Ling Li

Postdoctoral Research Associate

Chemical Sciences Division

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Research Interest

My current research interest lies in developing novel materials/processing methods in an attempt to save critical materials such as lithium and rare earths. Specifically, ongoing projects include developing bonded permanent magnets using additive manufacturing, developing novel sorbents for lithium extraction from geothermal brine, etc.

Education

Aug. 2015	Doctor of Philosophy in Materials Science, **University of Tennessee, Knoxville**, USA Thesis: "Crystal growth and physical property characterization of complex perovskite oxides" Advisors: Veerle M. Keppens and David G. Mandrus
Jul. 2010	Bachelor of Science in Materials Science, **University of Science and Technology Beijing**, China

Experience

Nov. 2015 - present	Postdoctoral Research Associate, Chemical Sciences Division, Oak Ridge National Laboratory Advisor: M. Parans Paranthaman

Honors

2015	Chancellor's Citation Award – Extraordinary Professional Promise, University of Tennessee, Knoxville
2015	Joseph E. Spruiell Award for Excellence in Research, Dept. MSE, University of Tennessee, Knoxville
2014	First place in student poster competition, ASM Oak Ridge Chapter (1 out of 43 Ph.D. students)
2007	Outstanding Student Leader of the College, University of Science and Technology Beijing, China
2006-2010	Freshmen scholarship and National scholarships, University of Science and Technology Beijing, China

Oral Presentations

Feb. 2016	"Improved Methods for Lithium Extraction." Critical Materials Institute annual winter meeting, Colorado School of Mines, Golden, CO.
Nov. 2015	"The study of structural phase transition in $EuTi_{1-x}Nb_xO_3$ by resonant ultrasound spectroscopy." Acoustic Society of America 170th meeting, Jacksonville, FL. **(Invited)**
Mar. 2014	"Elastic softening and doping induced ferromagnetism in quantum paraelectric $EuTiO_3$." American Physical Society March Meeting, Denver, CO.
Feb. 2014	"Elastic softening and doping induced ferromagnetism in quantum paraelectric $EuTiO_3$." Materials Science and Engineering department seminar, University of Tennessee, Knoxville, TN.
Aug. 2013	"Magnetic structure study of NiO by Neutron Powder Diffraction." Elected to attend the National School on Neutron and X-ray Scattering, ORNL and ANL.
Mar. 2013	"Resonant ultrasound studies of double perovskites A_2FeReO_6 (A = Ba, Ca)." American Physical Society March Meeting, Baltimore, MD.

Publications

Appeared

1. A. Banerjee, C. A. Bridges, J.-Q. Yan, A. A. Aczel, L. Li, M. B. Stone, G. E. Granroth, M. D. Lumsden, Y. Yiu, J. Knolle, S. Bhattacharjee, D. L. Kovrizhin, R. Moessner, D. A. Tennant, D. G. Mandrus and S. E. Nagler,"Proximate Kitaev quantum spin liquid behaviour in a honeycomb magnet." Nature Materials (2016).
2. S. Calder, L. Li, S. Okamoto, Y. Choi, R. Mukherjee, D. Haskel, D. Mandrus, "Spin-orbit driven magnetic insulating state with J_{eff}= 1/2 character in a 4d oxide." Phys. Rev. B **92**, 180413(R) (2015).
3. L. Li, J. R. Morris, M. R. Koehler, Z. L. Dun, H. D. Zhou, J.-Q. Yan, D. Mandrus and V. Keppens, "Structural and magnetic phase transitions in $EuTi_{1-x}Nb_xO_3$." Phys. Rev. B **92**, 024109 (2015). **[Editor's Suggestion]**
4. A.A. Aczel, L. Li, V.O. Garlea, J.-Q. Yan, F. Weickert, V.S. Zapf, M. Jaime, P.J. Baker, V. Keppens, and D. Mandrus, "Spin liquid ground state in the frustrated J1-J2 zigzag chain system $BaTb_2O_4$." Phys. Rev. B **92**, 041110(R) (2015).
5. L. Li, M. R. Koehler, I. Bredeson, J. He, D. Mandrus and V. Keppens, "Magnetoelastic coupling in A_2FeReO_6 (A = Ba and Ca) probed by elastic constants and magnetostriction measurements." J. Appl. Phys. **117**, 213913 (2015).
6. D. S. Parker, N. Ghimire, J. Singleton, J. D. Thompson, E. D. Bauer, R. Baumbach, D. Mandrus, L. Li, and D. J. Singh, "Magnetocrystalline anisotropy in UMn_2Ge_2 and related Mn-based actinide ferromagnets." Phys. Rev. B **91**, 174401 (2015).
7. D. Braam, C. Gomez, S. Tezok, E.V.L. de Mello, L. Li, D. Mandrus, Hae-Young Kee, J.E. Sonier, "Magnetic properties of the helimagnetic $Cr_{1/3}NbS_2$ observed by muSR." Phys. Rev. B **91**, 144407 (2015).
8. L. Li, H. D. Zhou, J.-Q. Yan, D. Mandrus and V. Keppens, "Magnetic phase diagram of $EuTi_{1-x}B_xO_3$ (B=Zr, Nb)." APL Materials **2**, 110701 (2014).
9. A. A. Aczel, L. Li, V. O. Garlea, J.-Q. Yan, F. Weickert, M. Jaime, B. Maiorov, R. Movshovich, L. Civale, V. Keppens, D. Mandrus, "Magnetic ordering in the frustrated J1-J2 Ising chain candidate $BaNd_2O_4$." Phys. Rev. B **90**, 134403 (2014).
10. A. A. Aczel, D. E. Bugaris, L. Li, J.-Q. Yan, C. de la Cruz, H.-C. zur Loye, and S. E. Nagler, "Frustration by Competing Interactions in the Highly-distorted Double Perovskites $La_2NaB'O_6$ (B' = Ru, Os)." Phys. Rev.B **87**, 014435 (2013).

Submitted

1. T. Li, A. Patz, P. Lingos, L. Mouchliadis, L. Li, J. Yan, I. E. Perakis, J. Wang, "Correlating Quasi–Electron Relaxation with Quantum Femtosecond Magnetism in the Order Parameter Dynamics of Insulating Manganites." arXiv:1409.1591 (2014).