

HUIWEN JI

Department of Materials Science & Engineering
University of Utah
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122 S. Central Campus Drive, Room 212
Salt Lake City, UT 84112

SCI & TECH SPECIALTIES

Crystallography, solid-state chemistry, materials chemistry, materials synthesis, ceramics, lithium-ion batteries, electronic materials, magnetic materials, X-ray and neutron scattering, electrochemistry, physical property measurements.

EDUCATION

| | |
|---|-----------------|
| Ph.D. , Princeton University, Chemistry | 07/2010-06/2014 |
| Thesis: Solid state chemistry of binary and ternary chalcogenides with topological surface states | |
| Advisor: Robert J. Cava | |
| B.S. , University of Science and Technology of China (USTC), Chemistry | 09/2006-06/2010 |

PROFESSIONAL EXPERIENCE

| | |
|--|-----------------|
| Assistant Professor , University of Utah | 01/2021–Present |
| Materials Science & Engineering | |
| Career-track Research Scientist , Lawrence Berkeley National Laboratory | 05/2019–12/2020 |
| Energy Storage & Distributed Resources Division | |
| Postdoctoral Scholar , University of California, Berkeley | 11/2016–05/2019 |
| Materials Science & Engineering | |
| Supervisor: Prof. Gerbrand Ceder | |
| Postdoctoral Scholar , Princeton University, Chemistry | 03/2015–11/2016 |
| Supervisors: Prof. Robert J. Cava, Prof. Andrew B. Bocarsly | |
| Master's Student , Rutgers University, Communication & Information | 07/2014–03/2015 |
| No degree obtained. | |
| Graduate Research Assistant , Princeton University, Chemistry | 10/2010–06/2014 |
| Advisor: Prof. Robert J. Cava | |

HONORS & AWARDS

| | |
|---|-----------|
| ACS PRF DNI Award | 2022 |
| NSF CAREER Award | 2021 |
| Newman Fellowship , Lawrence Berkeley National Laboratory | 2019–2020 |
| Conoco Phillips Fellowship in Chemistry , Princeton University | 2011–2012 |
| Guo Moruo Scholarship , USTC | 2009 |
| National Scholarship , USTC | 2008 |
| Outstanding Student Scholarship , USTC | 2007 |

JOURNAL PUBLICATIONS

Citations: 7,828, h-index: 31, i10-index: 43 (updated 2/2024)

(†equal contribution, *corresponding)

