

Xiuquan Zhou – Curriculum vitae

Assistant Professor, Department of Chemistry, Georgetown University, 2024/08 - present

Address	Georgetown University Regents Hall 422	Phone Email	 xiuquan.zhou@georgetown.edu
----------------	---	------------------------------	---------------------------------

Research Interests

materials design, energy storage, superconductors, solid-state chemistry and crystallography

Education

2018/02/28 Ph.D., Chemistry (with Prof. Efrain Rodriguez)- the University of Maryland (UMD), College Park, MD

2013/03/15 M.S., Chemistry (co-advised by Prof. Cora Lind and Sanjay Khare)- the University of Toledo (UT), Toledo, OH

2007/07/01 B.S., Materials Science and Engineering - East China University of Science and Technology (ECUST), China

Research and Training Experience

2023/03-2024/07 Postdoctoral Researcher with Mercouri Kanatzidis, Northwestern University

Project: Rational synthesis of superconductors

2018/09-2023/03 Postdoctoral Researcher with Mercouri Kanatzidis, Argonne National Laboratory

Project: Rational synthesis of superconductors

2014/05-2018/03 Graduate Assistant with Efrain Rodriguez, University of Maryland

Project: Intercalation chemistry of tetrahedral transition metal chalcogenides

2013/11-2014/09 Graduate Assistant with Efrain Rodriguez, University of Maryland

Project: High-hydrogen capacity molecular and polymeric hydrides as efficient hydrogen storage materials

2012/09-2013/06 Graduate Assistant with Sanjay Khare, University of Toledo

Project: Density Functional Theory (DFT) studies of nitrides as superhard materials

2010/03-2013/03 Graduate Assistant with Cora Lind, University of Toledo

Project: Non-hydrolytic Sol-gel synthesis of transition metal sulfides and theoretical investigations

Programming Languages

Python, Linux bash and Visual Basic

Awards

2022 Postdoctoral Performance Award (\$500), Argonne National Laboratory

2018 Research Excellence Awards (\$500) and research presentation in the Department of Chemistry award ceremony, Maryland

2017 Ann G. Wylie Dissertation Fellowship (\$15800), Maryland

2016 Amit and Ruchi Mehta Graduate Research Award (\$2850), Maryland

2016 Outstanding Graduate Assistant Award, Maryland

2010 Outstanding Graduate Student Award, Toledo

2004 2nd Tier scholarship (¥1666), ECUST

Teaching and Outreach

CHEM5050: Advanced Inorganic Chemistry

Other graduate level: lab teaching assistant (TA) for instrumental analysis

Other undergraduate level: lab TA for general chemistry I; discussion class TA for general chemistry I&II

Outreach: demonstration of superconducting levitation and graphene exfoliation to middle school students and parents

Mentoring

2011-2013 Mentor to junior graduate student Rajvinder Kaur for non-hydrolytical sol-gel synthesis of metal sulfides

2012 Mentor to German exchange student Anne Soldat for inorganic solid-state chemistry synthesis and characterizations, who later obtained diploma at the University of Mainz

2012-2013 Mentor to German exchange student Martin Klünker for inorganic solid-state chemistry synthesis and characterizations, who later proceeded to doctoral student at the University of Mainz

2013 Mentor to German exchange student Stephanie Dolique for inorganic solid-state chemistry synthesis and characterizations, who later proceeded to doctoral student at the University of Mainz

2012-2013 Mentor to junior graduate student Terence Zhi Liu for first-principles calculations using VASP, who received doctoral degree of Physics from the University of Toledo

2015-2017 Mentor to undergraduate student Hector Vivanco for solid-state and hydrothermal synthesis of transition metal chalcogenides, who is a doctoral student at Johns Hopkins University after graduation.

2015-2018 Mentor to graduate student Brandon Wilfong for solid-state and hydrothermal synthesis of transition metal chalcogenides, currently a postdoc at Johns Hopkins University.

Service

The Fundamentals of Quantum Materials Winter School and Workshop (1st in 2017 and 2nd in 2018): Demonstrating and teaching hydrothermal crystal growth techniques to attendees; assistance with organizing the winter school

Reviewing Activities for Journals (>30 articles): *ACS Applied Energy Materials*, *Journal of Solid State Chemistry*, *Materials Chemistry and Physics*, *Chemical Physics Letters*, *Journal of Alloys and Compounds*, *Journal of Magnesium and Alloys*.

