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Materials Science and Technology Division, Oak Ridge National Laboratory

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Research emphasis

Magnetic, thermoelectric, and superconducting materials; cleavable materials; solid state chemistry and crystal growth of complex and new inorganic compounds; magnetic, thermal, and transport properties; crystallography and structure-property relationships.

Education

2001 – 2006	Cornell University	Ph.D. Physics
1999 – 2001	University of Mississippi	M.S. Physics
1995 – 1999	University of Mississippi	B.S. Physics

Research Experience

2007 – present **Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, TN**
Senior R&D Staff, Correlated Electron Materials Group (Eugene P. Wigner Fellow 2007-2009)

2006 – 2007 **Department of Chemistry, Princeton University, Princeton, NJ**
Postdoctoral Research Associate

2002 – 2006 **Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY**
Graduate Research Assistant
▪ Dissertation: “*Exploring Thallium Compounds, Chevrel Phases, and Other Chalcogenides as Thermoelectric Materials*”

2000 – 2001 **Department of Physics and Astronomy, University of Mississippi, Oxford, MS**
Graduate Research Assistant
▪ Thesis: “*Resonant Ultrasound Spectroscopy Studies of Clathrate Thermoelectrics*”

Fellowships, Memberships, and Awards

Fellow of the American Physical Society, 2017

Eugene P. Wigner Fellowship, Oak Ridge National Laboratory, 2007-2009

Cornell University Fellowship, Cornell University, 2001-2002

Member AAAS, American Physical Society, American Crystallographic Association, American Chemical Society

Highly Cited Researcher, Clarivate Analytics, 2018

Excellence in Technology Transfer Award, Federal Laboratory Consortium, 2018

R&D 100 Award, 2017

Excellence in Technology Transfer Award, Southeast Region of the Federal Laboratory Consortium, 2017

Highly Cited Researcher, Thompson Reuters, 2014

Significant Event Award, Oak Ridge National Laboratory, 2013

Gordon Battelle Prize, Oak Ridge National Laboratory, 2011

Directors Award for Outstanding Team Accomplishment, Oak Ridge National Laboratory, 2009

Scientific Research Team Award, Oak Ridge National Laboratory, 2009

Significant Event Award, Oak Ridge National Laboratory, 2008

Graduate Student Achievement Award, University of Mississippi, 2001

Taylor Medal, University of Mississippi, 1999

h-index = 45 [WOS/Researcher ID](#), **49** [Google Scholar](#); [ORCID](#)

Full Publication List:

- (230) L.D. Sanjeeva, V.O. Garlea, M.A. McGuire, C.D. McMillen, J.W. Kolis, "Magnetic Ground State Crossover in a Series of Glaserite Systems with Triangular Magnetic Lattices" **INORGANIC CHEMISTRY online** (2019). [DOI: 10.1021/acs.inorgchem.8b03418](https://doi.org/10.1021/acs.inorgchem.8b03418)
- (229) S.M. Neumayer, E.A. Eliseev, M.A. Susner, A. Tselev, B.J. Rodriguez, J.A. Brehm, S.T. Pantelides, G. Panchapakesan, S. Jesse, S.V. Kalinin, M.A. McGuire, A.N. Morozovska, P. Maksymovych, N. Balke, "Giant negative electrostriction and dielectric tunability in a van der Waals layered ferroelectric" **PHYSICAL REVIEW MATERIALS** 3, 024401 (2019). DOI: [10.1103/PhysRevMaterials.3.024401](https://doi.org/10.1103/PhysRevMaterials.3.024401)
- (228) T. Song, M.W.-Y. Tu, C. Carnahan, X. Cai, T. Taniguchi, K. Watanabe, M.A. McGuire, D.H. Cobden, D. Xiao, W. Yao, X. Xu "Voltage Control of a van der Waals Spin-Filter Magnetic Tunnel Junction" **NANO LETTERS** 19, 915 (2019). [DOI: 10.1021/acs.nanolett.8b04160](https://doi.org/10.1021/acs.nanolett.8b04160)
- (227) V.O. Garlea, L.D. Sanjeeva, M.A. McGuire, C.D. Batista, A.M. Samarakoon, D. Graf, B. Winn, F. Ye, C. Hoffmann, J.W. Kolis "Exotic magnetic field-induced spin-superstructures in a mixed honeycomb triangular lattice system" **PHYSICS REVIEW X accepted** (2019).
- (226) C. Sohn, E. Skoropata, Y. Choi, X. Gao, A. Rastogi, A. Huon, M.A. McGuire, L. Nuckols, Y. Zhang, J.W. Freeland, D. Haskel, H.N. Le, "Room-Temperature Ferromagnetic Insulating State in Cation-Ordered Double-Perovskite $\text{Sr}_2\text{Fe}_{1+x}\text{Re}_{1-x}\text{O}_6$ Films" **ADVANCED MATERIALS**, 1805389 (2018).
- (225) Q. Zheng, N.J. Schreiber, H. Zheng, J. Yan, M.A. McGuire, J.F. Mitchell, M. Chi, B.C. Sales, "Real space visualization of competing phases in $\text{La}_{0.6}\text{Sr}_{2.4}\text{Mn}_2\text{O}_7$ single crystals" **CHEMISTRY OF MATERIALS** 30, 7962 (2018). [DOI: 10.1021/acs.chemmater.8b03589](https://doi.org/10.1021/acs.chemmater.8b03589)
- (224) M.A. McGuire, K.V. Shanavas, M.S. Kesler, D.S. Parker, "Tuning magnetocrystalline anisotropy by cobalt alloying in hexagonal Fe_3Ge " **SCIENTIFIC REPORTS** 8, 14206 (2018). [DOI:10.1038/s41598-018-32577-x](https://doi.org/10.1038/s41598-018-32577-x)
- (223) V.O. Garlea, M.A. McGuire, L.D. Sanjeeva, D.M. Pajerwoski, F. Ye, J.W. Kolis, "The magnetic order of a manganese vanadate system with two-dimensional striped triangular lattice" **AIP ADVANCES** 8, 101407 (2018). [DOI: 10.1063/1.5043124](https://doi.org/10.1063/1.5043124)
- (222) L. Zhou, T.-H. Kim, B. Jensen, K. Sun, O. Palasyuk, I.C. Nlebedim, M.J. Kramer, M.A. McGuire, O. Rios, B.S. Conner, W.G. Carter, M.S. Kesler, "Microstructural Development in Melt-spun $\text{Nd}_2\text{Fe}_{14}\text{B}$ Under High Magnetic Field Annealing" **MICROSCOPY AND MICROANALYSIS** 24, 958 (2018). [DOI: 10.1017/S1431927618005287](https://doi.org/10.1017/S1431927618005287)
- (221) Q. Zheng, N. Schreiber, H. Zheng, J. Yan, M.A. McGuire, J.F. Mitchell, M. Chi, B.C. Sales "Real-space study of charge and orbital ordering in $\text{La}_{0.6}\text{Sr}_{2.4}\text{Mn}_2\text{O}_7$ manganite single crystal" **MICROSCOPY AND MICROANALYSIS** 24, 106 (2018). [DOI: 10.1017/S1431927618001022](https://doi.org/10.1017/S1431927618001022)