- [1] Y. Chen, Z. Lun, X. Zhao, K. P. Koirala, L. Li, Y. Sun, C. A. O’Keefe, X. Yang, Z. Cai, C. Wang, **H. Ji***, C. P. Grey*, B. Ouyang*, G. Ceder*. Unlocking Li superionic conductivity in face-centred cubic oxides via face-sharing configurations. *Nat. Mater.* (2024).
- [2] Z. Cai, B. Ouyang, H.-M. Hau, T. Chen, R. Giovine, K. P. Koirala, L. Li, **H. Ji**, Y. Ha, Y. Sun, J. Huang, Y. Chen, V. Wu, W. Yang, C. Wang, R. J. Clément, Z. Lun, G. Ceder. In situ formed partially disordered phases as earth-abundant Mn-rich cathode materials. *Nat. Energy* **9**, 27–36 (2024).
- [3] E. A. Lawrence, X. Huai, D. Kim, M. Avdeev, Y. Chen, G. Skorupskii, A. Miura, A. Ferrenti, M. Waibel, S. Kawaguchi, N. Ng, B. Kaman, Z. Cai, L. Schoop, S. Kushwaha, F. Liu, T. T. Tran, **H. Ji***. Fe Site Order and Magnetic Properties of $\text{Fe}_{1/4}\text{NbS}_2$. *Inorg. Chem.* **62(44)**, 18179–18188 (2023).
- [4] C. Ramette, L. Pressley, M. Avdeev, M. Lee, S. Kushwaha, M. Krogstad, S. Sarker, P. Cardon, J. Ruff, M. Khan, K. Kataoka, T. M. McQueen, **H. Ji***. Floating zone crystal growth, structure, and properties of a cubic $\text{Li}_{5.5}\text{La}_3\text{Nb}_{1.5}\text{Zr}_{0.5}\text{O}_{12}$ garnet-type lithium-ion conductor. *J. Mater. Chem. A* **11**, 21754–21766 (2023).
- [5] E. A. Lawrence, M. A. Davenport, R. Devi, Z. Cai, M. Avdeev, J. R. Belnap, H. Alnaser, A. Ho, T. D. Sparks, G. S. Gautam, J. M. Allred* & **H. Ji***. Reversible electrochemical lithium cycling in a vanadium(IV) and niobium(V)-based Wadsley-Roth phase. *Chem. Mater.* **35(9)**, 3470–3483 (2023).
- [6] Y. Chen, Z. Cai, C. Ramette & **H. Ji***. Lithium-ion conduction in a class of aluminoborates $\text{Li}_n\text{MAIB}_{12}\text{O}_{24}$ ($\text{M} = \text{Ba}, \text{Sr}, \text{Ca}, \text{or La}; n = 7 \text{ or } 6$). *Mater. Res. Bull.* **159**, 112087 (2022).
- [7] Y. Chen, C. J. Bartel, M. Avdeev, Y. Q. Zhang, J. Liu, P. Zhong, G. Zeng, Z. Cai, H. Kim, **H. Ji*** & G. Ceder*. Solid-state calcium-ion diffusion in $\text{Ca}_{1.5}\text{Ba}_{0.5}\text{Si}_5\text{O}_3\text{N}_6$. *Chem. Mater.* **34(1)**, 128–139 (2022).
- [8] Z. Cai, **H. Ji***, Y. Ha, J. Liu, D.-H. Kwon, Y. Zhang, A. Urban, E. E. Foley, R. Giovine, H. Kim, Z. Lun, T.-Y. Huang, G. Zeng, Y. Chen, J. Wang, B. D. McCloskey, M. Balasubramanian, R. J. Clement, W. Yang & G. Ceder*. Realizing continuous cation order-to-disorder tuning in a class of high-energy spinel-type Li-ion cathodes. *Matter* **4(12)**, 3897 – 3916 (2021).

