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EDUCATION

University of Tennessee, Knoxville, U.S.A.

Ph. D. in Physics December 2008

Pukyong National University, R. Korea

M.S. in Physics August 2001

Yanbian University, P. R. China

B.S. in Physics July 1993

PROFESSIONAL EXPERIENCE

01/2013 – present **Oak Ridge National Laboratory, USA**
R&D staff

11/2010 – 01/2013 **Oak Ridge Associated Universities, USA**
Post doctoral associate, working at the Oak Ridge National Laboratory

01/2009 – 11/2010 **NIST Center for Neutron Research, USA**
Instrument Scientist

AWARDS

Supplemental Performance Award from ORNL, November 2014.

Chancellor's Honor for Extraordinary Professional Promise April, 2008

JINS Neutron Fellowship Feb, 2008

Sigma Pi Sigma, the Physics National Honor Society membership May, 2006

PUBLICATIONS

Peer Reviewed Journal Articles: **131**

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Web of Science Core Collection Metrics as of 08/01/2023: H-index: 36, sum of Citations: 5442
High Impact Articles (IP>7): 36

1. **Overcoming Thermopower-Conductivity Trade-off: A Broadly Applicable, Spin Crossover Approach for High-Performance Thermoelectric Materials** Md Mobarak Hossain Polash, Matthew Stone, Songxue Chi, and Daryoosh Vashaee DOI: 10.22541/au.171353855.58806268/v1
2. **Uncovering the phonon spectra and lattice dynamics of plastically deformable InSe van der Waals crystals** Jiangtao Wu, Yifei Liu, Yifei Lin, Gaoting Lin, Mingfang Shu, Fengfeng Zhu, Yan Wu, Russell Ewings, Helen Walker, Guochu Deng, Songxue Chi, Shengwei Jiang, Matteo Baggioli, Min Jin, Tianran Wei, Jiong Yang, Xun Shi, Yupeng Ma, Cuiping Zhang, Pengfei Jiao, Haozhe Wang, Weiwei Xie ***Nature Communications* 15,** 6248 (2024)
3. **Hybrid magnon-phonon localization enhances function near ferroic glassy states** Michael Manley, Paul Stonaha, Nickolaus Bruno, Ibrahim Karaman, Raymundo Arroyave , Songuxe Chi, Douglas Abernathy, Matthew Stone, Yuriy Chumlyakov Jeffrey Lynn ***Science Advances*, 10,** eadn2840 (2024)
4. **Multiple lattice instabilities and complex ground state in $Cs_2AgBiBr_6$** Xing He, Matthew Krogstad, Mayanak K Gupta, Tyson Lanigan-Atkins, Chengjie Mao, Feng Ye, Yaohua Liu, Tao Hong, Songxue Chi, Haotong Wei, Jinsong Huang, Stephan Rosenkranz, Raymond Osborn, and Olivier Delaire, ***PRX Energy*, 3,** 1, 013014 (2024)
5. **Quantum critical behavior of the hyperkagome magnet Mn_3CoSi** Hiroki Yamauchi, Dita Puspita Sari, Yukio Yasui, Terutoshi Sakakura, Hiroyuki Kimura, Akiko Nakao, Takashi Ohhara, Takashi Honda, Katsuaki Kodama, Naoki Igawa, Kazutaka Ikeda, Kazuki Iida, Mitsutaka Nakamura, Daichi Ueta, Tetsuya Yokoo, Matthias D. Frontzek,11 Songxue Chi, Jaime A. Fernandez-Baca,Kenji M. Kojima, Donald Arseneau, Gerald Morris, Bassam Hitti, Yipeng Cai, Adam Berlie, Isao Watanabe, Pai-Tse Hsu, Yu-Sheng Chen, Min Kai Lee, Amelia Elisabeth Hall, Geetha Balakrishnan, Lieh-Jeng Chang, and Shin-ichi Shamoto ***Physical Review Research,* 6,** 013144 (2024).
6. **Two-step electronic response to magnetic ordering in a van der Waals ferromagnet** Han Wu, Jian-Xin Zhu,Lebing Chen, Matthew W Butcher, Ziqin Yue, Dongsheng Yuan, Yu He, Ji Seop Oh,Jianwei Huang, Shan Wu, Cheng Gong, Sung-Kwan Mo, Jonathan Denlinger, Donghui Lu,Makoto Hashimoto, Matthew B. Stone, Alexander I. Kolesnikov, Songxue Chi, Junichiro Kono, Andriy H. Nevidomskyy, Robert J. Birgeneau, Pengcheng Dai, and Ming Yi **Physical Review B*, 109*, 4**, 045416 (2024).
7. **Quantum to classical crossover in generalized spin systems: example of the temperature-dependent spin dynamics of FeI2** D. Dahlbom, D. Brooks, M. S. Wilson, S. Chi, A. I. Kolesnikov, M. B. Stone, H. Cao, Y.-W. Li, K. Barros, M. Mourigal, C. D. Batista, and X. Bai ***Physical Review B*, *109*,** 1, 014427 (2024).
8. **Magnetism and Fermiology of Kagome Magnet $YMn_6Sn_4Ge_2$** Hari Bhandari, Rebecca L. Dally, Peter E. Siegfried, Resham Regmi, Kirrily C. Rule, Songxue Chi, Jeffrey W. Lynn, I. I. Mazin, and Nirmal J. Ghimire ***npj Quantum Materials* 9**, 6 (2024)

