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RESEARCH INTERESTS

Design and synthesis of novel materials, crystal growth; local and itinerant moment magnetism, strongly correlated electron systems, heavy fermions systems, quantum criticality, superconductivity.

PROFESSIONAL EXPERIENCE

Professor
Rice University, Department of Electrical and Chemical Engineering 2015 - present
Rice University, Department of Materials Science and Nanoengineering 2015 - present
Rice University, Department of Chemistry, Houston
Rice University, Department of Physics and Astronomy (primary appointment)

Associate Professor 2013 - 2015
Rice University, Department of Materials Science and Nanoengineering
Rice University, Department of Chemistry, Houston
Rice University, Department of Physics and Astronomy (primary appointment)

Assistant Professor 2007 - 2013
Rice University, Department of Chemistry
Rice University, Department of Physics and Astronomy

Co-chair, *Rice Quantum Institute Applied Physics Program* 2012 - present
Member, *Rice Quantum Institute Executive Committee* 2007 - present
Member, *Rice University, Shared Equipment Authority Board* 2011 - present

Postdoctoral Research Associate 2005 - 2007
Princeton University, Department of Chemistry

EDUCATION

Ph.D. in Physics and Astronomy, *Iowa State University, Ames IA* 2005
B.S. in Physics, *Al. I. Cuza University, Iasi, Romania* 1999

HONORS AND PROFESSIONAL ACTIVITIES

National Academy of Sciences (NAS) Kavli "Frontiers of Science" 2014, 2016
13th and 15th Japanese-American Symposium, planning group, member
Rice Center for Quantum Materials, launch symposium, organizer 2014
Scientific Reports, Editorial Board, *member* 2014 - present
Gordon and Betty Moore Foundation Fellow in Materials Synthesis 2014
American Physical Society, DMP Executive Committee, *member-at-large* 2014 - present
Winter School on Superconductivity, Hong Kong, *organizer* 2013
National Academy of Sciences (NAS) Kavli Frontiers Fellow 2012
Presidential Early Career Award for Scientists and Engineers (PECASE) 2010

National Science Foundation (NSF) CAREER Award 2009

International Workshop on the Search for New Superconductors, Kanagawa, Japan
program committee, member 2009

Ralph E. Powe Junior Faculty Enhancement Award, ORAU 2008

ICAM Fellowship Committee, *member* 2007-present

American Physical Society, *member* 2002-present

American Chemical Society, *member* 2014-present

American Association for the Advancement of Science, *member* 2014-present

Reviewer: NSF, DOE, ARL, NSERC, ESRF; Scientific Reports, PNAS, PRL, PRB, PRA, J. Cryst. Growth Design, Chem. Mater., J. Mater. Chem., J. Magn. Res., J. Phys.: Condens. Matter, J. Phys: Conference Series.

American Physical Society March Meeting, *session chair*

ADVANCE workshop for women in science and engineering, Rice University
Panel member 2008, 2009, 2012

Career girls role model 2012

TECHNICAL EXPERTISE

Materials synthesis: single crystal growth - metal and salt fluxes, chemical and physical vapor transport; polycrystalline synthesis – solid-state chemistry, induction- and arc-melting.

Characterization: crystallography, powder xray diffraction, elemental analysis, x-ray photoemission spectroscopy; magnetization and specific heat measurements, electrical transport.

ADVISEES AND THESIS DIRECTOR

Graduate students: Eteri Svanidze (PhD 2015), Jiakui Wang (PhD 2015), Liang Zhao (PhD, 2012), Justin Chen (MS, 2014), Vishwa Nellore (MS, 2010), Chih-Wei Chen (PhD candidate, 2011-present), Binod Rai (PhD candidate, 2013-present), Jessica Santiago (2014-present), Jesse Choe (2014-present).