- (220) X. Li, W.M. Xu, M.A. McGuire, Y. Cho, M.C. Downer, Y. Wan, X.Y. Li, Z.Y. Li, Q. Cui, J.-G Cheng, J.B. Goodenough, J.-S. Zhou, “Spin freezing into a disordered state in $\text{CaFeTi}_2\text{O}_6$ synthesized under pressure” **PHYSICAL REVIEW B** 98, 064201 (2018). [DOI:10.1103/PhysRevB.98.064201](https://doi.org/10.1103/PhysRevB.98.064201)
- (219) N. Balke, S.M. Neumayer, J.A. Brehm, M.A. Susner, B.J. Rodriguez, S. Jesse, S.V. Kalinin, S.T. Pantelides, M.A. McGuire, P. Maksymovych, “Locally controlled Cu-ion transport in layered ferroelectric CuInP_2S_6 ” **ACS APPLIED MATERIALS AND INTERFACES** 10, 27188 (2018). [DOI: 10.1021/acsami.8b08079](https://doi.org/10.1021/acsami.8b08079)
- (218) M.A. McGuire, B.C. Sales, “Spin-glass behavior and vacancy order in van der Waals layered $\beta\text{-MoCl}_4$ ” **PHYSICAL REVIEW MATERIALS** 2, 074007 (2018). [DOI: 10.1103/PhysRevMaterials.2.074007](https://doi.org/10.1103/PhysRevMaterials.2.074007)
- (217) A. A. Aczel, L.M. DeBeer-Schmitt, T.J. Williams, M.A. McGuire, N.J. Ghimire, L. Li, D. Mandrus, “Extended exchange interactions stabilize long-period magnetic structures in $\text{Cr}_{1/3}\text{NbS}_2$ ” **APPLIED PHYSICS LETTERS** 113, 032404 (2018). [DOI: 10.1063/1.5038021](https://doi.org/10.1063/1.5038021)
- (216) S. Mukhopadhyay, D.S. Parker, B.C. Sales, A.A. Puretzky, M.A. McGuire, L. Lindsay, “Two-channel model for ultralow thermal conductivity of crystalline Tl_3VSe_4 ” **SCIENCE** 360, 1455 (2018). [DOI: 10.1126/science.aar8072](https://doi.org/10.1126/science.aar8072)
- (215) K.L. Seyler, D. Zhong, B. Huang, X. Linpeng, N.P. Wilson, T. Taniguchi, K. Watanabe, W. Yao, D. Xiao, M.A. McGuire, K.-M.C. Fu, X. Xu, “Valley Manipulation by Optically Tuning the Magnetic Proximity Effect in $\text{WSe}_2/\text{CrI}_3$ Heterostructures” **NANO LETTERS** 18, 3823 (2018). [DOI: 10.1021/acs.nanolett.8b01105](https://doi.org/10.1021/acs.nanolett.8b01105)
- (214) Y. Choi, P.J. Ryan, M.A. McGuire, B.C. Sales, J.-W. Kim, “Giant magnetostriction effect near onset of spin reorientation in MnBi ” **APPLIED PHYSICS LETTERS** 112, 192411 (2018). [DOI: 10.1063/1.5026408](https://doi.org/10.1063/1.5026408)