9. **Antiferromagnet to ferromagnet crossover driven by nonmagnetic Co doping in heavy-fermion $YbRh_3Si_7$** Long Qian, Kelly Neubauer, Joshua Miller, Yuxiang Gao, Jordan Murley, Songxue Chi, Shiming Lei, Pengcheng Dai, and E. Morosan ***Physical Review B, 108*** 184404(2023)
10. **Helical Magnetic State in the Vicinity of the Pressure-Induced Superconducting Phase in MnP** Sachith E. Dissanayake, Masaaki Matsuda, Kazuyoshi Yoshimi, Shusuke Kasamatsu, Feng Ye, Songxue Chi, William Steinhardt, Gilberto Fabbris, Sara Haravifard, Jinguang Cheng, Jiaqiang Yan, Jun Gouchi, and Yoshiya Uwatoko ***Physical Review Research,* 5,** 043026 (2023).
11. **Effect of random antiferromagnetic exchange disorder on the spin waves in a three-dimensional Heisenberg ferromagnet** S. Hameed, Z. Wang, D. M. Gautreau, J. Joe, K. P. Olson, S. Chi, P. M. Gehring, T. Hong, D. M. Pajerowski, T. J. Williams, Z. Xu, M. Matsuda, T. Birol, R. M. Fernandes, and M. Greven ***Physical Review B,* 108**, 134406 (2023).
12. **Topology stabilized fluctuations in a magnetic nodal semimetal** Nathan C. Drucker, Thanh Nguyen, Fei Han, Phum Siriviboon, Xi Luo, Nina Andrejevic, Ziming Zhu, Grigory Bednik, Quynh T. Nguyen, Zhantao Chen, Linh K. Nguyen, Tongtong Liu, Travis J. Williams, Matthew B. Stone, Alexander I. Kolesnikov, Songxue Chi, Jaime Fernandez-Baca, Christie S. Nelson, Ahmet Alatas, Tom Hogan, Alexander A. Puretzky, Shengxi Huang, Yue Yu, and Mingda Li ***NatureCommunications* 14,** 5182 (2023)
13. **Gapless spin-excitations in the superconducting state of a quasi-one-dimensional spin-triplet superconductor** Keith M. Taddei,, Bing-Hua Lei, Michael A. Susner, Hui-Fei Zhai, Thomas J. Bullard, Liurukara D. Sanjeewa, Qiang Zheng, Athena S. Sefat, Songxue Chi, Clarina dela Cruz, David J. Singh,, and Bing Lv ***Physical Review B,* 107**, L180504 (2023).
14. **Strongly over-doped $La_{2-x}Sr_xCuO_4$: Evidence for Josephson-coupled grains of strongly-correlated superconductor** Yangmu Li, A. Sapkota, P. M. Lozano, Zengyi Du, Zebin Wu, Asish Kundu, B. L. Winn, Songxue Chi, M. Matsuda, M. Frontzek, I. Bo_zovi_c, Abhay N. Pasupathy, Ilya K. Drozdov, Kazuhiro Fujita, G. D. Gu, I. A. Zaliznyak, Qiang Li, and J. M. Tranquada ***Physical Review B,* 106**, 224515 (2022).
15. **Antiferromagnetic fluctuations and orbital-selective Mott transition in the van der Waals ferromagnet $Fe_{3-x}GeTe_2$** Xiaojian Bai, Frank Lechermann, Yaohua Liu, Yongqiang Cheng, Alexander I. Kolesnikov, Feng Ye, Travis J. Williams, Songxue Chi, Garrett E. Granroth, Andrew F. May, and Stuart Calder ***Physical Review B*** 106, L180409 (2022)
16. **Unconventional short-range structural fluctuations in cuprate superconductors** D. Pelc, R. J. Spieker, Z. W. Anderson, M. J. Krogstatd, N. Bninskos, N. G. Lielinski, B. Yu, T. Sasagawa, L. Chauviere, P. Dosanjh, R. Liang, D. A. Bonn, A. Damascelli, S. Chi, Y. Liu, R. Osborn, and M. Greven ***Scientific Reports* 12**, 20483 (2022)
17. **Magnetic excitation linking quasi-one-dimensional Chevrel-type selenide and arsenide superconductors** Logan M. Whitt, Tyra C. Douglas, Songxue Chi, Keith M. Taddei, Jared M. Allred ***Physical Review Materials*** 6, 124804 (2022)
18. **Incommensurate magnetic orders and possible _eld-induced skyrmion state in the square-net centrosymmetric $EuGa_2Al_2$ system** Jaime M. Moya, Shiming Lei, Eleanor M. Clements, Kevin Allen, Qizhi Li, Y.Y.Peng, Matthew James Krogstad, Raymond Osborn, Douglas S. Robinson, Stella Sun, P. Abbamonte, Songxue Chi, Anand B. Puthirath, Jeffrey W. Lynn, and E. Morosan ***Phys. Rev. Mater.* 6**, 074201 (2022)
19. **Generic character of charge and spin density waves in superconducting cuprates** Sangjun Lee Edwin W. Huang, Thomas A. Johnson, Xuefei Guo, Ali A. Husain, Matteo Mitrano, Kannan Lu, Alexander V. Zakrzewski, Gilberto A. de la Pena, Yingying Peng, Hai Huang, Sang-Jun Lee, H. Jang, Jun-Sik Lee, Young Il Joe, William B. Doriese, Paul Szypryt, Daniel Swetz, Songxue Chi, Adam A Aczel, Gregory J. MacDougall, Steven A. Kivelson, Eduardo Fradkin, P. Abbamonte ***PNAS* 119,** e2119429119 (2022)

20. **Parallel Spin Stripes and Their Coexistance with Superconductivity at Optimal and High Doping in $La_{1.6-x}Nd_{0.4}Sr_xCuO_4$** Qianli Ma, Kirrily C. Rule, Zachary W. Cronkwright, Mirela Dragomir, Gabrielle Mitchell, Evan M. Smith, Songxue Chi, Alexander I. Kolesnikov, Matthew B. Stone,5 and Bruce D. Gaulin ***Phys. Rev. Research* 3**, 023151 (2021)
21. **Growth and characterization of large (Y,La)TiO_3 and (Y,Ca)TiO_3 single crystals** S. Hameed, J. Joe, L. R. Thoutam, J. Garcia-Barriocanal, B. Yu, G. Yu, S. Chi, T. Hong, T. J. Williams, J. W. Freeland, P. M. Gehring, Z. Xu, M. Matsuda, B. Jalan, and M. Greven ***Physical Review Materials* 5**, 125003 (2021)
22. **Magnetic order and its interplay with structure phase transition in the van der Waals ferromagnet VI_3** Yiqing Hao, Yiqing Gu, Yimeng Gu, Erxi Feng, Huibo Cao, Songxue Chi, Hua Wu and Jun Zhao ***Chin. Phys. Lett.* 38**, 096101 (2021)
23. **Canted antiferromagnetic order and spin dynamics in the honeycomb-lattice compound $Tb_2Ir_3Ga_9$** Feng Ye, Zachary Morgan, Wei Tian, Songxue Chi, Xiaoping Wang, Michael E. Manley, David Parker, Mojammel A. Khan, J. F. Mitchell, and Randy Fishman ***Physical Review B*, 103,** 184413 (2021).
24. **Field-induced topological Hall effect and double-fan spin structure with a c-axis component in the metallic kagome antiferromagnetic compound YMn_6Sn_6** Qi Wang, Kelly J. Neubauer, Chunruo Duan, Qiangwei Yin, Satoru Fujitsu, Hideo Hosono, Feng Ye, Rui Zhang, Songxue Chi, Kathryn Krycka, Hechang Lei, and Pengcheng Dai ***Phys. Rev. B 103*,** 014416 (2021)
25. **Quantized thermoelectric Hall effect induces giant power factor in a topological semimetal** Fei Han, Nina Andrejevic, Thanh Nguyen, Brian Skinner, Quynh Nguyen, Zhiwei Ding, Ricardo Pablo-Pedro, Shreya Parjan, Vladyslav Kozii, Ahmet Alatas, Ercan Alp, Songxue Chi, Jaime Fernandez-Baca, Shengxi Huang, Liang Fu, Mingda Li ***Nature Communications*, 11,** 6167 (2020).
26. **Noncollinear magnetic structure and magnetoelectric coupling in buckled honeycomb $Co_4Nb_2O_9$: A single crystal neutron diffraction study** Lei Ding, Minseong Lee, Tao Hong, Zhiling Dun, Ryan Sinclair,Songxue Chi, Harish K. Agrawal, Eun Sang Choi, Bryan C. Chakoumakos, Haidong Zhou and Huibo Cao ***Phys. Rev. B 102*,** 174443 (2020)
27. **Competition of three-dimensional magnetic phases in $Ca_2Ru_{1-x}Fe_xO_4$: A structural perspective** Songxue Chi, Feng Ye, Gang Cao, Huibo Cao, and Jaime A. Fernandez-Baca ***Phys. Rev. B* 102*,*** *014452 (2020)*
28. **Extended anharmonic collapse of phonon dispersions in SnS** T. Lanigan-Atkins, S. Yang, J. L. Niedziela, D. Bansal, A. F. May, A. A. Puretzky, J. Y. Y. Lin, D. M. Pajerowski, T. Hong, S. Chi, G. Ehlers, and O. Delaire ***Nature Communications* 11**, 4430 (2020)
29. **High-temperature short-range order in Mn_3RhSi** Hiroki Yamauchi, Dita Puspita Sari, Isao Watanabe, Yukio Yasui, Lieh-Jeng Chang[e], Keietsu Kondo[f], Takashi U. Ito, Motoyuki Ishikado, Masato Hagihara, Matthias D. Frontzek, Songxue Chi, Jaime A. Fernandez-Baca, James Lord, Adam Berlie, Chris Goodway, Atsuhiro Kotani, Shigeo Mori, Shin-ichi Shamoto ***Commun Mater* 1,** 43 (2020)
30. **Giant isotope effect on phonon dispersion and thermal conductivity in methylammonium lead iodide** M. E. Manley, K. Hong, P. Yin, S. Chi, Y. Cai, L. L. Daemen, R. P. Hermann, H. Wang, A. May, M. Asta, M. Ahmadi ***Science Advances*, 6,** 31, eaaz1842 (2020)
31. **Topological singularity-induced chiral Kohn anomaly in a Weyl semimetal** Thanh Nguyen, Fei Han, Nina Andrejevic, Ricardo Pablo-Pedro, Anuj Apte, Zhiwei Ding, Kunyan Zhang, Ahmet Alatas, Ercan Alp, Songxue Chi, Jaime Fernandez-Bacc, Masaaki Matsuda, David A. Tennant, Yang Zhao, Zhijun Xu, Jeffrey W. Lynn, Shengxi Huang, and Mingda Li ***Phys. Rev. Lett.* 124,** 236401 (2020)
32. **Anisotropic effect of a magnetic field on the neutron spin resonance in FeSe** Tong Chen, Youzhe Chen David W. Tam Bin Gao Yiming Qiu Astrid Schneidewind4 Igor Radelytskyi, Karel Prokes, Songxue Chi, Masaaki Matsuda, Collin Broholm, and Pengcheng Dai ***Phys. Rev. B* 101**, 140504 (R) (2020)