Postdoctoral Associate:

Dr. Andrea Marcinkova (2011-2014)

Undergraduate students: Ajay Subramanian (2014-present), Brian Brenner (2014-present), Karl Pierce (2014-present), Elena Busch (2014-2015), David Clark (2014- present), Ali Habib (2015-present), James Lee (2014), Stephanie Padley (2012-2014), Jamie Stone (2012-2014), Chris Georgen (2012-present), Matthew Kindy II (2012-2014), Vlad Ghita (2011-2012), Joshua Yip (Rice Century Scholar, 2010-2012), Alex Lambert, Victor Leyva (2010); Michael Mehlman (senior thesis, 2008-2009); Alex Eukel (undergraduate visiting summer student, 2010)

Interns: Ellen Kunzeman, Mark Hendricks, Jose Tusell, Sonja Khan, Phuan Vo, Emily Maxwell (REU summer students); Stephanie Rosales, Stephanie Padley (high school visiting students); Dr. Rhett Woo, Alvenia Chambliss, Katherine Celestine, Ralph Cox (RET summer teacher interns); Douglas Bollinger, Hikaru Iwata, Keisuke Takamizawa (Nano-Japan summer interns)

INVITED PRESENTATIONS

- *Invited colloquium or seminar speaker at many academic institutions, including* Yale University, Boston College; UC Davis; Princeton University; University of Tennessee; Florida State University; Zhejiang University, Hangzhou China; University of Texas at Austin; Stanford University; Sam Houston State University; John Hopkins University; Louisiana State University; Tulane University; Texas A&M University; University of Houston; University of Michigan; University of Minnesota.
- *Invited speaker at national and international workshops and symposia:* Moore Foundation Workshop (Sausalito CA); NSF SCES workshop (Arlington VA); CIFAR-EPiQS workshop, Vancouver CA (2015); US-Japan Kavli Frontiers of Science, Tokyo, Japan (2012); SCES@60 workshop, Urbana IL (2014); CIFAR-MPI14, Stuttgart, Germany (2014); QCM14 from atoms to bulk, Obergurgl, Austria (2014); keynote speaker, Physics and Modern Educational Technologies symposium FTEM, Iasi, Romania (2014); super-PIRE REIMEI workshop, Beijng, China (2014); US-China Workshop on Superconductivity, Hong Kong (2011, 2013); NSF workshop "Materials by Design", UC Santa Barbara CA (2010); Institute of Physics, CAS, Beijing China (2010); US-Japan Kavli Frontiers of Science, Santa Barbara CA (2012); Aspen Center for Physics, Aspen CO (2009); International Workshop on the Search for New Superconductors, Kanagawa, Japan (2009)

PUBLICATIONS

1. Yu Song, Zahra Yamani, Chongde Cao, Yu Li, Chenglin Zhang, Justin Chen, Qingzhen Huang, Hui Wu, Jing Tao, Yimei Zhu, Wei Tian, Songxue Chi, Rong Yu, Andriy H. Nevidomskyy, Emilia Morosan, Qimiao Si, and Pengcheng Dai "An antiferromagnetic insulator near iron pnictide superconductors" Nature Physics (under review)
2. Chih-Wei Chen, Jiakui K. Wang, and Emilia Morosan, "Enhanced ferromagnetism induced by structural phase transitions in $Co_2As_{1-x}P_x$", *Physica B* (under review)
3. E. Svanidze, Jiakui K. Wang, T. Besara, L. Liu, Q. Huang, T. Siegrist, Benjamin Frandsen, J. W. Lynn, Andriy H. Nevidomskyy, Monica Barbara Gamza, M. C. Aronson, Y. Uemura and E. Morosan, "Novel Itinerant Antiferromagnet TiAu" *Nat. Commun.* **6**, 7701 (2015)
4. Andrea Marcinkova, Clarina de la Cruz, Joshua Yip, Liang L. Zhao, Jiakui K. Wang, E. Svanidze and E. Morosan, "Strong magnetic coupling in the hexagonal R_5Pb_3 compounds (R = Gd-Tm) ", *J. Magn. Magn. Mater.* **384**, 192 (2015)
5. Binod K. Rai, Iain W. H. Oswald , Jiakui K. Wang, Gregory T. McCandless, Julia Y Chan and E. Morosan "Superconductivity in $R_3T_4Ge_{13}$ (R = Y, Lu and T = Rh, Co, Os) single crystals" *Chem. Matter.* **27**, 2488 (2015)
6. Binod K. Rai and E. Morosan "Intermediate Valence in Single Crystals of $(Lu_{1-x}Yb_x)_3Rh_4Ge_{13}$ ($0 \le x \le 1$)" *Applied Phys. Lett. Mater.* (invited) **3**, 041511 (2015)
7. Katherine Luna, Phillip M. Wu, Justin S. Chen, Emilia Morosan, Malcolm R. Beasley, "Point-contact tunneling spectroscopy measurement of Cu_xTiSe_2: disorder-enhanced Coulomb effects", *Phys. Rev. B* **91**, 094509 (2015)
8. E. Svanidze, L. Liu, B. Frandsen, B. D. White, T. Besara, T. Goko, T. Medina, T. J. S. Munsie, G. M. Luke, D. Zheng, C. Q. Jin, T. Siegrist, M. B. Maple, Y. J. Uemura and E. Morosan,