- (213) T. Song, X. Cai, M.W. Tu, X. Zhang, B. Huang, N.P. Wilson, K.L. Seyler, L. Zhu, T. Taniguchi, K. Watanabe, M.A. McGuire, D.H. Cobden, D. Xiao, W. Yao, X. Xu, “Giant tunneling magnetoresistance in spin-filter van der Waals heterostructures” **SCIENCE**, 360, 1214 (2018). [DOI: 10.1126/science.aar4851](https://doi.org/10.1126/science.aar4851)
- (212) B. Huang, G. Clark, D.R. Klein, D. MacNeill, E. Navarro-Moratalla, K.L. Seyler, N. Wilson, M.A. McGuire, D.H. Cobden, D. Xiao, W. Yao, P. Jarillo-Herrero, X. Xu, “Electrical control of 2D magnetism in bilayer CrI_3 ” **NATURE NANOTECHNOLOGY**, 13, 544 (2018). [DOI:10.1038/s41565-018-0121-3](https://doi.org/10.1038/s41565-018-0121-3)
- (211) G. Pokharel, A.F. May, D.S. Parker, S. Calder, G. Ehlers, A. Huq, S.A.J. Kimber, H. Suriya Arachchige, L. Poudel, M.A. McGuire, D. Mandrus, and A.D. Christianson “Negative thermal expansion and magnetoelastic coupling in the breathing pyrochlore lattice material $\text{LiGaCr}_4\text{S}_8$ ” **PHYSICAL REVIEW B** 97, 134117 (2018). [DOI: 10.1103/PhysRevB.97.134117](https://doi.org/10.1103/PhysRevB.97.134117)
- (210) R. Morrow, M.A. McGuire, J. Yan, P.M. Woodward “The Crystal Structure and Magnetic Behavior of Quinary Osmate and Ruthenate Double Perovskites $\text{LaABB}'\text{O}_6$ ($A = \text{Ca, Sr}$; $B = \text{Co, Ni}$; $B' = \text{Ru, Os}$)” **INORGANIC CHEMISTRY** 57, 2989 (2018). [DOI: 10.1021/acs.inorgchem.7b02282](https://doi.org/10.1021/acs.inorgchem.7b02282)
- (209) T.S. Pellizzeri, M.A. McGuire, C. McMillen, Y. Wen, G. Chumanov, J. Kolis “Two Halide-Containing Cesium Manganese Vanadates: Synthesis, Characterization, and Magnetic Properties” **DALTON TRANSACTIONS** 47, 2619 (2018). [DOI: 10.1039/C7DT04642A](https://doi.org/10.1039/C7DT04642A)
- (208) K.L. Seyler, D. Zhong, D.R. Klein, S. Gao, X. Zhang, B. Huang, E. Navarro-Moratalla, L. Yang, D.H. Cobden, M.A. McGuire, W. Yao, D. Xiao, P. Jarillo-Herrero, X. Xu, “Ligand-field helical luminescence in a 2D ferromagnetic insulator” **NATURE PHYSICS** 14, 277 (2017). [DOI:10.1038/s41567-017-0006-7](https://doi.org/10.1038/s41567-017-0006-7)