Review Panel for Proposals : Stanford synchrotron proposal review

Journal Articles

- [1] Pate, S. E.; Wang, B.; Zhang, Y.; Shen, B.; Liu, E.; Martin, I.; Jiang, J. S.; **Zhou, X.**; Chung, D. Y.; Kanatzidis, M. G.; Welp, U.; Kwok, W.-K.; Xiao, Z.-L. **Tunable anomalous hall effect in a kagome ferromagnetic weyl semimetal.** *Adv. Sci.* **2024**, 2406882.
- [2] Pate, S.; Chen, B.; Shen, B.; Li, K.; **Zhou, X.**; Chung, D. Y.; Divan, R.; Kanatzidis, M. G.; Welp, U.; Kwok, W.-K.; Xiao, Z.-L. **Extended Kohler's rule of magnetoresistance in TaCo₂Te₂.** *Phys. Rev. B* **2024**, 109, 035129.
- [3] Balisetty, L.; Wilfong, B.; Zhou, X.; Zheng, H.; Liou, S.-C.; Rodriguez, E. E. **Twisting two-dimensional iron sulfide layers into coincident site superlattices via intercalation chemistry.** *Chem. sci.* **2024**, 15, 3223–3232.
- [4] Usman, M.; **Zhou, X.**; Malliakas, C. D.; Welp, U.; Kwok, W.-K.; Chung, D. Y.; Kanatzidis, M. G. **Probing phosphorus solubility and its effect on critical temperature (T_c) in the helical superconducting magnet RbEuFe₄As_{4-x}P_x.** *Chem. Mater.* **2023**, 35, 8494–8501.
- [5] Quintero, M. A.; Pournara, A. D.; Godsel, R.; Li, Z.; Panuganti, S.; **Zhou, X.**; Wolverton, C.; Kanatzidis, M. G. **Metal sulfide ion exchangers: high acid stability of Na_{2x}Mg_{2y-x}Sn_{4-y}S₈ (NMS) and topotactic conversion to 2D solid acids with semiconducting character.** *Inorg. Chem.* **2023**, 62, 15971–15982.