33. **Magnetic anisotropy in ferromagnetic CrI_3** Lebing Chen, Jae-Ho Chung, Tong Chen, Chunruo Duan, Astrid Schneidewind, Igor Rodelytskyi, David J. Voneshen, Russel A. Ewings, Matthew B. Stone, Alexander I. Kolesnikov, Barry Winn, Songxue Chi, R. A. Mole, D.H.Hu, Bin Gao, and Pengcheng Dai ***Phys. Rev. B* 101** 134418 (2020)
34. **Coexistence of Soft Modes and Dynamic Ti Disorder in Cubic $BaTiO_3$ Studied by Inelastic Neutron Scattering** Izumi Tomeno, Jaime Fernandez-Baca, Songxue Chi, Kunihiko Oka, and Yorihiko Tsunoda, ***Journal of the Physical Society of Japan* 89**, 054601 (2020)
35. **The *f* -electron State of the Heavy Fermion Superconductor NpPd5Al2 and the Isostructural Family** Naoto Metoki, Adam A. Aczel, Dai Aoki, Songxue Chi, Jaime A. Fernandez-Baca,Jean-Christophe Griveau, Masato Hagihala, Tao Hong, Yoshinori Haga, Kazuhiko Ikeuchi, Y. Inamura, Kazuya Kamazawa, Ryoichi Kajimoto, Hideaki Kitazawa,Takatsugu Masuda, Masaaki Matsuda, Mitsutaka Nakamura, Junya Ohtsuki,Daniel Pajerowski, Hiroyuki S. Suzuki, Etsuji Yamamoto, and Hiroki Yamauchi ***JPS Conf. Proc. 30, 011123 (2020)***
36. **Anharmonic Eigenvectors and Acoustic Phonon Disappearance in Quantum Paraelectric $SrTiO_3$** Xing He, Dipanshu Bansal, Barry Winn, Songxue Chi, Lynn Boatner, and Olivier Delaire ***Phys. Rev. Lett.* 124,** 145901 (2020)
37. **Lattice distortion in the spin-orbital entangled state in RVO_3 perovskites** J. -Q. Yan, W. Tian, H. B. Cao, S. Chi, F. Ye, A. Llobet, Q. Chen, J. Ma, Y. Ren, J. -G. Cheng, J. -S. Zhou, M. A. McGuire, R. J. McQueeney ***Phys. Rev. B* 100**, 184423 (2019)
38. **Flat band magnetism and helical magnetic order in Ni-doped $SrCo_2As_2$** Yu Li, Zhonghao Liu, Zhuang Xu, Yu Song, Yaobo Huang,Dawei Shen, Ni Ma, Ang Li, Songxue Chi, Matthias Frontzek, Huibo Cao, Qingzhen Huang, Weiyi Wang, Yaofeng Xie, Yan Rong, David P. Young, J. F. DiTusa,, † and Pengcheng Dai ***Phys. Rev. B* 100**, 094446 (2019)
39. **Spin-liquid-like state in pure and Mn-doped $TbInO_3$ with a nearly triangular lattice** M. G. Kim, B. Winn, S.Chi, A.T.Savici, J. A. Rodriguez-Rivera, W. C. Chen, X. Xu, Y. Li, J. W. Kim, S.-W. Cheong, and V. Kiryukhin ***Phys. Rev. B 100,*** 024405 (2019)
40. **Low-temperature anharmonicity and the thermal conductivity of cesium iodide** Bin Wei, Chao Yang, Xiaoxia Yu, Xin Rao, Xueyun Wang, Songxue Chi, Xuefeng Sun, Jiawang Hong ***Phys. Rev. B 99,*** 184301 (2019)
41. **Anomalous magnetic behavior of Ba_2CoO_4 with isolated CoO_4 tetrahedra** Qiang Zhang, Guixin Cao, Feng Ye, Huibo Cao, Masaaki Matsuda, D. A. Tennant, Songxue Chi, S. E. Nagler, W. A. Shelton, Rongying Jin, E. W. Plummer, Jiandi Zhang ***Phys. Rev. B 99,*** 094416 (2019)
42. **Neutron spin resonance as a probe of Fermi surface nesting and superconducting gap symmetry in $Ba_{0:67}K_{0:33}(Fe_{1-x}Co_x)_2As_2$** Rui Zhang, Weiyi Wang, Thomas A. Maier, Meng Wang, Matthew B. Stone, Songxue Chi, Barry Winn, and Pengcheng Dai ***Phys. Rev. B 98,*** 060502 (R) (2018)
43. **Local orthorhombic lattice distortions in the paramagnetic tetragonal phase of superconducting $NaFe_{1-x}Ni_xAs$** Weiyi Wang, Yu Song, Chongde Cao, Yu Li,1 L. W. Harriger, Wei Tian,Songxue Chi, Rong Yu, Andriy H. Nevidomskyy, and Pengcheng Dai ***Nature Communications* 9**,3128 (2018)
44. **The *f* -electron states in $PrPd_5Al_2$** Naoto Metoki, Hiroki Yamauchi, Hiroyuki S. Suzuki, Hideaki Kitazawa,Masato Hagihara, Takatsugu Masuda, Adam Aczel, Songxue Chi, Tao Hong, Masaaki Matsuda, Daniel Pajerowski, and Jaime A. Fernandez-Baca ***Journal of the Physical Society of Japan,* 87**,094704 (2018)
45. **Coexistence of superconductivity and short-range double-stripe spin correlations in Te-vapor annealed $FeTe_{1-x}Se_x$ with x =0.2** Zhijun Xu, J. A. Schneeloch, Ming Yi, Yang Zhao, Masaaki Matsuda, D. M. Pajerowski, Songxue Chi, R. J. Birgeneau, Genda Gu, J. M. Tranquada, and Guangyong Xu ***Phys. Rev. B* 97**, 214511 (2018)
46. **Glassy phonon heralds a strain glass state in a shape memory alloy** PJ Stonaha, ME Manley, I Karaman, R Arroyave, N Bruno, M Chisholm, S Chi, D Abernathy ***Phys. Rev. Lett.* 120**, 245701 (2018)
47. **Dynamic spin-lattice coupling and nematic uctuations in NaFeAs** Yu Li, Zahra Yamani, Yu Song, Weiyi Wang, Chenglin Zhang,David W. Tam, Tong Chen, Zhuang Xu, Songxue Chi, Ke Xia, Li Zhang, Shifeng Cui, Wenan Guo, Ziming Fang, Yi Liu, and Pengcheng Dai ***Phys. Rev. X* 8**, 021056 (2018)
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50. **Suppression of the antiferromagnetic order when approaching the superconducting state in a phase-separated crystal of $K_xFe_{2-y}Se_2$** Shichao Li, Yuan Gan, Jinghui Wang, Ruidan Zhong, J. A. Schneeloch, Zhijun Xu, Wei Tian, M. B. Stone, Songxue Chi, M. Matsuda, Y. Sidis, Ph. Bourges, Qiang Li, Genda Gu, J. M. Tranquada, Guangyong Xu, R. J. Birgeneau, and Jinsheng Wen ***Phys. Rev. B*** 96, 094503 (2017)
51. **Manganese-induced magnetic symmetry breaking and its correlation with the metal-insulator transition in bilayered $Sr_3(Ru1-xMn_x)_2O_7$** Qiang Zhang, Feng Ye, Wei Tian, Huibo Cao, Songxue Chi, Dalgis Mesa, Biao Hu, Zhenyu Diao, David A. Tennant, Rongying Jin, Ward Plummer, Jiandi Zhang ***Phys. Rev. B*** 95, 220403(R) (2017)
52. **Competing spin density wave, collinear, and helical magnetism in Fe1+xTe** C. Stock, E. E. Rodriguez, P. Bourges, R. A. Ewings, H.Cao, S. Chi, J. A. Rodriguez-Rivera, and M. A. Green ***Phys. Rev. B*** 95, 144407 (2017)
53. **Magnetic Structure and Quadrupolar Order Parameter Driven by Geometrical Frustration Effect in NdB_4** Hiroki Yamauchi, Naoto Metoki, Ryuta Watanuki, Kazuya Suzuki, Hiroshi Fukazawa, Songxue Chi, and Jaime A. Fernandez-Baca, ***J. Phys. Soc. Jpn 86,*** 044705 (2017)
54. **Itinerant Antiferromagnetism in RuO_3** Berlijn, P. C. Snijders, O. Delaire, H.-D. Zhou, T. A. Maier, H.-B. Cao, S.Chi, M. Matsuda, Y. Wang, M. R. Koehler, P. R. C. Kent, and H. H. Weitering ***Phys. Rev. Lett.*** **118**, 077201 (2017)
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56. **Phase diagram and neutron spin resonance of superconducting $NaFe_{1-x}Cu_xAs$** Guotai Tan, Yu Song, Rui Zhang, Lifang Lin, Zhuang Xu, Long Tian, Songxue Chi, Barry Winn, M. K. Graves-Brook, Shiliang Li, and Pengcheng Dai ***Phys. Rev. B*** 95, 054501 (2017)
57. **A Mott insulator continuously connected to iron pnictide superconductors** Song Y., Yamani Z., Cao C., Li Y., Zhang C., Chen J.S., Huang Q.Z., Wu H., Tao J., Zhu Y., Tian W., Chi S.X., Cao H.B., Huang Y.B., Dantz M., Schmitt T., Yu R., Nevidomskyy A.H., Morosan E., Si Q., Dai P.C., ***Nature Communications, 7,*** 13879 (2016)
58. **Magnetic precursor of the pressure-induced superconductivity in Fe-ladder compound** Songxue Chi, Yoshiya Uwatoko, Huibo Cao, Yasuyuki Hirata, Kazuki Hashizume, Takuya Aoyama, and Kenya Ohgushi ***Phys. Rev. Lett.*** **117**, 047003 (2016)
59. **Electron doping evolution of the neutron spin resonance in $NaFe_{1-x}Co_xAs$** Chenglin Zhang, Weicheng Lv, Guotai Tan, Yu Song, Scott V. Carr, Songxue Chi, M. Matsuda, A. D. Christianson, J. A. Fernandez-Baca, L. W. Harriger, and Pengcheng Dai ***Phys. Rev. B*** 93, 174522 (2016)
60. **Experimental elucidation of the origin of the `double spin resonances' in $Ba(Fe_{1-x}Co_x)_2As_2$** Meng Wang, M. Yi, H. L. Sun, P. Valdivia, M. G. Kim, Z. J. Xu, T. Berlijn, A. D. Christianson, Songxue Chi, M. Hashimoto, D. H. Lu, X. D. Li, E. Bourret-Courchesne, Pengcheng Dai, D. H. Lee, T. A. Maier, R. J. Birgeneau ***Phys. Rev. B*** 93, 205149 (2016)
61. **Transition from Sign-Reversed to Sign-Preserved Cooper-Pairing Symmetry in Sulfur-Doped Iron Selenide Superconductors** Qisi Wang, J. T. Park, Yu Feng, Yao Shen, Yiqing Hao, Bingying Pan, J. W. Lynn, A. Ivanov, Songxue Chi, M. Matsuda, Huibo Cao, R. J. Birgeneau, D. V. Efremov, and Jun Zhao ***Phys. Rev. Lett.*** **116**, 197004 (2016)
62. **Pressure effects on magnetic ground states in cobalt doped multiferroic $Mn_{1-x}Co_xWO_4$** Jinchen Wang, Feng Ye, Songxue Chi, Jaime A. Fernandez-Baca, Huibo Cao,Wei Tian, M. Gooch, K.-C. Liang, Yaqi Wang, Bernd Lorenz, and C. W. Chu ***Phys. Rev. B*** 93, 155164 (2016)
63. **Pressure dependence of the magnetic ground states in MnP** M. Matsuda, F. Ye, S. E. Dissanayake, J.-G. Cheng, S. Chi, J. Ma, H. D. Zhou, J.-Q. Yan, S. Kasamatsu, O. Sugino, T. Kato, K. Matsubayashi, T. Okada, and Y. Uwatoko ***Phys. Rev. B*** 93, 100405(R) (2016)