- (207) L.D. Sanjeeva, V.O. Garlea, M.A. McGuire, M. Frontzek, C.D. McMillen, K. Fulle, J.W. Kolis, “Investigation of a Structural Phase Transition and Magnetic Structure of $\text{Na}_2\text{BaFe}(\text{VO}_4)_2$: A Triangular Magnetic Lattice with a Ferromagnetic Ground State” **INORGANIC CHEMISTRY** 56, 14842 (2017). DOI: [10.1021/acs.inorgchem.7b02024](https://doi.org/10.1021/acs.inorgchem.7b02024)
- (206) A. Belianinov, M.J. Burch, H.E. Hysmith, A.V. Ievlev, V. Iberi, M.A. Susner, M.A. McGuire, P. Maksymovych, M. Chyasnavichyus, S. Jesse, O.S. Ovchinnikova, “Chemical Changes in Layered Ferroelectric Semiconductors Induced by Helium Ion Beam” **SCIENTIFIC REPORTS** 7, 16619 (2017). DOI: [10.1038/s41598-017-16949-3](https://doi.org/10.1038/s41598-017-16949-3)
- (205) Y.Q. Cai, Y.Y. Jiao, Q. Cui, J.W. Cai, Y. Li, B.S. Wang, M.T. Fernandez-Diaz, M.A. McGuire, J.-Q. Yan, J.A. Alonso, J.-G. Cheng, “Giant reversible magnetocaloric effect in the pyrochlore $\text{Er}_2\text{Mn}_2\text{O}_7$ due to a cooperative two-sublattice ferromagnetic order” **PHYSICAL REVIEW MATERIALS**, 1, 064408 (2017). DOI: [10.1103/PhysRevMaterials.1.064408](https://doi.org/10.1103/PhysRevMaterials.1.064408)
- (204) M.A. McGuire, J. Yan, P. Lampen-Kelley, A.F. May, V.R. Cooper, L. Lindsay, A. Puretzy, L. Liang, S. KC, E. Cakmak, S. Calder, B.C. Sales, “High-temperature magnetostructural transition in van der Waals-layered $\alpha\text{-MoCl}_3$ ” **PHYSICAL REVIEW MATERIALS**, 1, 064001 (2017). DOI: [10.1103/PhysRevMaterials.1.064001](https://doi.org/10.1103/PhysRevMaterials.1.064001)
- (203) R. Roccanova, W. Ming, V.R. Whiteside, M.A. McGuire, I.R. Sellers, M.-H. Du, B. Saparov, “Synthesis, Crystal and Electronic Structures, and Optical Properties of $(\text{CH}_3\text{NH}_3)_2\text{CdX}_4$ ($X = \text{Cl}, \text{Br}, \text{I}$)” **INORGANIC CHEMISTRY**, 56, 13878 (2017). DOI: [10.1021/acs.inorgchem.7b01986](https://doi.org/10.1021/acs.inorgchem.7b01986)
- (202) B.C. Sales, K. Jin, H. Bei, J. Nichols, M.F. Chisholm, A.F. May, N.P. Butch, A.D. Christianson, M.A. McGuire, “Quantum critical behavior in the asymptotic limit of high disorder in the medium entropy alloy $\text{NiCoCr}_{0.8}$ ” **NPJ QUANTUM MATERIALS** 2, 33 (2017). DOI: [10.1038/s41535-017-0042-7](https://doi.org/10.1038/s41535-017-0042-7)
- (201) L. Poudel, C. de la Cruz, M.R. Koehler, M.A. McGuire, V. Keppens, D. Mandrus, A.D. Christianson, “ $\text{LaCu}_{6-x}\text{Ag}_x$: A promising host of an elastic quantum critical point” **PHYSICA B** 536, 479 (2017). DOI: [10.1016/j.physb.2017.08.066](https://doi.org/10.1016/j.physb.2017.08.066)
- (200) M.A. Susner, M. Chyasnavichyus, M.A. McGuire, P. Ganesh, P. Maksymovych “Metal Thio- and Selenophosphates as Multi-Functional van der Waals Layered Materials” **ADVANCED MATERIALS**, 1602852 (2017). DOI: [10.1002/adma.201602852](https://doi.org/10.1002/adma.201602852)
- (199) M. A. Susner, M. Chyasnavichyus, A.A. Puretzy, Q. He, B.S. Conner, Y. Ren, D.A. Cullen, P. Ganesh, D. Shin, H. Demir, J.W. McMurray, A.Y. Borisevich, P. Maksymovych, M.A. McGuire “Cation–Eutectic Transition via Sublattice Melting in $\text{CuInP}_2\text{S}_6/\text{In}_{4/3}\text{P}_2\text{S}_6$ van der Waals Layered Crystals” **ACS NANO** 11, 7060 (2017). DOI: [10.1021/acsnano.7b02695](https://doi.org/10.1021/acsnano.7b02695)
- (198) J.Q. Yan, B.C. Sales, M.A. Susner, M.A. McGuire, “Flux growth in a horizontal configuration: An analog to vapor transport growth” **PHYSICAL REVIEW MATERIALS** 1, 023402 (2017). DOI: [10.1103/PhysRevMaterials.1.023402](https://doi.org/10.1103/PhysRevMaterials.1.023402)
- (197) H. Xia, J. Dai, Y. Xu, Y. Yin, X. Wang, Z. Liu, M. Liu, M.A. McGuire, X. Li, Z. Li, C. Jin, Y. Yang, J. Zhou, Y. Long, “Magnetism and the spin state in cubic perovskite CaCoO_3 synthesized under high pressure” **PHYSICAL REVIEW MATERIALS** 1, 024406 (2017). DOI: [10.1103/PhysRevMaterials.1.024406](https://doi.org/10.1103/PhysRevMaterials.1.024406)
- (196) M.A. McGuire, “Crystal and Magnetic Structures in Layered, Transition Metal Dihalides and Trihalides” **CRYSTALS** 7, 121 (2017). DOI: [10.3390/cryst7050121](https://doi.org/10.3390/cryst7050121)

