Amlan Biswas

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EDUCATION

Degree	Institution	Year
PhD in Physics	Indian Institute of Science	1999
MS in Physics	Indian Institute of Science	1995
BS in Physics	University of Delhi	1992

EMPLOYMENT

Position	Institution	Dates
Professor	University of Florida	Aug 2018 – Present
Associate Professor	University of Florida	Aug 2009 – Aug 2018
Assistant Professor	University of Florida	Aug 2002 – Aug 2009
Research Associate	University of Maryland	1998 – 2002

RESEARCH INTERESTS

I am an experimental condensed matter physicist studying correlated electron systems. With my graduate and undergraduate students, I grow oxide thin films by pulsed laser deposition and probe them at cryogenic temperatures down to 1.5 K and magnetic fields up to 33 T using custom-built tools, focusing on emergent interfacial phenomena in magnetic and high–spin-orbit coupling systems. The overarching focus of my research is to investigate the ability to control magnetism in materials using electric fields; the so-called "magnetoelectric effect."

AREAS OF EXPERTISE

(details on research webpage: http://www.phys.ufl.edu/~amlan/research.html)

a) Materials

1. Colossal magnetoresistive and multiferroic perovskite manganese oxides
2. High-T_c cuprate and iron-based superconductors
3. High spin-orbit coupling materials e.g. iridates

b) Techniques

1. Pulsed Laser thin-film deposition
2. Measurements at cryogenic temperatures and in high magnetic fields
   a. Magneto-transport and magnetization
   b. Point Contact Spectroscopy
   c. Scanning Probe Microscopy
3. High-resolution x-ray diffraction
4. Photolithography

LIST OF PUBLICATIONS AND PRESENTATIONS

I. PUBLICATIONS

a) Refereed Journals

1. *Phase coexistence in strained La0.67Sr0.33MnO3/SrTiO3 (100) thin films*, In Hae Kwak, Paul Carpinone, and Amlan Biswas, Physica B **715**, 417517 (2025)

2. *Near-field infrared nanoscopy of bilayered, nanostructured, and anisotropic media*, Patrick McArdle, Haoyue Jiang, David J. Lahneman, Ubaid Kazianga, Jingyi Chen, Amlan Biswas, and M. Mumtaz Qazilbash, Phys. Rev. B **111**, 245427 (2025)

3. *Preparation of Atomically Smooth SrTiO3 Substrates*, Monique Kubovsky and Amlan Biswas, UF Journal of Undergraduate Research, **26** (2024)

4. *Detection of paramagnetic to charge-ordered insulator phase transitions in phase separated (La1-yPry)0.67Ca0.33MnO3 thin films*, J.M. DeStefano and A. Biswas, Physica B **666**, 415071 (2023)

5. *In-plane magnetic anisotropy and magnetization reversal in phase-separated (La0.5Pr0.5)0.625Ca0.375MnO3 thin films*, Surendra Singh, J. Olamit, M. R. Fitzsimmons, J. D. Thompson, H. Jeen, and A. Biswas, Phys. Rev. B **107**, 024420 (2023)

6. *Magnetism dynamics driven by phase separation in Pr-doped manganite thin films: A ferromagnetic resonance study*, D. Carranza-Celis, E. Skoropata, Amlan Biswas, M. R. Fitzsimmons, Ivan K. Schuller, and Juan Gabriel Ramirez, Phys. Rev. Materials **5**, 124413 (2021)

7. *Near-field infrared nanospectroscopy of surface phonon-polariton resonances*, P. McArdle, D. J. Lahneman, Amlan Biswas, F. Keilmann, and M. M. Qazilbash, Phys. Rev. Research **2**, 023272 (2020)

8. *Dynamic percolation of ferromagnetic regions in phase separated manganites using non-uniform electric fields*, Ambika Shakya and Amlan Biswas, J. Appl. Phys. **127**, 213902 (2020)

9. *Correlation of cation deficiency and nanostructure to decreased magnetism in a ferroelectric $BiMnO_3$ film*, Daniel M. Pajerowski, Lisa A. Krayer, Hyoungjeen Jeen, Julie A. Borchers, Amlan Biswas, and Bruce Ravel, J. Appl. Phys. **126**, 085303 (2019)