- [6] Bindi, L.; **Zhou**, X.; Deng, T.; Li, Z.; Wolverton, C. **Kanatzidisite: a natural compound with distinctive van der Waals heterolayered architecture**. *J. Am. Chem. Soc.* **2023**, *145*, 18227–18232.
- [7] Vasileiadou, E. S.; Tajuddin, I. S.; De Siena, M. C.; Klepov, V. V.; Kepenekian, M.; Volonakis, G.; Even, J.; Wojtas, L.; Spanopoulos, I.; **Zhou**, X.; Iyer, A. K.; Fenton, J. L.; Dichtel, W. R.; Kanatzidis, M. G. **Novel 3D cubic topology in hybrid lead halides with a symmetric aromatic triammonium exhibiting water stability**. *Chem. Mater.* **2023**, *35*, 5267–5280.
- [8] **Zhou**, X.; Wilfong, B.; Chen, X.; Laing, C.; Pandey, I. R.; Chen, Y.-P.; Chen, Y.-S.; Chung, D.-Y.; Kanatzidis, M. G. **Sr(Ag_{1-x}Li_x)₂Se₂ and [Sr₃Se₂][(Ag_{1-x}Li_x)₂Se₂] tunable direct band gap semiconductors**. *Angew. Chem. Int. Ed.* e202301191.
- [9] Xu, J.; Wang, Y.; Pate, S. E.; Zhu, Y.; Mao, Z.; Zhang, X.; **Zhou**, X.; Welp, U.; Kwok, W.-K.; Chung, D. Y.; Kanatzidis, M. G.; Xiao, Z.-L. **Unreliability of two-band model analysis of magnetoresistivities in unveiling temperature-driven Lifshitz transition**. *Phys. Rev. B* **2023**, *107*, 035104.
- [10] **Zhou**, X.; Kolluru, C. V. S.; Xu, W.; Wang, L.; Chang, T.; Chen, Y.-S.; Yu, L.; Wen, J.; Chan, M. K. Y.; Chung, D. Y.; Kanatzidis, M. G. **Discovery of chalcogenides structures and compositions using mixed fluxes**. *Nature* **2022**, *612*, 72–77.
- [11] **Zhou**, X.; Malliakas, C. D.; Yakovenko, A. A.; Wilfong, B.; Wang, S. G.; Chen, Y.-S.; Yu, L.; Wen, J.; Balasubramanian, M.; Wang, H.-H.; Chung, D. Y.; Kanatzidis, M. G. **Coherent approach to two-dimensional heterolayered oxychalcogenides using molten hydroxides**. *Nature Synthesis* **2022**, *1*, 729–737.
- [12] Laing, C. C.; Weiss, B. E.; Pal, K.; Quintero, M. A.; Xie, H.; **Zhou**, X.; Shen, J.; Chung, D. Y.; Wolverton, C.; Kanatzidis, M. G. **ACuZrQ₃ (A= Rb, Cs; Q= S, Se, Te): direct bandgap semiconductors and metals with ultralow thermal conductivity**. *Chem. Mater.* **2022**, *34*, 8389–8402.
- [13] Cheng, M.; Iyer, A. K.; **Zhou**, X.; Tyner, A.; Liu, Y.; Shehzad, M. A.; Goswami, P.; Chung, D. Y.; Kanatzidis, M. G.; Dravid, V. P. **Tuning the structural and magnetic properties in mixed cation Mn_xCo_{2-x}P₂S₆**. *Inorg. Chem.* **2022**, *61*, 13719–13727.
- [14] Wilfong, B.; Fedorko, A.; Baigutlin, D. R.; Miroshkina, O. N.; **Zhou**, X.; *et al.*, **Helical spin ordering in room-temperature metallic antiferromagnet Fe₃Ga₄**. *J. Alloys Compd.* **2022**, *917*, 165532.
- [15] Zhang, C.; He, J.; McClain, R.; Xie, H.; Cai, S.; Walters, L. N.; Shen, J.; Ding, F.; **Zhou**, X.; Malliakas, C. D.; *et al.*, **Low thermal conductivity in heteroanionic materials with layers of homoleptic polyhedra**. *J. Am. Chem. Soc.* **2022**, *144*, 2569–2579.
- [16] Shrestha, K.; Chapai, R.; Pokharel, B. K.; Miertschin, D.; Nguyen, T.; **Zhou**, X.; Chung, D. Y.; Kanatzidis, M. G.; Mitchell, J. F.; Welp, U.; Popović, D.; Graf, D. E.; Lorenz, B.; Kwok, W. K. **Nontrivial Fermi surface topology of the kagome superconductor CsV₃Sb₅ probed by de Haas–van Alphen oscillations**. *Phys. Rev. B* **2022**, *105*, 024508.
- [17] Xu, J.; Han, F.; Wang, T.-T.; Thoutam, L. R.; Pate, S. E.; Li, M.; Zhang, X.; Wang, Y.-L.; Fotovat, R.; Welp, U.; **Zhou**, X.; Kwok, W.-K.; Chung, D. Y.; Kanatzidis, M. G.; Xiao, Z.-L. **Extended Kohler's Rule of Magnetoresistance**. *Phys. Rev. X* **2021**, *11*, 041029.
- [18] **Zhou**, X.; Mandia, D. J.; Park, H.; Balasubramanian, M.; Yu, L.; Wen, J.; Yakovenko, A.; Chung, D. Y.; Kanatzidis, M. G. **New Compounds and Phase Selection of Nickel Sulfides via Oxidation State Control in Molten Hydroxides**. *J. Am. Chem. Soc.* **2021**, *143*, 13646–13654.
- [19] Rettie, A.; Ding, J.; **Zhou**, X.; Johnson, M.; Malliakas, C.; Osti, N. C.; Chung, D. Y.; Osborn, R.; Delaire, O.; Rosenkranz, S.; Kanatzidis, M. G. **A two-dimensional type I superionic conductor**. *Nat. Mater.* **2021**, *20*, 1–6.
- [20] Becknell, N.; Lopes, P. P.; Hatsukade, T.; **Zhou**, X.; Liu, Y.; Fisher, B.; Chung, D. Y.; Kanatzidis, M. G.; Markovic, N. M.; Tepavcevic, S.; Stamenkovic, V. R. **Employing the Dynamics of the Electrochemical Interface in Aqueous Zinc-Ion Battery Cathodes**. *Adv. Funct. Mater.* **2021**, *31*, 2102135.
- [21] Gillard, C. H. R.; **Zhou**, X.; Avdeev, M.; Rodriguez, E. E.; Sharma, N. **On the Electrochemical Phase Evolution of Anti-PbO-Type CoSe in Alkali Ion Batteries**. *Inorg. Chem.* **2021**, *60*, 7150–7160.