"Non-Fermi Liquid Behavior Close to a Quantum Critical Point in a Ferromagnetic State without Local Moments" *Phys. Rev. X* **5**, *011026 (2015)*

9. W. J. Hardy, Chih-Wei Chen, A. Marcinkova, Heng Ji, Jairo Sinova, D. Natelson and E. Morosan, "Very large magnetoresistance in $Fe_{0.28}TaS_2$ single crystals" *Phys. Rev. B* **91**, 054426 (2015)
10. Justin S. Chen, Jiakui K. Wang, Scott V. Carr, Sven C. Vogel, Olivier Gourdon, Pengcheng Dai and E. Morosan, "Remarkable chemical tuning of the electrical transport in $Ti_{1-x}Pt_xSe_{2-y}$", *Phys. Rev. B* **91**, 045125 (2015)
11. Benjamin Huber-Rodriguez, Siu Yi Kwang, Will J. Hardy, Heng Ji, Chih-Wei Chen, E. Morosan, Douglas Natelson, "Thermally Driven Analog of the Barkhausen Effect at the Metal-Insulator Transition in Vanadium Dioxide", *Appl. Phys. Lett*. **105**, 131902 (2014)
12. Jiakui K. Wang, A. Marcinkova, Chih-Wei Chen, Hua He, Meigan Aronson, and E. Morosan, "Magnetic and transport properties of the layered transition-metal pnictides $R_3T_4As_4O_{2-\delta}$ (R = La, Ce, Pr, Nd, and Sm, T = Ni, Cu)" *Phys. Rev. B* **89**, 094405 (2014)
13. A. Marcinkova, J. K. Wang, C. Slavonic, Andriy H. Nevidomskyy, K. F. Kelly, Y. Filinchuk and E. Morosan, "Topological metal behavior in $GeBi_2Te_4$ single crystals" *Phys. Rev. B* **88**, 165128 (2013)
14. Liang L. Zhao, M. S. Mehlman, T. Besara, T. Siegrist and E. Morosan "Thermodynamic and transport properties of RSn_2 (R=Tb-Tm, Lu, Y) single crystals", *J. Magn. Magn. Mater.* **341**, 6 (2013)
15. Eteri Svanidze and E. Morosan, "Cluster-glass behavior induced by local moment doping in the itinerant ferromagnet $Sc_{3.1}In$", *Phys. Rev. B* **88**, 064412 (2013)
16. G. Morrison, N. Haldolaarachchige, CW. Chen, D. P. Young, E. Morosan and Julia Y. Chan, "Synthesis, Structure, and Properties of $Ln_2Ru_3Al_{15}$ (Ln = Ce, Gd): Comparison with $LnRu_2Al_{10}$ and $CeRu_4(Al,Si)_{15.58}$", *Inorg. Chem.* **52**, 3198 (2013)
17. Liang L. Zhao, S. Wu, J. K. Wang, J. P. Hodges, C. Broholm and E. Morosan, "Quasi-two-dimensional noncollinear magnetism in the Mott insulator $Sr_2F_2Fe_2OS_2$", *Phys. Rev. B* **87**, 020406 (2013)
18. W. Adam Phelan, G. V. Nguyen, Jiakui K. Wang, Gregory T. McCandless, E. Morosan, J. F. DiTusa and Julia Y. Chan, "Discovery of Spin Glass Behavior in Ln(2)Fe(4)Sb(5) (Ln = La-Nd and Sm)" *Inorg. Chem*. **51**, 11412 (2012)
19. Su-Yang Xu, Chang Liu, N. Alidoust, D. Qian, M. Neupane, J. D. Denlinger, Y. J. Wang, L. A. Wray, R. J. Cava, H. Lin, A. Marcinkova, E. Morosan, A. Bansil, M. Z. Hasan "Observation of Topological Crystalline Insulator phase in the lead tin chalcogenide $Pb_{1-x}Sn_xTe$ material class", *Nature Commun.* **3**, 1192 (2012)
20. E. Morosan, D. Natelson, Andriy H. Nevidomskyy, Q. Si, "Strongly correlated materials at Rice University", *Adv. Mater.* **24**, 4896 (2012) (invited)
21. Liang L. Zhao, Stefan Lausberg, H. Kim, M. A. Tanatar, Manuel Brando, R. Prozorov, and E. Morosan, "Type I Superconductivity in YbSb2 Single Crystals" *Phys. Rev. B* **85,** 214526 (2012)
22. E. Svanidze and E. Morosan, "Type-I superconductivity in ScGa3 and LuGa3 single