- [9] M. Yajyaoglu, M. Ozen, Y. Prots, O. E. Hamouli, V. Tshitoyan, **H. Ji**, U. Burkhardt, B. Lenoir, G. J. Snyder, A. Jain, C. Candolfi & U. Aydemir. Phase-transition-enhanced thermoelectric transport in Rickardite Mineral Cu_{3-x}Te₂. *Chem. Mater.* **33**(5), 1832–1841 (2021).
- [10] Z. Lun, B. Ouyang, D.-H. Kwon, Y. Ha, E.E. Foley, T.-Y. Huang, Z. Cai, H. Kim, M. Balasubramanian, Y. Sun, J. Huang, Y. Tian, H. Kim, B.D. McCloskey, W. Yang, R.J. Clement, **H. Ji*** & G. Ceder*. Cation-disordered rocksalt-type high-entropy cathodes for Li-ion batteries. *Nat. Mater.* **20**(2), 214–221 (2021).
- [11] R. M. McFadden, A. Chatzichristos, D. L. Cortie, D. Fujimoto, Y. S. Hor, **H. Ji**, V. L. Karner, R. F. Kiefl, C. D. Levy, R. Li, L. McKenzie, G. D. Morris, M. R. Pearson, M. Stachura, R. J. Cava & W. A. MacFarlane. Local electronic and magnetic properties of the doped topological insulators Bi₂Se₃:Ca and Bi₂Te₃:Mn investigated using ion-implanted ⁸Li β-NMR. *Phys. Rev. B* **102**(23), 235206 (2020).
- [12] Y. Wang, G. B. Osterhoudt, Y. Tian, P. Lampen-Kelley, A. Banerjee, T. Goldstein, J. Yan, J. Knolle, **H. Ji**, R. J. Cava, J. Nasu, Y. Motome, S. E. Nagler, D. Mandrus & K. S. Burch. The range of non-Kitaev terms and fractional particles in α-RuCl₃. *npj Quantum Mater.* **5**(1), 1–8 (2020).
- [13] **H. Ji**, J. Wu, Z. Cai, J. Liu, D.-H. Kwon, H. Kim, A. Urban, J.K. Papp, E. Foley, Y. Tian, M. Balasubramanian, H. Kim, R.J. Clement, B.D. McCloskey, W. Yang & G. Ceder. Ultrahigh power and energy density in partially ordered Li-ion cathode materials. *Nat. Energy* **5**, 213–221 (2020).
- [14] B. Ouyang, N. Artrith, Z. Lun, Z. Jadidi, D.A. Kitchaev, **H. Ji**, A. Urban & G. Ceder. Effect of fluorination on Li transport and short-range order in disordered-rocksalt-type Li-ion battery cathodes. *Adv. Energy Mater.* **10**, 1903240 (2020).
- [15] Z. Lun, B. Ouyang, Z. Cai, R. J. Clement, D.-H. Kwon, J. Huang, J. K. Papp, M. Balasubramanian, Y. Tian, B. D. McCloskey, **H. Ji**, H. Kim, D. A. Kitchaev & G. Ceder. Design principles for high-capacity Mn-based cation-disordered rocksalt cathodes. *Chem* **6**(1), 153–168 (2020).
- [16] H. Kim[†], **H. Ji[†]**, J. Wang & G. Ceder. Next-Generation Cathode Materials for Non-aqueous K-Ion Batteries. *Trends in Chemistry*, **1**(7), 682–692 (2019).
- [17] **H. Ji[†]**, D.A. Kitchaev[†], Z. Lun, D.-H. Kwon, H. Kim, Y. Tian, M. Balasubramanian, M. Bianchini, J.C. Kim & G. Ceder. Computational investigation and experimental realization of disordered high-capacity Li-ion cathodes based on Ni redox. *Chem. Mater.* **31**, 2431–2442 (2019).
- [18] R. M. McFadden, A. Chatzichristos, K. H. Chow, D. L. Cortie, M. H. Dehn, D. Fujimoto, M. D. Hossain, **H. Ji**, V. L. Karner, R. F. Kiefl, C. D. Levy, R. Li, L. McKenzie, G. D. Morris, O. Ofer, M. R. Pearson, M. Stachura, R. J. Cava & W. A. MacFarlane. Ionic and electronic properties of the topological insulators Bi₂Te₂Se investigated via β-detected nuclear magnetic relaxation and resonance of ⁸Li. *Phys. Rev. B* **99**(12), 125201 (2019).
- [19] F. von-Rohr, A. Ryser, **H. Ji**, K. Stolze, J. Tao, J.J. Frick, G.R. Patzke & R.J. Cava. The *h*-Sb_xWO_{3+2x} oxygen excess antimony tungsten bronze. *Chem.: Eur. J.* **25**, 2082–2088 (2019).
- [20] **H. Ji**, A. Urban, D.A. Kitchaev, D.-H. Kwon, N. Artrith, C. Ophus, W. Huang, Z. Cai, T. Shi, J.C. Kim, H. Kim & G. Ceder. Hidden structural and chemical order controls lithium transport in cation-disordered oxides for rechargeable batteries. *Nat. Commun.* **10**, 592 (2019).