- [22] Guo, Z.; Sun, F.; Puggioni, D.; Luo, Y.; Li, X.; **Zhou, X.**; Chung, D. Y.; Cheng, E.; Li, S.; Rondinelli, J. M.; Yuan, W.; Kanatzidis, M. G. **Local Distortions and Metal–Semiconductor–Metal Transition in Quasi-One-Dimensional Nanowire Compounds AV_3Q_3O ($A = K, Rb, Cs$ and $Q = Se, Te$).** *Chem. Mater.* **2021**, *33*, 2611–2623.
- [23] Quintero, M. A.; Hao, S.; Patel, S. V.; Bao, J.-K.; **Zhou, X.**; Hu, Y.-Y.; Wolverton, C.; Kanatzidis, M. G. **Lithium Thiostannate Spinels: Air-Stable Cubic Semiconductors.** *Chem. Mater.* **2021**,
- [24] Zhang, N.; Sun, C.; Huang, Y.; Zhu, C.; Wu, Z.; Lv, L.; **Zhou, X.**; Wang, X.; Xiao, X.; Fan, X.; Chen, L. **Tuning electrolyte enables micro-sized Sn as advanced anode for Li-ion batteries.** *J. Mater. Chem. A* **2020**, *9*, 1812–1821.
- [25] Slade, T. J.; Pal, K.; Grovogui, J. A.; Bailey, T. P.; Male, J.; Khoury, J. F.; **Zhou, X.**; Chung, D. Y.; Snyder, G. J.; Uher, C.; Dravid, V.; Wolverton, C.; Kanatzidis, M. G. **Contrasting $SnTe$ – $NaSbTe_2$ and $SnTe$ – $NaBiTe_2$ thermoelectric alloys: high performance facilitated by increased cation vacancies and lattice softening.** *J. Am. Chem. Soc.* **2020**, *142*, 12524–12535.
- [26] Cui, C.; Fan, X.; **Zhou, X.**; Chen, J.; Wang, Q.; Ma, L.; Yang, C.; Hu, E.; Yang, X.-Q.; Wang, C. **Structure and interface design enable stable Li-rich cathode.** *J. Am. Chem. Soc.* **2020**, *142*, 8918–8927.
- [27] Wilfong, B.; **Zhou, X.**; Zheng, H.; Babra, N.; Brown, C. M.; Lynn, J. W.; Taddei, K. M.; Paglione, J.; Rodriguez, E. E. **Long-range magnetic order in hydroxide-layer-doped $(Li_{1-x-y}Fe_xMn_yOD)FeSe$.** *Phys. Rev. Mater.* **2020**, *4*, 034803.
- [28] **Zhou, X.**; Wang, L.; Fan, X.; Wilfong, B.; Liou, S.-C.; Wang, Y.; Zheng, H.; Feng, Z.; Wang, C.; Rodriguez, E. E. **Isotope Effect between H_2O and D_2O in hydrothermal synthesis.** *Chem. Mater.* **2020**, *32*, 769–775.
- [29] Fan, X.; Ji, X.; Chen, L.; Chen, J.; Deng, T.; Han, F.; Yue, J.; Piao, N.; Wang, R.; **Zhou, X.**; Xiao, X.; Chen, L.; Wang, C. **All-temperature batteries enabled by fluorinated electrolytes with non-polar solvents.** *Nature Energy* **2019**, *4*, 882–890.
- [30] Deng, T.; Fan, X.; Cao, L.; Chen, J.; Hou, S.; Ji, X.; Chen, L.; Li, S.; **Zhou, X.**; Hu, E.; Su, D.; Yang, X.-Q.; Wang, C. **Designing in-situ-formed interphases enables highly reversible cobalt-free $LiNiO_2$ cathode for Li-ion and Li-metal batteries.** *Joule* **2019**, *3*, 2550–2564.
- [31] Virtue, A.; **Zhou, X.**; Wilfong, B.; Lynn, J. W.; Taddei, K.; Zavalij, P.; Wang, L.; Rodriguez, E. E. **Magnetic order effects on the electronic structure of $KMMnS_2$ ($M = Cu, Li$) with the $ThCr_2Si_2$ -type structure.** *Phys. Rev. Mater.* **2019**, *3*, 044411.
- [32] Deng, T.; Fan, X.; Chen, J.; Chen, L.; Luo, C.; **Zhou, X.**; Yang, J.; Zheng, S.; Wang, C. **Layered $P2$ -Type $K_{0.65}Fe_{0.5}Mn_{0.5}O_2$ microspheres as superior cathode for high-energy potassium-ion batteries.** *Adv. Funct. Mater.* **2018**, 1800219.
- [33] **Zhou, X.**; Wilfong, B.; Liou, S.-C.; Hodovanets, H.; Brown, C. M.; Rodriguez, E. E. **Stabilization of ammonia-intercalated iron chalcogenides by hydrogen bonding.** *Chem. Comm.* **2018**, *54*, 6895–6898.
- [34] Chen, J.; Fan, X.; Ji, X.; Gao, T.; Hou, S.; **Zhou, X.**; Wang, L.; Wang, F.; Yang, C.; Chen, L.; Wang, C. **Intercalation of Bi nanoparticles into graphite enables ultra-fast and ultra-stable anode material for Sodium-ion batteries.** *Energy Environ. Sci.* **2018**, *11*, 1218–1225.
- [35] Fan, X.; Yue, J.; Han, F.; Chen, J.; Deng, T.; **Zhou, X.**; Hou, S.; Wang, C. **High performance all-solid-state Na-S battery enabled by casting-annealing technology.** *ACS Nano* **2018**, *12*, 3360–3368.
- [36] Wilfong, B.; **Zhou, X.**; Vivanco, H.; Campbell, D. J.; Wang, K.; Graf, D.; Paglione, J.; Rodriguez, E. E. **Frustrated magnetism in tetragonal $CoSe$, analogue to superconducting $FeSe$.** *Phys. Rev. B* **2018**, *97*, 104408.
- [37] Deng, T.; Fan, X.; Luo, C.; Chen, J.; Chen, L.; Hou, S.; Eidson, N.; **Zhou, X.**; Wang, C. **Self-templated formation of $P2$ -type $K_{0.6}CoO_2$ microspheres for high reversible potassium-ion batteries.** *Nano Lett.* **2018**, *18*, 1522–1529.
- [38] **Zhou, X.**; Rodriguez, E. E. **Tetrahedral transition metal chalcogenides as functional inorganic materials.** *Chem. Mater.* **2017**, *29*, 5737–5752.