crystals", *Phys. Rev. B* **85**, 174514 (2012)

23. W. Adam Phelan, Michael J. Kangas, Gregory T. McCandless, Brenton L. Drake, Neel Haldolaarachchige, Liang L. Zhao, Jiakui K. Wang, Xiaoping Wang, David P. Young, E. Morosan, Christina Hoffmann, Julia Y. Chan, "Synthesis, Structure, and Physical Properties of *Ln*(Cu,Al,Ga)13-x (*Ln* = La, Ce, Pr, and Eu) and Eu(Cu,Al)13-x" *Inorg. Chem.* **51**, 10193 (2012)
24. Adam C. Colson, Chih-Wei Chen, E. Morosan and Kenton H. Whitmire "Synthesis of Phase-Pure Ferromagnetic Fe3P Films from Single-Source Molecular Precursors" *Adv. Functional Mater.* **22**, 1850 (2012)
25. W. Phelan, Michael Kangas, Brenton Drake, Liang L. Zhao, Jiakui K. Wang, E. Morosan, Julia Chan, "Crystal Growth, Structure, and Physical Properties of LnCu2(Al,Si)5 (Ln = La and Ce)", *Inorg. Chem.* **51**, 920 (2012)
26. Liang L. Zhao, Stella Kim, Gregory McCandles, P. C. Canfield, Julia Chan and E. Morosan, "Effects of chemical doping and hydrostatic pressure effects on $CaFe_4As_3$" *Phys. Rev. B* **84** , 104444 (2011)
27. Jiakui K. Wang, Liang L. Zhao, Q. Yin, G. Kotliar, Moosung Kim, M. C. Aronson and E. Morosan, "Layered transition metal pnictide SrMnBi2 with metallic blocking layer" *Phys. Rev. B* **84**, 064428 (2011) - *Editor's suggestion*
28. Tanghong Yi, Peter Klavins, Adam P. Dioguardi, Nicholas J. Curro, Liang L. Zhao, E. Morosan and Susan M. Kauzlarich, "Synthesis and thermal stability studies of CaFe4As3", *Eur. J. of Inorg. Chem.* **32**, 5054 (2011)
29. C. Sun, J. Kono, A. Imambekov, and E. Morosan, "Anomalous magneto-optical Kerr hysteresis loops in Fe0.25TaS2", *Phys. Rev. B* **84**, 224402 (2011)
30. M. S. Kim, M. C. Aronson, L. L. Zhao and E. Morosan, "Thermal and electrical transport in the spin density wave antiferromagnet CaFe4As3", *Phys. Rev. B* **84**, 075112 (2011)
31. Yusuke Nambu, Liang L. Zhao, Emilia Morosan, Kyoo Kim, Gabriel Kotliar, Pawel Zajdel, Mark A. Green, William Ratcliff, Jose A. Rodriguez-Rivera and Collin Broholm, "Incommensurate Magnetism in FeAs Strips: Neutron Scattering from CaFe4As3" *Phys. Rev. Lett*. **106,** 037201 (2011)
32. E. Morosan, K. E. Wagner, Liang L. Zhao, Y. Hor, A. J. Williams, J. Tao, Y. Zhu and R. J. Cava, "Multiple electronic transitions and superconductivity in PdxTiSe2" *Phys. Rev. B* **81**, 094524 (2010) – *Editor's suggestion*
33. Jian-Xin Zhu, Rong Yu, Hangdong Wang, Liang L. Zhao, M. D. Jones, Jianhui Dai, Elihu Abrahams, E. Morosan, Minghu Fang and Qimiao Si, "Band Narrowing and Mott Localization in Iron Oxychalcogenides La2O2Fe2O(Se,S)2" *Phys. Rev. Lett*. **104**, 216405 (2010)
34. Liang L. Zhao, Tanghong Yi, James C. Fettinger, Susan M. Kauzlarich and E. Morosan, "Fermi liquid state and enhanced electron correlations in the iron pnictide CaFe4As3" *Phys. Rev. B (R)* **80**, 1 (2009) – *Editor's suggestion*
35. R. Bardhan, W. Chen, C. Perez-Torres, M. Bartels, R. M. Huschka, Liang L. Zhao, E. Morosan, R. Pautler, A. Joshi and N. J. Halas, "Nanoshells with targeted simultaneous