10. *Coercive field enhancement in microstructured $(La_{0.4}Pr_{0.6})_{0.67}Ca_{0.33}MnO_3$ thin films*, Daniel Grant, Michael Ryan, and Amlan Biswas, Eur. Phys. J. B **91**, 197 (2018)

11. *Temperature dependent infrared nano-imaging of $La_{0.67}Sr_{0.33}MnO_3$ thin film*, Peng Xu, T. J. Huffman, In Hae Kwak, Amlan Biswas, and M. M. Qazilbash, J. Phys.: Condens. Matter **30**, 025602 (2018)

12. *Optimization of atomically smooth and metallic surface of $SrTiO_3$*, In Hae Kwak, Sima saeidi Varnoosfaderani, Colin S. Barquist, Ashkan Paykar, Ambika Shakya, Yoonseok Lee, Arthur F. Hebard, and Amlan Biswas, J. Appl. Phys. **121**, 135305 (2017)

13. *Surface morphology driven non-uniform magnetism in epitaxial $BiMnO_3$*, Hyoungjeen Jeen, In Hae Kwak, and Amlan Biswas, Mater. Res. Express **3**, 086101 (2016)

14. *Composition dependence of charge and magnetic length scales in mixed valence manganite thin films*, Surendra Singh, J. W. Freeland, M. R. Fitzsimmons, H. Jeen, and A. Biswas, Scientific Reports **6**, 29632 (2016)

15. *Proximate transition temperatures amplify linear magnetoelectric coupling in strain-disordered multiferroic $BiMnO_3$*, Patrick R. Mickel, Hyoungjeen Jeen, Pradeep Kumar, Amlan Biswas, and Arthur F. Hebard, Phys. Rev. B **93**, 134205 (2016)

16. *Growth of atomically flat thin films of the electronically phase-separated manganite (La0.5Pr0.5)0.67Ca0.33MnO3*, Hyoungjeen Jeen, Rafiya Javed, Amlan Biswas, Appl. Phys. A **122**, 35 (2016)

17. *Orientational strain modulation of ferroelectric polarization in multiferroic BiMnO3*, Patrick Mickel, Hyoungjeen Jeen, Amlan Biswas, and Arthur F. Hebard, Appl. Phys. Lett. **105**, 262904 (2014)

18. *Electronic and magnetic properties of manganite thin films with different compositions and its correlation with transport properties: An X-ray resonant magnetic scattering study*, Surendra Singh, J. W. Freeland, M. R. Fitzsimmons, H. Jeen, and A. Biswas, J. Appl. Phys. **116**, 222205 (2014)

19. *Elastically controlled manipulation of the magnetic order parameter and the metal-insulator transition in a manganite thin film*, Surendra Singh, M. R. Fitzsimmons, T. Lookman, H. Jeen, and A. Biswas, Phys. Rev. B **90**, 060407(R) (2014)

20. *Influence of the magnitude and direction of applied elastic stress on the transport properties of (La0.4Pr0.6)0.67Ca0.33MnO3 thin films*, Surendra Singh, M. R. Fitzsimmons, H. Jeen and A. Biswas, Appl. Phys. Lett. **104**, 201602 (2014)

21. *Films of photomagnetic CoFe Prussian blue analogue on thin manganite substrates: Fabrication and characterization*, P.A. Quintero, M.F. Dumont, D.M. Grant, E.S. Knowles, H. Jeen, A. Biswas, D.R. Talham, and M.W. Meisel, Polyhedron **66**, 201 (2013)

22. *Measurement of the polarization vector in BiMnO3 multiferroic thin films using surface and embedded microelectrodes*, Patrick R. Mickel, Sanal Buvaev, Andrei Kamalov, Hyoungjeen Jeen, Patrick Finnegan, Amlan Biswas, Arthur F. Hebard and Conrad D. James, J. Appl. Phys. **114**, 094104 (2013)

23. *Electric field driven dynamic percolation in electronically phase separated (La0.4Pr0.6)0.67Ca0.33MnO3 thin films*, Hyoungjeen Jeen and Amlan Biswas, Phys. Rev. B **88**, 024415 (2013)

24. *Competing soft dielectric phases and detailed balance in thin film manganites*, Patrick R. Mickel, Amlan Biswas, and Arthur F. Hebard, Phys. Rev. B **86**, 094410 (2012)