64. **Structure symmetry determination and magnetic evolution in $Sr_2Ir_{1-x}Rh_xO_4$** Feng Ye, Xiaoping Wang, Christina Hoffmann, Songxue Chi, Masaaki Matsuda, Bryan C. Chakoumakos, Jaime A. Fernandez-Baca, Jinchen Wang, and G. Cao ***Phys. Rev. B* 92**, 201112 (R) (2015)
65. **Spin dynamics near a putative antiferromagnetic quantum critical point and its relation to high-T_c in Cu substituted $BaFe_2As_2$** M. G. Kim, P. N. Valdivia, M. Wang, G. S. Tucker, D. L. Abernathy, Songxue Chi, A. D. Christianson, A. A. Aczel, T. Hong, T. W. Heitmann, S. Ran, P. C. Canfield, E. D. Bourret-Courchesne, A. Kreyssig, D. H. Lee, A. I. Goldman, R. J. McQueeney, and R. J. Birgeneau ***Phys. Rev. B* 92**, 214404 (2015)
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67. **Vibrational entropy drives magnetic transition in metamagnetic shape memory alloy** P.J. Stonaha, M.E. Manley, N. Bruno, I. Karaman, D.L. Abernathy, S. Chi ***Phys. Rev. B***. **92** 140406 (2015)
68. **Structure of Water and Ice in Poly-N,N,-Dimethylacrylamide Hydrogel** Yurina SEKINE, Tomoko IKEDA-FUKAZAWA, Hiroki YAMAUCHI, Songxue CHI, Jaime A. FREMANDEZ-BACA, and Hiroshi FUKAZAWA ***JPS Conf. Proc.*** 8,033009 **(2015)**
69. **Properties of Ferroelectric Ice** Hiroshi FUKAZAWA, Masashi ARAKAWA, Hiroki YAMAUCHI, Yurina SEKINE, Riki KOBAYASHI, Yoshiya UWATOKO, Songxue CHI, and Jaime A. FERNENDEZ-BACA ***JPS Conf. Proc.*** 8,033010 **(2015)**
70. **The effects of Co_3O_4 on the structure and unusual magnetism of $LaCoO_3$** A M Durand, T J Hamil, D P Belanger, S Chi, F Ye, J A Fernandez-Baca, Y Abdollahian and C H Booth ***J. Phys.: Condens. Matter* 27** 126001 (2015)
71. **Temperature and composition phase diagram in the iron-based ladder compounds$Ba_{1-x}Cs_xFe_2Se_3$** Takafumi Hawai, Yusuke Nambu, Kenya Ohgushi, Fei Du, Yasuyuki Hirata, Maxim Avdeev, Yoshiya Uwatoko, Yurina Sekine, Hiroshi Fukazawa, Jie Ma, Songxue Chi, Yutaka Ueda, Hideki Yoshizawa, and Taku J. Sato ***Phys. Rev.B* 91,** 184416 (2015)
72. **The unusual magnetism of nanoparticle $LaCoO_3$** A.M. Durand, D. P. Belanger, T. J. Hamil, F. Ye, S. Chi, J. A. Fernandez-Baca, C. H. Booth, Y. Abdollahian, M. Bhat ***J. Phys.: Condens. Matter* 27** 176003 (2015)
73. **Neutron-scattering measurements of the spin excitations in LaFeAsO and $Ba(Fe_{0.953}Co_{0.047})_2As_2$: Evidence for a sharp enhancement of spin uctuations by nematic order** Qiang Zhang, Rafael M. Fernandes, Jagat Lamsal, Jiaqiang Yan, Songxue Chi, Daniel K. Pratt, Je_rey W. Lynn, R. W. McCallum, Paul C. Canfield, Thomas A. Lograsso, Alan Goldman, David Vaknin, and Robert J. McQueeney ***Phys. Rev. Lett.* 114**, 057001 (2015)
74. **Neutron Diffraction of Ice in Hydrogels** Yurina Sekine, Tomoko Ikeda-Fukazawa, Mamoru Aizawa, Riki Kobayashi, Songxue Chi, Jaime Fernandez-Baca, Hiroki Yamauchi, Hiroshi Fukazawa ***Journal of Physical Chemistry B*** 118, 13453 (2014)
75. **High-pressure single-crystal neutron scattering study of magnetic and Fe vacancy orders in $(Tl,Rb)_2Fe_4Se_5$ superconductor** Feng Ye, Wei Bao, Songxue Chi, Antonio M. dos Santos, Jamie J. Molaison, Minghu Fang, Hangdong Wang, Qianhui Mao Jinchen Wang, Juanjuan Liu, Jieming Sheng ***Chin. Phys. Lett.* 31,** 127401 (2014)
76. **Neutron-scattering evidence for a periodically modulated superconducting phase in the underdoped cuprate $La_{1.905}Ba_{0.095}CuO_4$** Zhijun Xu, C. Stock, Songxue Chi, A. I. Kolesnikov, Guangyong Xu, Genda Gu, and J. M. Tranquada ***Phys. Rev. Lett.* 113**, 177002 (2014)
77. **Magnetoelectric coupling tuned by competing anisotropies in $Mn_{1-x}Ni_xTiO_3$** Songxue Chi, Feng Ye, H. D. Zhou, E. S. Choi, J. Hwang, Huibo Cao, Jaime A. Fernandez-Baca ***Phys. Rev. B.* 90** 144429 (2014)
78. **Two spatially separated phases in semiconducting $Rb_{0.8}Fe_{1.5}S_2$** Meng Wang, Wei Tian, P. Valdivia, Songxue Chi, E. Bourret-Courchesne, Pengcheng Dai,and R. J. Birgeneau,. ***Phys. Rev. B.* 90** 125148 (2014)