enhancement of magnetic and optical imaging and photothermal therapeutic response" *Adv. Functional Mater.* **19**, 3901 (2009)

36. M. D. Vannette, S. Yeninas, E. Morosan, R. J. Cava and R. Prozorov, "Local-moment ferromagnetism and unusual magnetic domains in Fe1/4TaS2 crystals" *Phys. Rev. B* **80**, 024421 (2009)
37. C. S. Levin, C. Hofmann, T. A. Ali, A. T. Kelly, E. Morosan, P. Nordlander, K. H. Whitmire and N. J. Halas, "Magnetic-Plasmonic Core-Shell Nanoparticles" *ACS Nano* **3,** 1379 (2009)
38. C. L. Pint, E. Morosan, Y. Xu and R. H. Hauge, "Alignment effects on the 1-D electronic hopping transport in highly aligned films of ultra-long single-walled carbon nanotubes" *Applied Physics Letters* **94,** 182107 (2009)
39. K. E. Wagner, E. Morosan, Y. S. Hor, J. Tao, Y. Zhu, T. Sanders, T. M. McQueen, H.W. Zandbergen, A. J. Williams, D. V. West and R.J. Cava, "Tuning the Charge Density Wave and Superconductivity in Cu_xTaS_2" *Phys. Rev. B* **78,** 104520 (2008)
40. X. Ke, M. L. Dahlberg, E. Morosan, J. A. Fleitman, R. J. Cava and P. Schiffer, "Magnetothermodynamics of the Ising Antiferromagnet $Dy_2Ge_2O_7$" *Phys. Rev. B* **78,** 104411 (2008)
41. W. Z. Hu, G. T. Wang, Rongwei Hu, C. Petrovic, E. Morosan, R. J. Cava, Z. Fang and N. L. Wang, "Evidence for a band broadening across the ferromagnetic transition of $Cr_{1/3}NbSe_2$" *Phys. Rev. B* **78,** 085120 (2008)
42. E. Morosan, J. A. Fleitman, Q. Huang, J. W. Lynn, Y. Chen, X. Ke, M. L. Dahlberg, P. Schiffer, C. R. Craley and R. J. Cava, "Structure and magnetic properties of the $Ho_2Ge_2O_7$ pyrogermanate" *Phys. Rev. B* **77,** 224423 (2008)
43. D. Qian, D. Hsieh, L. Wray, Y. Xia, R. J. Cava, E. Morosan and M. Z. Hasan, "Evolution of low-lying states in a doped CDW superconductor Cu_xTiSe_2" *Physica B – Cond. Matter* **403,** 1002 (2008)
44. H. Barath, M. Kim, J. F. Karpus, S. L. Cooper, P. Abbamonte, E. Fradkin, E. Morosan, and R. J. Cava, "Quantum and Classical Mode Softening Near the Charge-Density-Wave–Superconductor Transition of Cu_xTiSe_2" *Phys. Rev. Letters* **100,** 106402 (2008)
45. K. L. Holman, E. Morosan, P. A. Casey, Lu Li, N. P. Ong, T. Klimczuk, C. Felser and R. J. Cava, "Crystal structure and physical properties of $Mg_6Cu_{16}Si_7$ – type $M_6Ni_{16}Si_7$ for M = Mg, Sc, Ti, Nb and Ta" *J. Solid State Chemistry* **43,** 9 (2008)
46. E. Morosan, J. Fleitman, T. Klimczuk and R. J. Cava, "Rich magnetic phase diagram in the Kagome-staircase compound $Mn_3V_2O_8$" *Phys. Rev. B* **76,** 144403 (2007)
47. J. G. Checkelsky, Minhyea Lee, E. Morosan, R. J. Cava and N. P. Ong, "The anomalous Hall Effect and magnetoresistance in the layered ferromagnet $Fe_{1/4}TaS_2$, the inelastic regime" *Phys. Rev. B* **77,** 014433 (2008)
48. J. W. G. Bos, J. T. Hertz, E. Morosan and R. J. Cava, "Magnetic and thermoelectric properties of layered $Li_xNa_yCoO_2$" *J. Sol. State. Chem.* **180,** 3217 (2007)
49. S. L. Bud'ko, P. C. Canfield, E. Morosan, R. J. Cava and G. M. Schmiedeshoff, "Thermal expansion and effect of pressure on superconductivity in Cu_xTiSe_2" *J. Phys: Condens. Matter* **19,** 176230 (2007)