- [21] M.T. Randeria, K. Agarwal, B.E. Feldman, H. Ding, **H. Ji**, R.J. Cava, S.L. Sondhi, S.A. Parameswaran & A. Yazdani. Interacting multi-channel topological boundary modes in a quantum Hall valley system. *Nature* **566**, 363–367 (2019).
- [22] M.T. Randeria, B.E. Feldman, F. Wu, H. Ding, A. Gyenis, **H. Ji**, R.J. Cava, A.H. MacDonald & A. Yazdani. Ferroelectric quantum Hall phase revealed by visualizing Landau level wavefunction interference. *Nat. Phys.* **14**, 796–800, (2018).
- [23] D.A. Kitchaev, Z. Lun, W.D. Richards, **H. Ji**, R.J. Clément, M. Balasubramanian, D.-H. Kwon, K. Dai, J.K. Papp, T. Lei, B.D. McCloskey, W. Yang, J. Lee & G. Ceder. Design principles for high transition metal capacity in disordered rocksalt Li-ion cathodes. *Energ. Environ. Sci.* **11**, 2159 (2018).
- [24] N. Haldolaarachchige, L. Schoop, M. A. Khan, W. Huang, **H. Ji**, K. Hettiarachchilage, D. P. Young. Ir *d*-band derived superconductivity in the lanthanum-iridium system LaIr₃. *J. Phys. Condens. Matter* **29**(47) 475602 (2017).
- [25] **H. Ji**, G. Sahasrabudhe, M.K. Vallon, J. Schwartz, A.B. Bocarsly & R.J. Cava. Investigating the origin of Co(IV)'s high electrocatalytic activity in the oxygen evolution reaction at a Na_xCoO₂ interface. *Mater. Res. Bull.* **95**, 285–291 (2017).
- [26] D. Weber, L. M. Schoop, D. Wurmbrand, J. Nuss, E. M. Seibel, F. F. Tafti, **H. Ji**, R. J. Cava, R. E. Dinnebier & B. V. Lotsch. Trivalent iridium oxides: layered triangular lattice iridate K0.75Na0.25IrO₂ and oxyhydroxide IrOOH. *Chem. Mater.* **29**(19), 8338–8345 (2017).
- [27] C. Gong, L. Li, Z. Li, **H. Ji**, A. Stern, Y. Xia, T. Cao, W. Bao, C. Wang, Y. Wang, Z. Q. Qiu, R. J. Cava, S. G. Louie, J. Xia & Xiang Zhang. Intrinsic ferromagnetism in two-dimensional van der Waals crystals. *Nature* **546**(7657), 265 (2017).
- [28] S. L. Bergman, G. Sahasrabudhe, **H. Ji**, R.J. Cava & S.L. Bernasek. Useful X-ray Photoelectron Spectroscopy-Based Chemical Tool: Differential Charging Studies of Complex Composite Materials. *Chem. Mater.* **29**(10), 4162–4166 (2017).
- [29] F. von-Rohr, **H. Ji**, F.A. Cevallos, T. Gao, N.P. Ong & R.J. Cava. High-pressure synthesis and characterization of β-GeSe—a six-membered-ring semiconductor in an uncommon boat conformation. *J. Am. Chem. Soc.* **139**(7), 2771–2777 (2017).
- [30] B.E. Feldman, M.T. Randeria, A. Gyenis, F. Wu, **H. Ji**, R.J. Cava, A.H. MacDonald & A. Yazdani. Observation of a nematic quantum Hall liquid on the surface of bismuth. *Science* **354**, 316–321 (2016).
- [31] S. Zimmermann, F. Steckel, C. Hess, **H. Ji**, Y. S. Hor, R. J. Cava, B. Buchner & V. Kataev. Spin dynamics and magnetic interactions of Mn dopants in the topological insulator Bi₂Te₃. *Phys. Rev. B* **94**(12), 125205 (2016).
- [32] Yao Tian, M.J. Gray, **H. Ji**, R. J. Cava, and K.S. Burch. Magneto-Elastic coupling in a potential ferromagnetic 2D atomic crystal. *2D Materials* **3**(2), 025035 (2016).
- [33] S. K. Kushwaha, I. Pletikosic, T. Liang, A. Gyenis, S. H. Lapidus, Y. Tian, H. Zhao, K. S. Burch, J. Lin, W. Wang, **H. Ji**, A. V. Fedorov, A. Yazdani, N. P. Ong, T. Valla & R. J. Cava. Sn-doped Bi_{1.1}Sb_{0.9}Te₂S bulk crystal topological insulator with excellent properties. *Nat. Commun.* **7**, 11456 (2016).