79. **Spin-Chirality-Driven Ferroelectricity on a Perfect Triangular Lattice Antiferromagnet** H. Mitamura, R. Watanuki, K. Kaneko, N. Onozaki, Y. Amou, S. Kittaka, R. Kobayashi, Y. Shimura, I. Yamamoto, K. Suzuki, S. Chi, and T. Sakakibara ***Phys. Rev. Lett. 113,*** *147002* (2014)
80. **Influence of Electron Doping on Magnetic Order in $CeRu_2Al_{10}$** Riki Kobayashi, Koji Kaneko, Kotaro Saito, Jean-Michel Mignot, Gilles Andr´e, Julien Robert, Shuichi Wakimoto, Masaaki Matsuda, Songxue Chi, Yoshinori Haga, Tatsuma D. Matsuda y, Takashi Nishioka, Masahiro Matsumura, Hiroshi Tanida, and Masafumi Sera, ***Journal of the Physical Society of Japan*** **83** (2014)
81. **Development of a Compact *in situ* Polarized ^{3}He Neutron Spin Filter at Oak Ridge National Laboratory** C.Y. Jiang, X. Tong , D. R. Brown, S.Chi, A. D. Christianson, B. J. Kadron, J. L. Robertson, B. Winn ***Review of Scientific Instruments*** 85, 075112 (2014)
82. **Magnetic excitations and anomalous spin wave broadening in multiferroic FeV_2O_4** Qiang Zhang, Mehmet Ramazanoglu, Songxue Chi, Yong Liu, Thomas. A. Lograsso, David Vaknin ***Phys. Rev. B*** **89**, 224416 (2014)
83. **Magnetic and Structural Phase Transitions in the Spinel Compound Fe1+xCr2-xO4** J. Ma, V. O. Garlea, A. Rondinone, A. A. Aczel, S. Calder, C. dela Cruz, R. Sinclair,W. Tian, Songxue Chi, A. Kiswandhi, J. S. Brooks, H. D. Zhou, and M. Matsuda ***Phys. Rev. B*** **89**, 134106 (2014)
84. **Direct observation of dynamic charge stripes in $La_{1.67}Sr_{0.33}NiO_4$** S. Anisimova, D. Parshall, G. D. Gu, K. Marty, M. D. Lumsden, Songxue Chi, J. Fernandez-Baca, D. L. Abernathy, D. Lamago, J. M. Tranquada, and D. Reznik, ***Nature Communications*** **5,**3467 (2014)
85. **The role of random electric field in relaxors** Daniel Phelan, Christopher Stock, Jose A. Rodriguez-Rivera, Songxue Chi, Juscelino B Leao , Xifa Long , Yujuan Xie , Alexei A Bokov , Zuo-Guang Ye , P. Ganesh and Peter M Gehring ***PNAS*** 1314780111 (2014)
86. **Intertwining of frustration with magneto-elastic coupling in the multiferroic LuMnO3** Shin-ichiro Yano, Despina Louca, Songxue Chi, Masaaki Matsuda, Yiming Qiu, John R. D. Copley, Sang-Wook Cheong ***Journal of the Physical Society of Japan*** **83**, 024601 (2014)
87. **In-plane spin excitation anisotropy in the paramagnetic phase of NaFeAs** Yu Song, Louis-Pierre Regnault, Chenglin Zhang, Guotai Tan, Scott V. Carr, Songxue Chi, A. D. Christianson, Tao Xiang, Pengcheng Dai ***Phys. Rev. B*** **88**, 1134512 (2013)
88. **Polar and Magnetic Layered A-Site and Rock Salt B-Site Ordered $NaLnFeWO_6$ (Ln= La, Nd) Perovskites** Retuerto, Maria; Li, Man-Rong; Ignatov, Alexander; Croft, Mark; Ramanujachary, Kandalam; Chi, Songxue; Hodges, Jason; Dachraoui, Walid; Hadermann, Joke; Tran, Thanh; Halasyamani, P. Shiv; Grams, Christoph; Hemberger, Joachim; Greenblatt, Martha ***Inorganic Chemistry*** **52,** 12482 (2013)
89. **Magnetic phase transition in the low-dimensional compound $BaMn_2Si_2O_7$** J. Ma, C. D. Dela Cruz, T. Hong, W. Tian, A. A. Aczel, Songxue Chi, J.-Q. Yan, H. D. Zhou, and M. Matsuda ***Phys. Rev. B***. **88** 144405 (2013)
90. **Magnetic and structural phase transitions in $LaCoO_3$.** A.M. Durand, D.P. Belanger, C.H. Booth, F. Ye, S. Chi, J.A. Fernandez-Baca, M. Bhat ***J. Phys.: Condens. Matter*** **25** 382203 (2013)
91. **Uniaxial pressure effect on structural and magnetic phase transitions in NaFeAs and its comparison with as-grown and annealed BaFe$_2$As$_2$** Yu Song, Scott V. Carr, Xingye Lu, Chenglin Zhang, Zachary C. Sims, N. F. Luttrell, Songxue Chi, Yang Zhao, Jeffrey W. Lynn, Pengcheng Dai ***Phys. Rev. B*** **87**, 184511 (2013)
92. **The magnetic and crystal structures of Sr_2IrO_4: A neutron diffraction study** Feng Ye, Songxue Chi, Bryan C. Chakoumakos, Jaime A. Fernandez-Baca, Tongfei Qi, G. Cao ***Phys. Rev. B*** 87, 140406 (R) (2013)
93. **Powder Neutron Diffraciton Study of $HoCoGa_5$** Riki Kobayashi, Koji Kaneko, Songxue Chi, Naoyuki Sanada, Ryuta Watanuki and Kazuya Suzuki ***J. Korean Phys. Soc.63,****337* (2013)