50. E. Morosan, L. Li, N.P. Ong and R. J. Cava, "Anisotropic properties of the layered superconductor $Cu_{0.07}TiSe_2$" *Phys. Rev. B* **75,** 104505 (2007)
51. E. Morosan, H. W. Zandbergen, Lu Li, Minhyea Lee, J. G. Checkelsky, M. Heinrich, T. Siegrist, N. P. Ong and R. J. Cava, "Sharp switching of the magnetization in $Fe_{1/4}TaS_2$" *Phys. Rev. B* **75,** 104401 (2007)
52. G. Li, W. Z. Hu, D. Qian, D. Hsieh, M. Z. Hasan, E. Morosan, R. J. Cava and N. L. Wang, "Semimetal to semimetal charge density wave transition in 1*T*-$TiSe_2$" *Phys. Rev. Letters* **99,** 27404 (2007)
53. G. Li, W. Z. Hu, J. Dong, D. Qian, D. Hsieh, M. Z. Hasan, E. Morosan, R. J. Cava and N. L. Wang, "Anomalous metallic state of $Cu_{0.07}TiSe_2$: an optical spectroscopy study" *Phys. Rev. Letters* **99,** 167002 (2007)
54. D. Qian, D. Hsieh, L. Wray, N.L. Wang, E. Morosan, Y. Xia, R.J. Cava and M.Z. Hasan, "Emergence of Fermi pockets in an excitonic CDW melted novel superconductor" *Phys. Rev. Letters* **98,** 117007 (2007)
55. P. A. Goddard, J. Singleton, A. L. Lima-Sharma, E. Morosan, S. J. Blundell, S. L. Bud'ko and P. C. Canfield, "Separation of energy scales in the kagome antiferromagnet TmAgGe: a magnetic-field-orientation study up to 55 T", *Phys. Rev. B* **75,** 094426 (2007)
56. L. Viciu, Q. Huang, E. Morosan, H. W. Zandbergen, N. I. Greenbaum, T. McQueen and R. J. Cava, "Structure and basic magnetic properties of the honeycomb lattice compounds $Na_2Co_2TeO_6$ and $Na_3Co_2SbO_6$" *J. Solid State Chemistry* **180,** 1060 (2007)
57. K. L. Holman, Q. Huang, T. Klimczuk, K. Trzebiatowski, J. W. G. Bos, E. Morosan, J. W. Lynn and R. J. Cava, "Synthesis and properties of the double perovskites La_2NiVO_6, La_2CoVO_6 and La_2CoTiO_6" *J. Solid State Chemistry* **180,** 75 (2007)
58. T. Klimczuk, Q. Xu, E. Morosan, H. W. Zandbergen and R. J. Cava, "Superconductivity in $Mg_{10}Ir_{19}B_{16}$" *Phys. Rev. B (R)* **74,** 220502 (2006)
59. E. Morosan, H. W. Zandbergen, B. S. Dennis, J. W. G. Bos, Y. Onose, T. Klimczuk, A. P. Ramirez, N. P. Ong and R. J. Cava, "Superconductivity in Cu_xTiSe_2" *Nature Physics* **2**, 544 (2006)
60. J.W.G. Bos, M. Lee, **E.** Morosan, H.W. Zandbergen, W.L. Lee, N.P. Ong and R. J. Cava, "Ferromagnetism below 10 K in Mn – doped BiTe" *Phys. Rev. B* **74,** 184429 (2006)
61. E. Morosan, S. L. Bud'ko, Y. A. Mozharivskyj and P. C. Canfield, "Magnetic field-induced quantum critical point in YbPtIn and $YbPt_{0.98}In$ single crystals" *Phys. Rev. B* **73,** 174432 (2006)
62. S. L. Bud'ko, V. S. Zapf, E. Morosan, P. C. Canfield, "Anisotropic Hall effect in single crystal heavy fermion YbAgGe" Physica B **378-380**, 87 (2006)
63. J. Schnack, M. Brueger, M. Luban, P. Koegerler, E. Morosan, R. Fuchs, R. Modler, H. Nojiri, R. C. Rai, J. Cao, J. L. Musfeldt and X. Wei, "Observation of field-dependent magnetic parameters in the magnetic molecule $\{Ni_4Mo_{12}\}$" *Phys. Rev. B* **73,** 094401 (2006)
64. G. D. Samolyuk, S. L. Bud'ko, E. Morosan, V. P. Antropov and P. C. Canfield,"Electronic structure and anisotropic transport properties in the hexagonal YPtIn and LuAgGe ternary compounds" *J. Phys: Cond. Matter* **18,** 1473 (2006)