- [34] **H. Ji**, I. Pletikosić, Q.D. Gibson, G. Sahasrabudhe, T. Valla & R.J. Cava, Strong topological metal material with multiple Dirac cones. *Phys. Rev. B* **93**, 045315 (2016).
- [35] A.P. Weber, Q.D. Gibson, **H. Ji**, A.N. Caruso, A.V. Fedorov, R.J. Cava & T. Valla, Gapped surface states in a strong-topological-insulator material. *Phys. Rev. Lett.* **114**, 256401 (2015).
- [36] I.K. Drozdov, A. Alexandradinata, S. Jeon, S. Nadj-Perge, **H. Ji**, R.J. Cava, B.A. Bernevig & A. Yazdani. One-dimensional topological edge states of bismuth bilayers. *Nat. Phys.* **10**, 664–669 (2014).
- [37] L.D. Alegria, **H. Ji**, N. Yao, J.J. Clarke, R.J. Cava & J.R. Petta. Large anomalous Hall effect in ferromagnetic insulator-topological insulator heterostructures. *Appl. Phys. Lett.* **105**, 053512 (2014).
- [38] I. Voborník, G. Panaccione, J. Fujii, Z.-H. Zhu, F. Offi, B. R. Salles, F. Borgatti, P. Torelli, J. P. Rueff, D. Coelin, A. Artioli, M. Unnikrishnan, G. Levy, M. Marangolo, M. Eddrief, D. Krizmancic, **H. Ji**, A. Damascelli, G. van der Laan, R. G. Egdell & R. J. Cava. *J. Phys. Chem. C* **118**(23), 12333–12339 (2014).
- [39] K. Baroudi, C. Yim, H. Wu, Q. Huang, J. H. Roudebush, E. Vavilova, H.-J. Grafe, V. Kataev, B. Buechner, **H. Ji**, C. Kuo, Z. Hu, T.-W. Pi, C. Pao, J. Lee, D. Mikhailova, L. H. Tjeng & R. J. Cava. Structure and properties of α -NaFeO₂-type ternary sodium iridates. *J. Solid State Chem.* **210**(1), 195–205 (2014).
- [40] M. Hajlaoui, E. Papalazarou, J. Mauchain, L. Perfetti, A. Taleb-Ibrahimi, F. Navarin, M. Monteverde, P. Auban-Senzier, C. R. Pasquier, N. Moisan, D. Boschetto, M. Neupane, M. Z. Hasan, T. Durakiewicz, Z. Jiang, Y. Xu, I. Miotkowski, Y. P. Chen, S. Jia, **H. Ji**, R. J. Cava & M. Marsi. Tuning a Schottky barrier in a photoexcited topological insulator with transient Dirac cone electron-hole asymmetry. *Nat. Commun.* **5**(1), 1–8 (2014).
- [41] E. M. Seibel, J. H. Roudebush, H. Wu, Q. Huang, M. N. Ali, **H. Ji** & R. J. Cava. Structure and magnetic properties of the α -NaFeO₂-type honeycomb compound Na₃Ni₂BiO₆. *Inorg. Chem.* **52**(23), 13605–13611 (2013).
- [42] M. Neupane, S. Basak, N. Alidoust, S.-Y. Xu, C. Liu, I. Belopolski, G. Bian, J. Xiong, **H. Ji**, S. Jia, S.-K. Mo, M. Bissen, M. Severson, H. Lin, N. P. Ong, T. Durakiewicz, R. J. Cava, A. Bansil & M. Z. Hasan. Oscillatory surface dichroism of the insulating topological insulator Bi₂Te₂Se. *Phys. Rev. B* **88**(16), 165129 (2013).
- [43] **H. Ji**, R.A. Stokes, L.D. Alegria, E.C. Blomberg, M.A. Tanatar, A. Reijnders, L.M. Schoop, T. Liang, R. Prozorov, K.S. Burch, N.P. Ong, J. R. Petta & R.J. Cava. A ferromagnetic insulating substrate for the epitaxial growth of topological insulators. *J. Appl. Phys.* **114**, 114907 (2013).
- [44] Q. D. Gibson, L. M. Schoop, A. P. Weber, **H. Ji**, S. Nadj-Perge, I. K. Drozdov, H. Beidenkopf, J. T. Sadowski, A. Fedorov, A. Yazdani, T. Valla & R. J. Cava. Termination-dependent topological surface states of the natural superlattice phase Bi₄Se₃. *Phys. Rev. B* **88**(8), 081108 (2013).
- [45] **H. Ji**, A. Reijnders, T. Liang, L.M. Schoop, K.S. Burch, N.P. Ong & R.J. Cava. Crystal Structure and Elementary Electronic Properties of Bi-stabilized α -In₂Se₃. *Mater. Res. Bull.* **48**, 2517–2521 (2013).
- [46] M. N. Ali, **H. Ji**, D. Hirai, M.K. Fuccillo & R.J. Cava. Synthesis and characterization of two crystallographic forms of Ag_{0.79}VS₂. *J. Solid State Chem.* **202**, 77–84 (2013).
- [47] L. M. Schoop, J. M. Allred, N. Ni, D. Hirai, J. Krez, M. Schwall, **H. Ji**, M. N. Ali & R. J. Cava. β -HfCuGe-a new polymorph of HfCuGe with a novel structure type. *J. Solid State Chem.* **199**, 66–70 (2013).