94. **Neutron Scattering Study on Spin Dynamics in Superconducting $(Tl,Rb)_2Fe_4Se_5$** Songxue Chi, Feng Ye, Wei Bao, Minghu Fang, H. D. Wang, C. H. Dong, A. T. Savici, G. E. Granroth, M. B. Stone, and R. S. Fishman ***Phys. Rev. B* 87,** 100501(R) (2013)
95. **Magnetic orders and spin-flop transitions in the cobalt doped multiferroic $Mn_{1-x}Co_xWO_4$** Feng Ye, Songxue Chi, Jaime A. Fernandez-Baca, Huibo Cao, K.-C. Liang, Yaqi Wang, Bernd Lorenz, C. W. Chu ***Phys. Rev. B.*** 86, 094429 (2012)
96. **A magnetoelectric multiglass state in multiferroic $YbFe_2O_4$** Young Sun, Yi Liu, Feng Ye, Songxue Chi, Yang Ren, Tao Zou, Fen Wang, and Liqin Yan ***J. Appl. Phys.111,*** 07D902 **(**2012)
97. **Single-bilayer E-type antiferromagnetism in Mn-substituted $Sr_3Ru_2O_7$:Neutron scattering study** Dalgis Mesa, Feng Ye, Songxue Chi, J. A. Fernandez-Baca, Biao Hu, R. Jin, E.W. Plummer, Jiandi Zhang ***Phys. Rev. B* 85**, 180410 (R) (2012)
98. **Structure and magnetic properties of the pyrochlore iridate $Y_2Ir_2O_7$** M. C. Shapiro, S. C. Riggs, M. B. Stone, C. R. Dela Cruz, S. Chi, A. Podlesnyak, and I. R. Fisher ***Phys. Rev. B*, 85**, 214434 (2012)
99. **Direct evidence of a zigzag spin chain structure in the honeycomb lattice: A neutron and x-ray diffraction investigation on single crystal Na_2IrO_3** Feng Ye, Songxue Chi, Huibo Cao, Bryan Chakoumakos, Jaime A. Fernandez-Baca, Radu Custelcean, Tongfei Qi, O. B. Korneta, and G. Cao **Phys. Rev. B 85,** 180403(R) (2012)
100. **Block magnetism coupled with local distortion in the iron-based spin ladder $BaFe_2Se_3$** Yusuke Nambu, Kenya Ohgushi, Shunpei Suzuki, Fei Du, Maxim Avdeev, Yoshiya Uwatoko, Koji Munakata, Hiroshi Fukazawa, Songxue Chi, Yutaka Ueda, and Taku J Sato ***Phys. Rev. B* 85**, 064413 (2012)
101. **Spin glass and semiconducting behavior in one-dimensional $BaFe_{2-\delta}Se_3$ ($\delta \approx 0.2$) Crystals** Bayrammurad Saparov, Stuart A. Calder, Balazs Sipos, Huibo Cao, Songxue Chi, David J. Singh, Andrew D. Christianson, Mark D. Lumsden and Athena S. Sefat ***Phys. Rev B* 84,** 245132 **(**2011)
102. **Double Focusing Thermal Triple Axis Spectrometer at the NCNR** J. W. Lynn, Y. Chen, S. Chang, Y. Zhao, Songxue Chi, W. Ratcliff, II, B. G. Ueland, and R. W. Erwin ***J. Research NIST* 117,** No. 1 (2011)
103. **Common origin of two types of magnetic fluctuations in iron chalcognenides** Songxue Chi, J. A. Rodriguez, J. W. Lynn, Chenglin Zhang, D. Phelan, D. K. Singh, R. Paul, and Pengcheng Dai, ***Phys. Rev. B* 84,** 214407(2011)
104. **Response of acoustic phonons to charge and orbital order in the 50% doped bilayer manganite $LaSr_2Mn_2O_7$** F. Weber, S. Rosenkranz, J.-P Castellan, R. Osborn, D. Reznik, H. Zheng, J. F. Mitchell, Y. Chen, Songxue Chi, J. W. Lynn ***Phys. Rev. Lett. 107,*** *207202* (2011)
105. **Magnetic field tuning of antiferromagnetic Yb_3Pt_4** L. S. Wu, Y. Janssen, C. Marques, M. C. Bennett, M. S. Kim, K. S. Park, M. C. Aronson, Songxue Chi, and J. W. Lynn ***Phys. Rev. B* 84,** 134409 (2011)
106. **Neutron scattering studies of spin excitations in hole-doped $Ba_{0.67}K_{0.33}Fe_2As_2$ superconductor** Chenglin Zhang, Meng Wang, Miaoyin Wang, Jun Zhao, Karol Marty, M. D. Lumsden, Songxue Chi , Sung Chang, J. W. Lynn, Huiqian Luo, Tao Xiang, Jiangping Hu, Pengcheng Dai ***Scientific Reports* 1,** 115 (2011)
107. **Common crystalline and magnetic structure of superconducting $A_2Fe_4Se_5$ (A=K,Rb,Cs,Tl) single crystals measured using neutron diffraction** F. Ye, Songxue Chi, Wei Bao, X. F. Wang, J. J. Ying, X. H. Chen, H. D. Wang, C. H. Dong, Minghu Fang ***Phys. Rev. Lett.* 107**, 137003 (2011)
108. **Coupling of field-induced spin fluctuations and sliding spin density wave in intermetallic $CeAg_2Ge_2$** D.K. Singh,, A. Thamizhavel, S. Chang, J.W. Lynn, D. Joshi, S.K. Dhar, and Songxue Chi ***Phys. Rev. B*** 84, 052401 (2011)
109. **Local-moment magnetism in superconducting $FeTe_{0.35}Se_{0.65}$ as seen via inelastic neutron scattering** Zhijun Xu, Jinsheng Wen, Guangyong Xu, Songxue Chi, Wei Ku, Genda Gu, and J. M. Tranquada ***Phys. Rev. B* 84**, 052506 (2011)
110. **$HfFeGa_2$ and $HfMnGa_2$: Transition-metal-based itinerant ferromagnets with low Curie temperatures** C. Marques, Y. Janssen, M. S. Kim, L. Wu, Songxue Chi, J. W. Lynn, and M. C. Aronson ***Phys. Rev. B*** 83, 184435 (2011)
111. **Neutron diffraction investigation of magnetism in $BiFeO_3$ epitaxial films** William D. Ratcliff, D. Kan, WangChun Chen, Shannon Watson, Songxue Chi, Ross W. Erwin, Garry J. McIntyre, Silvia C. Capelli, I. Takeuchi ***Advanced Functional Materials*, 21**, 1567 (2011)

