February Department of Chemistry, *University of Houston, Houston, TX*
2023 February Department of Chemistry, *University of Illinois, Urbana-Champaign, IL*
2023 February Department of Chemistry, *University of Illinois, Chicago, IL*
2023 February Department of Chemistry, *Columbia University, New York, NY*
2023 January School of Molecular Sciences, *Arizona State University, AZ*
2023 January BACCARA Public Lecture Series, *University of Münster, Münster, Germany*
2022 November Renewable & Sustainable Energy Institute, *University of Colorado, Boulder, CO*
2022 October **Kavli Frontiers of Science Israeli-American Symposium**, *Irvine, CA*
2022 October **International Battery Association**, *Bled, Slovenia*
2022 September **Molecular Chemistry in Electrochemical Energy Storage**, TSRC, *Telluride, CO*
2022 September Department of Chemistry, *Princeton University, Princeton, NJ*
2022 September **2022 Electrochemistry GRC**, *Ventura, CA*
2022 August **American Chemical Society National Spring Meeting,** *Chicago, IL*, hybrid
2022 May **NanoLytica,** *Simon Fraser University*, virtual
2022 April **StorageX International Symposium,** hosted by Stanford, virtual
2022 March Department of Chemistry & Biochemistry, *University of California, Los Angeles*, virtual
2022 March Jacobs School of Engineering, *University of California, San Diego*, virtual
2022 March Department of Materials Science and Engineering, *University of California, Irvine*, virtual
2022 March Department of Chemistry & Biochemistry, *Montana State University, Bozeman, MT*, virtual

2022 March Arkema Inc., *King of Prussia, PA*, virtual
2022 January Department of Chemistry, *University of Central Florida, Orlando, FL,* virtual
2022 February Department of Chemistry & Biochemistry, *University of California, San Diego, CA,* virtual
2021 Dec **Jr. Faculty in Battery Research: The Next Generation of Energy Storage**, virtual
2021 Dec **Materials Research Society National Fall Meeting**, virtual
2021 Sept School of Molecular Sciences, *Arizona State University, Tempe, AZ,* virtual
2021 Sept Department of Chemistry and Biochemistry, *Florida State University, Tallahassee, FL,* virtual
2021 April **American Chemical Society National Spring Meeting**, virtual
2021 March School of Chemistry, *University of Birmingham, UK,* virtual
2021 February *Helmholtz-Institute, Ulm, Germany,* virtual
2021 February *Max Planck Institute for Solid State Research, Stuttgart, Germany,* virtual
2020 November Materials Science and Engineering, *Georgia Tech,* virtual
2020 October Hard Matter Seminar, *University of Illinois Urbana-Champaign,* virtual
2020 June **Telluride Science Summer Lectureship Series**, virtual
2020 February **The Minerals, Metals & Materials Society (TMS) Meeting,** *San Diego, CA*
2020 February Department of Chemistry & Biochemistry, *California State University, Northridge*
2020 February Department of Chemistry, *Colorado School of Mines*
2020 January **Materials Research Outreach Program Symposium,** *University of California, Santa Barbara*
2020 January Department of Chemistry, *University of Southern California*
2019 November **Science Award Electrochemistry & Science Dialogue**, *Wolfsburg, Germany*
2019 August **American Chemical Society National Fall Meeting**, ENFL division, *San Diego, CA*
2019 August **American Chemical Society National Fall Meeting**, PHYS division, *San Diego, CA*
2019 June Department of Chemistry and Biochemistry, *University of Oregon*
2019 March Department of Chemistry and Biochemistry, *University of Texas at El Paso*
2018 November Department of Chemistry and Biochemistry, *California State University, Los Angeles*
2018 October **Materials Development for Automotive Propulsion**, *Physizkzentrum Bad Honnef, Germany*
2018 July **Molecular Chemistry in Electrochemical Energy Storage**, *Telluride, CO*
2017 October **S. California Electrochemical Energy Storage Association Meeting***, UC Santa Barbara, CA*
2017 October **Electrochemical Society Conference**, *National Harbor, MD*
2017 May **Canadian Chemistry Conference**, *Toronto, Ontario, Canada*
2017 May Materials & Interfaces Seminar, *Weizmann Institute of Science*, *Rehovot, Israel*
2017 January Division of Chemistry and Chemical Engineering, *California Institute of Technology*
2017 January Department of Chemistry, *Colorado State University*
2016 December Department of Chemical Engineering and Materials Science, *University of Minnesota*
2016 December Department of Chemistry, *Columbia University*
2016 December Department of Chemistry & Chemical Biology, *Cornell University*
2016 December Department of Chemistry, *University of Wisconsin-Madison*
2016 December Department of Chemistry, *University of Minnesota*
2016 November Department of Chemistry & Biochemistry, *The Ohio State University*
2016 July **STFC Batteries Meeting,** *The Cosener's House, Abingdon, UK*
2015 March **Invited Seminar**, *University of Michigan, Ann Arbor, MI*
2014 Feb. **Materials Research Outreach Program Symposium,** *University of California, Santa Barbara, CA*
2012 June **Materials for Catalysis and Energy Applications,** *Chalmers University, Gothenburg, Sweden*

Invited Oral Presentations – Non-technical meetings

2023 May **GPS Chair's Council Meeting,** *Pasadena, CA*
2022 September **CCE Chair's Council Meeting**, *Pasadena, CA*
2021 November **Caltech Campus-Wide Faculty Meeting**, virtual meeting
2021 March **Caltech Associates Event**, virtual meeting
2019 February **Break Through on the Road –The Caltech Campaign**, *Los Angeles, CA*
2018 November **CCE Chair's Council Meeting**, *Pasadena*, *CA*
2018 October **Resnick Sustainably Institute Advisory Council Meeting**, *Pasadena, CA*

Oral Presentations

2019 September **European Congress and Exhibition on Advanced Materials & Processes**, *Stockholm, Sweden*
2016 March **American Chemical Society Spring Meeting**, *San Diego, CA*
2015 December **Pacifichem,** *Honolulu, HI*
2014 April **Materials Research Society Spring Meeting,** *San Francisco, CA*
2013 April **American Chemical Society Spring Meeting,** *New Orleans, LA*

2012 November **Materials Research Society Fall Meeting,** *Boston, MA*

COMMUNITY INVOLVEMENT

Caltech	Watson Lecturer at Caltech with associated pre-show outreach (2026) Guest speaker for La Cañada High School's Science National Honors Society (2024) Host lecture on sustainability, lab tours, demos for Sequoyah High School Students (2024) Host for lab tours/demos for the Women in STEM program at Caltech (2022) Keynote speaker and lab tour host for Wilson Middle School (2020) Host for Sierra Madre Middle School lab tour (2019) Outreach with Marshall Fundamental High School (hosted by the Agapie group) Pinhead Institute Punk Scientist (outreach for K-12 and community members in Telluride, CO)
UIUC	Retreat for Graduate Women in Chemistry Planning Committee Retreat for Graduate Women in Chemistry, Invited Speaker and Mentor Women Chemists Committee's Girls Day Camp, Volunteer
UCSB	Partnerships for Research and Education in Materials, Materials Science Ambassador Graduate Students for Diversity in Science, Scheduling Chair Solar car workshop through the Materials Research Laboratory (MRL), Volunteer Buckyball and "It's a Materials World" workshop through the MRL, Volunteer