65. S. L. Bud'ko, V. Zapf, E. Morosan and P. C. Canfield, "Field-dependent Hall effect in single crystal heavy fermion YbAgGe below 1 K" *Phys. Rev. B* **72,** 17241 (2005)
66. E. Morosan, S. L. Bud'ko and P. C. Canfield, "Magnetic ordering and effects of crystal electric field anisotropy in the hexagonal compounds RPtIn, R = Y, Gd - Lu" *Phys. Rev. B* **72,** 014425 (2005)
67. B. K. Cho, J.-S. Rhyee, J. Y. Kim, E. Morosan and P. C. Canfield, "Anomalous magnetoresistance at low temperatures (T ≤ 10 K) in a single crystal of GdB_4" *J. Appl. Phys*. **97,** 0A923 (2005)
68. E. Morosan, S. L. Bud'ko and P. C. Canfield, "Angular dependent planar metamagnetism in the hexagonal compounds TbPtIn and TmAgGe" *Phys. Rev. B* **71,** 14445 (2005)
69. S. L. Bud'ko, E. Morosan and P. C. Canfield, "Anisotropic Hall effect in single-crystal heavy-fermion YbAgGe" *Phys. Rev. B* **71,** 4408 (2005)
70. M.-K. Han, E. Morosan, P. C. Canfield and G. J. Miller, "The coloring problem in intermetallics: bonding and properties of $Tb_3Zn_{3.6}Al_{7.4}$ with the La_3Al_{11} structure type" *Z. Kristallogr.* **220,** 95 (2005)
71. E. Morosan, S. L. Bud'ko, P. C. Canfield, M. S. Torikachvili and A. H. Lacerda, "Thermodynamic and transport properties of RAgGe (R = Tb – Lu) single crystals" *J. Magn. Magn. Mater*. **277,** 298 (2004)
72. S. L. Bud'ko, E. Morosan and P. C. Canfield, "Magnetic field induced non-Fermi-liquid behavior in YbAgGe single crystals", *Phys. Rev. B* **69,** 14415 (2004)
73. O. Garlea, E. Morosan, S. L. Bud'ko, J. L. Zaretsky, P. C. Canfield and C. Stassis, "Neutron scattering study of TbPtIn intermetallic compound" *J. Appl. Phys*. **95,** 6921 (2004)

DISSERTATION

"Field-induced magnetic phase transitions and correlated electronic states in the hexagonal RAgGe and RPtIn compounds", PhD dissertation, Iowa State University (2005). Advisor: Prof. P. C. Canfield

THESIS AND DISSERTATION DIRECTOR

- Eteri Svanidze "", Ph.D. (2015)
- Jiakui Wang "", Ph.D. (2015)
- Justin Chen "Remarkable chemical tuning of the electrical transport in $Ti_{1-x}Pt_xSe_{2-y}$", M.S. (2014)
- Liang L. Zhao "Search for Unconventional Superconductors at the Itinerant-to-Local Moment Crossover", Ph. D. (2012)
- Vishva Nellore "Synthesis and Characterization of Novel Layered Materials", MS (2010)
- Michael Mehlman "Anisotropic Physical Properties of Single Crystal RSn_2 Compounds (R = Y, Gd - Tm, Lu)", B. Sc (2009)