- (195) M.A. McGuire, G. Clark, S. KC, W.M. Chance, G.E. Jellison, Jr., V.R. Cooper, X. Xu, B.C. Sales, “Magnetic behavior and spin-lattice coupling in cleavable van der Waals layered CrCl_3 crystals” **PHYSICAL REVIEW MATERIALS** 1, 014001 (2017). DOI: [10.1103/PhysRevMaterials.1.014001](https://doi.org/10.1103/PhysRevMaterials.1.014001)
- (194) A. Choudhury, S. Mohapatra, H.Y. Asl, S.H. Lee, Y.S. Hor, J. Medvedeva, D.L. McClane, G.E. Hilmas, M.A. McGuire, A.F. May, H. Wang, S. Dash, A. Welton, P. Boolchand, K.P. Devlin, J. Aitken, R. Herbst-Irmer, V. Patřiček, “New insights into the structure, chemistry, and properties of Cu_4SnS_4 ” **JOURNAL OF SOLID STATE CHEMISTRY**, 253, 192 (2017). DOI: [10.1016/j.jssc.2017.05.033](https://doi.org/10.1016/j.jssc.2017.05.033)
- (193) A.F. May, Y. Liu, S. Calder, D.S. Parker, T. Pandey, E. Cakmak, H. Cao, J.Q. Yan, M.A. McGuire, “Magnetic order and interactions in ferrimagnetic $\text{Mn}_3\text{Si}_2\text{Te}_6$ ” **PHYSICAL REVIEW B** 95, 174440 (2017). DOI: [10.1103/PhysRevB.95.174440](https://doi.org/10.1103/PhysRevB.95.174440)
- (192) M.A. McGuire, V.O. Garlea, S. KC, V.R. Cooper, J.-Q. Yan, H. Cao, B.C. Sales, “Antiferromagnetism in the van der Waals layered spin-lozenge semiconductor CrTe_3 ” **PHYSICAL REVIEW B** 95, 144421 (2017). DOI: [10.1103/PhysRevB.95.144421](https://doi.org/10.1103/PhysRevB.95.144421)
- (191) D. Zhong, K.L. Seyler, X. Linpeng, R. Cheng, N. Sivadas, B. Huang, E. Schmidgall, T. Taniguchi, K. Watanabe, M.A. McGuire, W. Yao, D. Xiao, K.-M. C. Fu, X. Xu, “Van der Waals engineering of ferromagnetic semiconductor heterostructures for spin and valleytronics” **SCIENCE ADVANCES** 3, e1603113 (2017). DOI: [10.1126/sciadv.1603113](https://doi.org/10.1126/sciadv.1603113)
- (190) B. Huang, G. Clark, E. Navarro-Moratalla, D.R. Klein, R. Cheng, K.L. Seyler, D. Zhong, E. Schmidgall, M.A. McGuire, D.H. Cobden, W. Yao, D. Xiao, P. Jarillo-Herrero, X. Xu, **NATURE** 546, 270 (2017). DOI: [10.1038/nature22391](https://doi.org/10.1038/nature22391)
- (189) B.S. Conner, M.A. Susner, P. Lampen-Kelley, A.F. May, M.A. McGuire, J.-Q. Yan, B.C. Sales, “Heat capacity, resistivity, and angular dependent magnetization studies of single crystal $\text{Nd}_{1+\epsilon}\text{Fe}_4\text{B}_4$ for $\epsilon \approx 1$ ” **JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS** 435, 100 (2017). DOI: [10.1016/j.jmmm.2017.04.002](https://doi.org/10.1016/j.jmmm.2017.04.002)