112. **Magnetic field effect on the static antiferromagnetic order and spin excitations in underdoped iron arsenide superconductor $BaFe_{1.92}Ni_{0.08}As_2$** Miaoyin Wang, Huiqian Luo, Meng Wang, Songxue Chi, Jose A. Rodriguez-Rivera, Deepak Singh, Sung Chang, Jeffrey W. Lynn and Pengcheng Dai ***Phys. Rev. B* 83**, 094516 (2011)
113. **Nitrogen Contamination in Elastic Neutron Scattering** Songxue Chi, Jeff W. Lynn, Y. Chen, W. Ratcliff II, Benjamin G. Ueland, N. P. Butch, S. Saha and J. Paglione ***Meas. Sci. Technol.* 22** 047001 (2011).
114. **Antiferromagnetic critical fluctuations in $BaFe_2As_2$** Stephen D. Wilson, Z. Yamani, C. R. Rotundu, B. Freelon, P. N. Valdivia, E. Bourret-Courchesne, J. W. Lynn, Songxue Chi, Tao Hong, and R. J. Birgeneau ***Phys. Rev. B* 82**, 144502 (2010)
115. **Disappearance of static magnetic order and evolution of spin fluctuations in $Fe_{1+\delta}Se_xTe_{1-x}$** Zhijun Xu, Jinsheng Wen, Guangyong Xu, Qing Jie, Zhiwei Lin, Qiang Li, Songxue Chi, D. K. Singh, Genda Gu, and J. M. Tranquada ***Phys. Rev. B* 82**, 104525 (2010)
116. **Doping Dependence of Spin Dynamics in Electron-Doped $Ba(Fe_{1-x}Co_x)_2As_2$** K. Matan, S. Ibuka, R. Morinaga, Songxue Chi, J. W. Lynn, A. D. Christianson, M. D. Lumsden, T. J. Sato ***Phys. Rev. B 82*** *054515* (2010)
117. **Antiferromagnetic critical pressure in URu_2Si_2 under hydrostatic conditions** N. P. Butch, J. R. Jeffries, Songxue Chi, J. B. Leão, J. W. Lynn, and M. B. Maple ***Phys. Rev. B* 82,** R33030 (2010)
118. **Magnetic and Structural Properties of $Ca(Fe_{1-x}Co_x)_2P_2$ and $Ca(Ni_{1-x}Co_x)_2P_2$** Shuang Jia, Songxue Chi, J. W. Lynn, R. J. Cava ***Phys. Rev. B* 81,**214446 (2010)
119. **Electron-doping evolution of the low-energy spin excitations in the iron arsenide $BaFe_{2-x}Ni_xAs_2$ superconductors** Miaoyin Wang, Huiqian Luo, Jun Zhao, Chenglin Zhang, Meng Wang, Karol Marty, Songxue Chi, Jeffrey W. Lynn, Astrid Schneidewind,Shiliang Li, Pengcheng Dai ***Phys. Rev. B* 81,**174524 (2010)
120. **Effect of magnetic field on the spin resonance in $FeTe_{0.5}Se_{0.5}$ as seen via inelastic neutron scattering** Jinsheng Wen, Guangyong Xu, Zhijun Xu, Zhi Wei Lin, Qiang Li, Ying Chen, Songxue Chi, Genda Gu, J. M. Tranquada ***Phys. Rev. B 81,*** *100513(R)* (2010)
121. **Evolution of the bulk properties, structure, magnetic order, and superconductivity with Ni doping in $CaFe_{2-x}Ni_xAs_2$** Neeraj Kumar, Songxue Chi, Ying Chen, Kumari Gaurav Rana, A. K. Nigam, A. Thamizhavel, William Ratcliff, II, S. K. Dhar, and Jeffrey W. Lynn ***Phys. Rev. B 80****, 144524 (2009).*
122. **Electronic Self-Organization in the Single-Layer Manganite $Pr_{1-x}Ca_{1+x}MnO_4$** F. Ye, Songxue Chi, J. A. Fernandez-Baca, A. Moreo, E. Dagotto, J. W. Lynn, R. Mathieu, Y. Kaneko, Y. Tokura, and Pengcheng Dai ***Phys. Rev. Lett. 103****, 167202 (2009).*
123. **Inelastic neutron scattering measurements of a three-dimensional spin resonance in the FeAs-based $BaFe_{1.9}Ni_{0.1}As_2$ superconductor** Songxue Chi, Astrid Schneidewind, Jun Zhao, Leland W. Harriger, Linjun Li, Yongkang Luo, Guanghan Cao, Zhu'an Xu, Michael Loewenhaupt, Jianping Hu and Pengcheng Dai, ***Phys. Rev. Lett. 102****, 107006 (2009).*
124. **Crystalline electric field as a probe for long range antiferromagnetic order and superconductivity in $CeFeAsO_{1-x}F_x$,** Songxue Chi, D. T. Adroja, T. Guidi, R. Bewley, Shliang Li, Jun Zhao, J. W. Lynn, C. M. Brown, Y. Qiu, G. F. Chen, J. L. Lou, N. L. Wang, and Pengcheng Dai, ***Phys. Rev. Lett. 101****, 217002 (2008).*
125. **Impact of oxygen annealing on the heat capacity and magnetic resonance of superconducting $Pr_{0.88}LaCe_{0.12}CuO_4$** Shiliang Li, Songxue Chi, Jun Zhao, H.-H. Wen, M. B. Stone, J. W. Lynn, and Pengcheng Dai ***Phys. Rev. B 78****, 014520 (2008).*
126. **Inelastic neutron scattering study of crystal field levels in $PrOs_4As_{12}$** Songxue Chi, Pengcheng Dai, T. Barnes, H. J. Kang, J. W. Lynn, R. Bewley, F. Ye, M. B. Maple, Z. Henkie, and A. Pietraszko ***Phys. Rev. B* 77**, *094428 (2008)*
127. **Effect of antiferromagnetic spin correlations on lattice distortion and charge ordering in $Pr_{0.5}Ca_{1.5}MnO_4$** Songxue Chi, F. Ye , Pengcheng Dai, J. A. Fernandez-Baca , Q. Huang , J. W. Lynn , E. W. Plummer, R. Mathieu, Y. Kaneko, and Y. Tokura ***Proc. Natl. Acad. Sci.*** *USA* ***(PNAS) 104****, 11796-11801 (2007).*
128. **Field-dependent ordered phases and Kondo phenomena in the filled skutterudite compound $PrOs_4As_{12}$** M. B. Maple, N. P. Butch, N. A. Frederick, P.-C. Ho, J. R. Jeffries, T. A. Sayles, T. Yanagisawa, W. M. Yuhasz, Songxue Chi,