- [48] R.J. Cava, **H. Ji**, M.K. Fuccillo, Q.D. Gibson & Y.S. Hor. Crystal structure and chemistry of topological insulators. *J. Mater. Chem. C* **1**, 3176 (2013).
- [49] T. Valla, **H. Ji**, L.M. Schoop, A.P. Weber, Z.-H. Pan, J.T. Sadowski, E. Vescovo, A.V. Fedorov, A.N. Caruso, Q.D. Gibson, L. Muchler, C. Felser & R. J. Cava. Topological semimetal in a Bi-Bi₂Se₃ infinitely adaptive superlattice phase. *Phys. Rev. B* **86**, 241101(R) (2012).
- [50] M. Neupane, S.-Y. Xu, L. A. Wray, A. Petersen, R. Shankar, N. Alidoust, C. Liu, A. Fedorov, **H. Ji**, J. M. Allred, Y. S. Hor, T.-R. Chang, H.-T. Jeng, H. Lin, A. Bansil, R. J. Cava & M. Z. Hasan. *Phys. Rev. B* **85**(23), 235406 (2012).
- [51] **H. Ji**, J.M. Allred, M.K. Fuccillo, M. Neupane, L.A. Wray, M.Z. Hasan & R. J. Cava. Bi₂Te_{1.6}S_{1.4}: A topological insulator in the tetradymite family. *Phys. Rev. B* **85**, 201103(R) (2012).
- [52] **H. Ji**, J.M. Allred, N. Ni, J. Tao, M. Neupane, A. Wray, S. Xu, M.Z. Hasan & R.J. Cava. Bulk intergrowth of a topological insulator with a room-temperature ferromagnet. *Phys. Rev. B* **85**, 165313 (2012).
- [53] S. Jia, **H. Ji**, E. Climent-Pascual, M.K. Fuccillo, M.E. Charles, J. Xiong, N.P. Ong & R.J. Cava. Low-carrier-concentration crystals of the topological insulator Bi₂Te₂Se. *Phys. Rev. B* **84**, 235206 (2011).
- [54] H. Zhang, J. Dai, Y. Zhang, D. Qu, **H. Ji**, G. Wu, X. F. Wang, X. H. Chen, B. Wang, C. Zeng, J. Yang & J. G. Hou. 2×2 structure and charge inhomogeneity at the surface of superconducting BaFe_{2-x}Co_xAs₂ ($x = 0\text{--}0.32$)

INVITED TALKS

- 48th International Conference and Expo on Advanced Ceramics and Composites, Jan 2024
 Physics, Brigham Young University, Nov 2021
 Spallation Neutron Source, Oak Ridge National Laboratory, May 2021
 Chemical Engineering and Materials Science, Stevens Institute of Technology, Feb 2021
 Physics, University of Utah, Jan 2021
 Advanced Light Source, Lawrence Berkeley National Laboratory, Dec 2020
 Mechanical Engineering & Materials Science, Washington University in St. Louis, Feb 2020
 Materials Science and Engineering, University of Utah, Feb 2020
 Applied Physical Sciences, University of North Carolina, Chapel Hill, Jan 2020