- (188) B.S. Conner, M.A. McGuire, M.A. Susner, B.C. Sales, “Phase relationships in the $\text{CeFe}_8\text{Co}_3(\text{Ti,Si})$ system” **JOURNAL OF ALLOYS AND COMPOUNDS** 712, 30 (2017). DOI: [10.1016/j.jallcom.2017.04.048](https://doi.org/10.1016/j.jallcom.2017.04.048)
- (187) S.J. Kuhn, M.K. Kidder, D.S. Parker, C. dela Cruz, M.A. McGuire, W.M. Chance, L. Li, L. Debeer-Schmitt, J. Ermentrout, K.C. Littrell, M.R. Eskildsen, A.S. Sefat “Structure and Property Correlations in FeS ” **PHYSICA C** 534, 29 (2017). DOI: [10.1016/j.physc.2016.12.006](https://doi.org/10.1016/j.physc.2016.12.006)
- (186) M.A. McGuire, O. Rios, B.S. Conner, W.G. Carter, M. Huang, K. Sun, O. Palasyuk, B. Jensen, L. Zhou, K. Dennis, I.C. Nlebedim, M.J. Kramer “Magnetic field control of microstructural development in melt-spun $\text{Pr}_2\text{Co}_{14}\text{B}$ ” **JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS** 430, 85 (2017). DOI: [10.1016/j.jmmm.2016.12.101](https://doi.org/10.1016/j.jmmm.2016.12.101)
- (185) L.D. Sanjeeva, M.A. McGuire, C.D. McMillen, V.O. Garlea, J.W. Kolis, “Polar materials with isolated V^{4+} $s = \frac{1}{2}$ triangles: $\text{NaSr}_2\text{V}_3\text{O}_3(\text{Ge}_4\text{O}_{13})\text{Cl}$ and $\text{KSr}_2\text{V}_3\text{O}_3(\text{Ge}_4\text{O}_{13})\text{Cl}$ ” **CHEMISTRY OF MATERIALS** 29, 1404 (2017). DOI: [10.1021/acs.chemmater.6b05320](https://doi.org/10.1021/acs.chemmater.6b05320)
- (184) L.D. Sanjeeva, C.D. McMillen, M.A. McGuire, J.W. Kolis, “Manganese Vanadate Chemistry in Hydrothermal BaF_2 Brines: $\text{Ba}_3\text{Mn}_2(\text{V}_2\text{O}_7)_2\text{F}_2$ and $\text{Ba}_7\text{Mn}_8\text{O}_2(\text{VO}_4)_2\text{F}_{23}$ ” **INORGANIC CHEMISTRY** 55, 12512 (2016). DOI: [10.1021/acs.inorgchem.6b02355](https://doi.org/10.1021/acs.inorgchem.6b02355)

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- (182) P. Vilmercati, S-K. Mo, A. Fedorov, M.A. McGuire, A. Sefat, B. Sales, D. Mandrus, D.J. Singh, W. Ku, S. Johnston, N. Mannella "Nonrigid band shift and nonmonotonic electronic structure changes upon doping in the normal state of the pnictide high-temperature superconductor $\text{Ba}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ " **PHYSICAL REVIEW B** 94, 195147 (2016). DOI: [10.1103/PhysRevB.94.195147](https://doi.org/10.1103/PhysRevB.94.195147)
- (181) B.S. Conner, M.A. McGuire, K.V. Shanavas, D.S. Parker, B.C. Sales "Evolution of Structural and Magnetic Properties in $\text{La}_x\text{Ce}_{2-x}\text{Co}_{16}\text{Ti}$ for $0 \leq x \leq 2$ " **JOURNAL OF ALLOYS AND COMPOUNDS** 695, 2266 (2017). DOI: [10.1016/j.jallcom.2016.11.078](https://doi.org/10.1016/j.jallcom.2016.11.078)
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