H. J. Kang, J. W. Lynn, Pengcheng Dai, S. K. McCall, M. W. McElfresh, M. J. Fluss, Z. Henkie, and A. Pietraszko ***Proc. Natl. Acad. Sci.*** *USA* ***(PNAS)*** **103**, 6783-6789 (2006)

129. **Resonance in the electron doped high transition temperature superconductor $Pr_{0.88}LaCe_{0.12}CuO_{4-\delta}$** Stephen D. Wilson, Pengcheng Dai, Shiliang Li, Songxue Chi, H. J. Kang and J. W. Lynn ***Nature 442****, 59-62 (2006)*
130. **Conduction Behavior of $SrBi_2Ta_2O_9$ Thin Film Grown by Pulsed Laser Deposition** Jin Soo Kim, Ill Won Kim, Chang Won Ahn, Tae Kwon Song, Sang Su Kim, Song Xue Chi, Jong Seong Bae and Jung Hyun Jeong, ***Japanese Journal of Applied Physics***, **41,** 6785-6789 (2002)
131. **Ferroelectric Properties of $La_{0.75}Bi_{3.25}Ti_3O_{12}$ Ceramic and Thin Films Prepared by Pulsed Laser Deposition** Ill Won Kim, Sung Hoon Kim, Sung Lae Cho, Jong Seong Bae, Song Xue Chi, Jung Hyun Jeong and Jae Shin Lee, ***Ferroelectrics***, **260**, 119-124 (2001)

TALKS AND PRESENTATIONS

Invited talks:

1. Effect of antiferromagnetic spin correlations on lattice distortion and charge ordering in $Pr_{0.5}Ca_{1.5}MnO_4$
Invited seminar at the Dept. of Phys. of University of Tennessee (Oct. 2007)
2. Evolution of CE-phase in layered manganites
Seminar at NIST Center for Neutron Research (Aug. 2008)
3. Spin fluctuations in iron-based superconductors
Seminar at NIST Center for Neutron Research (June 2009)
4. Crystalline Electric Field (CEF) as a probe for AFM order and SC state of $CeFeAsO_{1-x}F_x$
Seminar at ORNL (June 2010)
5. Magnetic phase transitions of Ni-doped MnTiO3
Seminar at ORNL (Dec. 2011)
6. Magnetic structure and spin dynamics of the intercalated iron selenide superconductors
Seminar at ORNL (Oct. 2013)
7. HB3 Backend Upgrade Plan
Seminar at ORNL (Oct. 2015)
8. HB3 Neutron Velocity Selector Project
Scientific Productivity Steering Committee Meeting (Sept. 2016)
9. Status of Triple-axis Spectrometers at HFIR
Quantum Materials Young Investigator Workshop (June 2018)
10. Harnessing the High Flux: Neutron Scattering Instrumentation at HFIR
NSD and NTD Seminar Series: Why Neutrons

Conference Presentations

1. Current-Voltage Characteristic of Pulsed Laser Ablated $SrBi_2Ta_2O_3$ Thin Films
2001 Physical Society-Spring Meeting. (South Korea)
2. Structural and magnetic properties of single layered manganite $Pr_{0.5}Ca_{1.5}MnO_4$
2006 American Physical Society March Meeting
3. Magnetic structure and crystal field potential of $PrOs_4As_{12}$

2007 American Physical Society March Meeting

4. Phase separation in $Pr_{0.55}Ca_{1.45}MnO_4$ evidenced by magnetic excitations

2008 American Physical Society March Meeting

5. The crystal electric field as a probe for long range magnetic ordering and superconductivity in $CeFeAsO_{1-x}F_x$

2009 American Physical Society March Meeting

6. Evolution of the bulk properties, structure, magnetic order and superconductivity with Ni doping in $CaFe_{2-x}Ni_xAs_2$

2010 American Physical Society March Meeting

7. Neutron study of spin fluctuations in iron chalcogenide

2011 American Physical Society March Meeting

8. Elastic neutron scattering study of $BaMn_{0.97}Li_{0.03}O_3$ single crystal

2011 American Crystalographic Association Meeting

9. Magnetic phase transitions in single crystalline $Mn_{1-x}Ni_xTiO3$

2012 American Physical Society March Meeting

10. Effective J_1-J_2 model for the spin wave in the superconducting $(Tl,Rb)_2Fe_4Se_5$

2013 American Physical Society March Meeting

11. Magnetic order and negative thermal expansion in $Ca_2Ru_{1-x}Fe_xO_4$

2014 American Physical Society March Meeting

12. Neutron scattering studies on semiconducting Rb0.8Fe1.5S

2015 American Physical Society March Meeting

13. The pressure effects on the antiferromagentic orders in iron-based ladder compounds BaFe2S3

2016 American Physical Society March Meeting

14. Magnetic precursor of the pressure-induced superconductivity in Fe-ladder compound

2017 American Physical Society March Meeting

15. The magnetic field effect on the two competing magnetic phases in $Ca_2Ru_{0.92}Fe_{0.08}O_4$

2018 American Physical Society March Meeting

16. Competition of three-dimensional magnetic phases in Ca2Ru1−xFexO4: A structural perspective

2021 American Physical Society March Meeting

FUNDINGS

PI: 2024 Graduate Research at ORNL (GRO), Awarded funding to mentor graduate student

PI: 2024 Proposal “Probing Spin-Orbit Mott Insulators with Pressure” was awarded funding to mentor a postdoc associate.

PI: 2016 HB3 Neutron Velocity Selector ($2,500,000)

Co-PI: 2013 WAND Phase One Upgrade

Contributor 2023 LDRD GPU-based Resolution And Visualization Interface for Triple-Axis Spectrometers

Contributor 2021 Alignment Robot for Large Format Neutron Sample Environments with Square One Systems- Design, Inc., Funding for SBIR/STTR

Collaborator 2021 NSF CAREER funding and DOE EPSCoR funding. “Machine Learning Assisted Discovery of Nanostructures with Significant Phonon Localization” PI: Yan Wang University of Nevada, Reno

SERVICES

Workshops

Lead Organizer, August 2020 Neutrons and Complementary Techniques for Quantum Materials
Lead Organizer, September 2022 Neutrons and Complementary Techniques for Quantum Materials
Lead Organizer, July 2024 Neutrons and Complementary Techniques for Quantum Materials

Advisory Board

Sept. 2022 to present Advisory board member of the DOE supported consortium CA2REERs

Funding Reviews

2024 Discovery and Innovation Grant for the University of Wisconsin-Milwaukee
2024 Technical Reviewer for ORNL LDRD proposal

Manuscript Reviews

More than **75** verified reviews of manuscripts for 20 research journals such as **Nature Physics, Nature Communications, Physical Review Letters, Physical Review B** and **Journal of Physics:Condensed Matter.**

Session Chair at Conferences

1. **Session K6: Ruthenates** 2016 American Physical Society March Meeting
2. **Session A43: Spin Orbit Physics in Oxides I** 2017 American Physical Society March Meeting
3. **Session X11: Fe-based superconductivity - Neutron scattering and magnetism** 2018 American Physical Society March Meeting

Editorial Roles:

Associate Editor for ***Frontiers in Electronic Materials***

Instrument Development and Upgrades:

BT7 Analyzer System (NIST Center for Neutron Research)
WAND Single Crystal Measurement Capability and Phase I Upgrade (HFIR ORNL)
HB3 Neutron Velocity Selector Project (HFIR ORNL)
HB3 Backend Rebuild (HFIR ORNL)

Technical Support:

High-Temperature Steering committee

IPTS Feasibility Review Work Group
HFIR Beam Room Planning Work Group
"Wash Up Meeting" Work Group

Other Services:
2021-present NSD Award Committee