- [39] **Zhou, X.**; Eckberg, C.; Wilfong, B.; Liou, S.-C.; Vivanco, H. K.; Paglione, J.; Rodriguez, E. E. **Superconductivity and magnetism in iron sulfides intercalated by metal hydroxides.** *Chem. Sci.* **2017**, *8*, 3781–3788.
- [40] **Zhou, X.**; Wilfong, B.; Vivanco, H.; Paglione, J.; Brown, C. M.; Rodriguez, E. E. **Metastable layered cobalt chalcogenides from topochemical deintercalation.** *J. Am. Chem. Soc.* **2016**, *138*, 16432–16442.
- [41] **Zhou, X.**; Zhou, W.; Udovic, T. J.; Yildirim, T.; Rush, J. J.; Rodriguez, E. E.; Wu, H. **Development of potential organic-molecule-based hydrogen storage materials: Converting C-N bond-breaking thermolysis of guanidine to N-H bond-breaking dehydrogenation.** *Int. J. Hydrogen Energy* **2016**, *41*, 18542–18549.
- [42] Wu, H.; **Zhou, X.**; Rodriguez, E. E.; Zhou, W.; Udovic, T. J.; Yildirim, T.; Rush, J. J. **A new family of metal borohydride guanidinate complexes: Synthesis, structures and hydrogen-storage properties.** *J. Solid State Chem.* **2016**, *242*, 186–192.
- [43] **Zhou, X.**; Borg, C. K. H.; Lynn, J. W.; Saha, S. R.; Paglione, J.; Rodriguez, E. E. **The preparation and phase diagrams of $(^7\text{Li}_{1-x}\text{Fe}_x\text{OD})\text{FeSe}$ and $(\text{Li}_{1-x}\text{Fe}_x\text{OH})\text{FeSe}$ superconductors.** *J. Mater. Chem. C* **2016**, *4*, 3934.
- [44] Borg, C. K.; **Zhou, X.**; Eckberg, C.; Campbell, D. J.; Saha, S. R.; Paglione, J.; Rodriguez, E. E. **Strong anisotropy in nearly ideal tetrahedral superconducting FeS single crystals.** *Phys. Rev. B* **2016**, *93*, 094522.
- [45] Lynn, J. W.; **Zhou, X.**; Borg, C. K.; Saha, S. R.; Paglione, J.; Rodriguez, E. E. **Neutron investigation of the magnetic scattering in an iron-based ferromagnetic superconductor.** *Phys. Rev. B* **2015**, *92*, 060510.
- [46] **Zhou, X.**; Gall, D.; Khare, S. V. **Mechanical properties and electronic structure of anti-ReO₃ structured cubic nitrides, M₃N, of d block transition metals M: An *ab initio* study.** *J. Alloys Compounds* **2014**, *595*, 80–86.
- [47] Efthimiopoulos, I.; Kemichick, J.; **Zhou, X.**; Khare, S. V.; Ikuta, D.; Wang, Y. **High-Pressure Studies of Bi₂S₃.** *J. Phys. Chem. A* **2014**, *118*, 1713–1720.
- [48] **Zhou, X.**; Heinrich, C. P.; Klunker, M.; Dolique, S.; Mull, D. L.; Lind, C. **Non-hydrolytic sol-gel synthesis of tantalum sulfides.** *J. Sol-gel Sci. Technol.* **2014**, *69*, 596–604.
- [49] Liu, Z. T. Y.; **Zhou, X.**; Gall, D.; Khare, S. V. **First-principles investigation of the structural, mechanical and electronic properties of the NbO-structured 3d, 4d and 5d transition metal nitrides.** *Comput. Mater. Sci.* **2014**, *84*, 365–373.
- [50] **Zhou, X.**; Soldat, A. C.; Lind, C. **Phase selective synthesis of copper sulfides by non-hydrolytic sol-gel methods.** *RSC Adv.* **2014**, *4*, 717–726.
- [51] Liu, Z. T. Y.; **Zhou, X.**; Khare, S. V.; Gall, D. **Structural, mechanical and electronic properties of 3d transition metal nitrides in cubic zincblende, rocksalt and cesium chloride structures: a first-principles investigation.** *J. Phys.: Condens. Matt.* **2013**, *26*, 025404.
- [52] **Zhou, X.**; Roehl, J. L.; Lind, C.; Khare, S. V. **Study of B1 (NaCl-type) to B2 (CsCl-type) pressure-induced structural phase transition in BaS, BaSe and BaTe using *ab initio* computations.** *J. Phys.: Condens. Matt.* **2013**, *25*, 075401.