PATENTS

- Gerbrand Ceder, **Huiwen Ji**, Zhengyan Lun, William Richards & Daniil A. Kitchaev. Cation-disordered rocksalt lithium metal oxides and oxyfluorides and methods of making same. US Patent 10,978,706 (2021).
- Gerbrand Ceder & **Huiwen Ji**. Lithium-excess transition-metal-deficient spinels for fast charging/discharging lithium-ion battery materials. Filed as a US provisional patent. US Patent App. 16/928,743 (2021).

TEACHING EXPERIENCE

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| MSE 5520/6620: Methods and Principles of Single Crystal Growth and Crystallography, <i>University of Utah</i> | Spring 2021 Fall 2023 |
| MSE 3310: Introduction to Ceramics, <i>University of Utah</i> | Spring 2022 Spring 2023 Spring 2024 |

INSTITUTIONAL & ACADEMIC COMMUNITY SERVICE

Ad-hoc Proposal Review:

- Department of Energy SBIR/STTR, the Office of Basic Sciences
- American Chemical Society, Petroleum Research Fund
- Science Review Committee for ORNL SNS user proposals
- Stanford Synchrotron Radiation Light source user proposals

Panel Proposal Review:

- NSLS-II Proposal Review Panel for BNL synchrotron user proposals

Journal Reviewer: *Nature, Nature Chemistry, Nature Reviews Chemistry, Nature Sustainability, Advanced Materials, Journal of American Chemical Society, ACS Applied Materials & Interfaces, Chemistry of Materials, Inorganic Chemistry, CrystEngComm, Applied Physics Letters, Journal of Crystal Growth, ChemPhysChem, Materials Research Bulletin, Superconductor Science and Technology, Physica C: Superconductivity and its Application.*

Chair of Materials Special Interest Group, American Crystallographic Association (2023-present)

Member of Faculty Search Committee: Department of Materials Science & Engineering, University of Utah, 10/2021-02/2022, 10/2023-02/2024

Member of College of Engineering Lab Safety Committee: University of Utah (2021-present)

Organizing and Chairing Conference Sessions:

- Co-organized a session at the 5th International Union of Materials Research Societies-International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM), Kyushu University, Fukuoka, Japan. August 3-6, 2022.
- Co-chaired a session on single crystal diffuse scattering in the 2022 American Crystallography Association Meeting.

STUDENTS MENTORING

Current Students

Chao-Chun Wei (Ph.D., Materials Science & Engineering)
Caleb Ramette (Ph.D., Materials Science & Engineering)
Paul Cardon (Ph.D., Materials Science & Engineering)
George H. Peterson (Undergraduate, Materials Science & Engineering)

Former Graduate Students Advised

Erick A. Lawrence (M.S., Materials Science & Engineering), graduated 06/2023
Jonathan R. Belnap (M.S., Materials Science & Engineering), graduated 12/2022.

Former Undergraduate Students Advised

Alide Ho, NSF-REU (Materials Science & Engineering, Carnegie Mellon University)
Robert Kaman, NSF-REU (Materials Science & Engineering, Ohio State University)
Nisha Fletcher, NSF-REU (Mechanical Engineering, Southern Utah University)

Advisory Committees

Jiangfan Shi (Ph.D., Materials Science & Engineering, 2023)
Jeffrey Lin (Ph.D., Chemistry, 2023)
Carter Salbego (M.S., Materials Science & Engineering, 2023)
Nathan David Rock (M.S., Materials Science & Engineering, 2023)
Mark Halling (M.S., Materials Science & Engineering, 2023)
Pooya Elahi (Ph.D., Materials Science & Engineering, 2022)
Isaac Krieger (M.S., Materials Science & Engineering, 2022)
Nathan Rock (M.S., Materials Science & Engineering, 2022)
Chenguang Yang (Ph.D., Materials Science & Engineering, 2022)