Book Chapters

- Wilfong, B.; **Zhou, X.**; Rodriguez, E. E., "Hydrothermal Synthesis and Crystal Growth", In *Fundamentals of Quantum Materials*, p 99-136.

Conference Talks

MRS Spring Meeting (April, 2021, virtual): Phase Selection of Nickel Sulfides via Precise Oxidation State Control in Molten Hydroxides

North American Solid State Chemistry Conference (Aug., 2017, Santa Barbara, CA): Topochemical intercalation and ion-Exchange of layered tetragonal chalcogenides via low-temperature routes

American Physical Society Meeting (March, 2016, Baltimore, MD): Physical properties of superconducting single crystal iron sulfide

Conference Posters

North American Solid State Chemistry Conference (August, 2023, Calgary, Canada): Rational discovery of copper chalcogenides using mixed fluxes

Gordon Research Conference: Solid State Chemistry (July, 2022, New London, NH): Rational approach to 2D heterolayered oxychalcogenides

American Chemical Society Meeting (April, 2017, San Francisco, CA): Topochemical intercalation and ion-exchange of layered iron chalcogenides

North American Solid State Chemistry Conference (May, 2015, Tallahassee, FL): Bottom-up preparation of layered iron chalcogenides superconductors

69th Pittsburgh Diffraction Conference (Nov. 2011, Cleveland, OH): Non-hydrolytic sol-gel synthesis of copper sulfides (*poster*)

North American Solid State Chemistry Conference (June, 2011, Hamilton, Canada): Non-hydrolytic sol-gel synthesis of copper sulfides

Inorganic Discussion Weekend (Nov. 2010, Windsor, Canada): Non-hydrolytic Sol-gel synthesis of copper sulfides

Invited Talks

Physics Colloquium: Tailoring Properties in Two-dimensional Materials via Structural Design (Oct., 2024, Georgetown University): Rational approach to 2D heterolayered oxychalcogenides