25. *Temperature dependence of nanometer-size metallic phase texture and its correlation with bulk magnetic and transport properties and defects of a (La0.4Pr0.6)0.67Ca0.33MnO3 film*, Surendra Singh, M. R. Fitzsimmons, H. Jeen, A. Biswas, and M. E. Hawley, Appl. Phys. Lett. **101**, 022404 (2012)

26. *Role of elastic bending stress on magnetism of a manganite thin film studied by polarized neutron reflectometry*, Surendra Singh, M. R. Fitzsimmons, T. Lookman, H. Jeen, A. Biswas, M. A. Roldan, and M. Varela, Phys. Rev. B **85**, 214440 (2012)

27. *Magnetic Nonuniformity and Thermal Hysteresis of Magnetism in a Manganite Thin Film,* Surendra Singh, M. R. Fitzsimmons, T. Lookman, J. D. Thompson, H. Jeen, A. Biswas, M. A. Roldan, and M. Varela, Phys. Rev. Lett. **108**, 077207 (2012)

28. *Large photoinduced conductivity reduction in thin films of metallic ferromagnetic manganites*, V. N. Smolyaninova, G. Yong, Rajeswari M. Kolagani, Amlan Biswas, H. K. Ermer, K. Wang, and A. Piazza, Appl. Phys. Lett. **99**, 222507 (2011)

29. *LPCMO nano-templates grown using substrate induced strain*, Tara Dhakal, Sunghee Yun, Jacob Tosado, Naveen Margankunte, and Amlan Biswas, Materials Science and Engineering: B **176**, 1326 (2011)

30. *Single domain to multi-domain transition due to in-plane magnetic anisotropy in phase separated (La0.4Pr0.6)0.67Ca0.33MnO3 thin films*, Hyoungjeen Jeen and Amlan Biswas, Phys. Rev. B **83**, 064408 (2011)

31. *Growth and characterization of multiferroic BiMnO3 thin films*, Hyoungjeen Jeen, Guneeta Singh-Bhalla, Patrick R. Mickel, Kristen Voigt, Chelsey Morien, Sefaattin Tongay, A. F. Hebard, and Amlan Biswas, J. Appl. Phys. **109**, 074104 (2011)

32. *Electronic Transport in Graphitic Nanoribbon Films*, Ashkan Behnam, Jason L. Johnson, Yanbin An, Amlan Biswas, and Ant Ural, ACS Nano **5**, 1617 (2011)

33. *Temperature-dependent transport and 1/f noise mechanisms in single-walled carbon nanotube films*, Ashkan Behnam, Amlan Biswas, Gijs Bosman, and Ant Ural, Phys. Rev. B **81**, 125407 (2010)

34. *Colossal Piezoresistance in phase-separated manganites*, Jacob Tosado, Tara Dhakal, and Amlan Biswas, Journal of Physics: Condens. Matter. **21**, 192203 (2009)

35. *Tunneling magnetoresistance in phase-separated manganite nanobridges*, G. Singh-Bhalla A. Biswas, A. F. Hebard, Phys. Rev. B **80**, 144410 (2009)

36. *Intrinsic Tunneling in Phase Separated Manganites*, G. Singh-Bhalla, S. Selcuk, T. Dhakal, A. Biswas, and A. F. Hebard, Phys. Rev. Lett. **102**, 077205 (2009)

37. *Giant positive magnetoresistance in ultrathin films of mixed phase manganites*, S. H. Yun, T. Dhakal, D. Goswami, G. Singh, A. F. Hebard, and A. Biswas, J. Appl. Phys. **103**, 07E317 (2008)

38. *Phonon modes in LPCMO thin films*, N. Margankunte, T. Dhakal, D. B. Tanner, and A. Biswas, Physica B-Condensed Matter, **403**, 1593 (2008)

39. *Colossal magnetocapacitance and scale-invariant dielectric response in phase-separated manganites*, Ryan P. Rairigh, Guneeta Singh-Bhalla, Sefaatin Tongay, Tara Dhakal, Amlan Biswas and Arthur F. Hebard, Nature Physics **3**, 551 (2007)

40. *Effect of strain and electric field on the electronic soft matter in manganite thin films*, Tara Dhakal, Jacob Tosado, Amlan Biswas, Phys. Rev. B **75**, 092404 (2007)

41. *Depth analysis of the in-plane lattice constants in compressively strained* $La_{0.67}Ca_{0.33}MnO_3$ *thin films*, M. Petit, M. Rajeswari, A. Biswas, R. L. Greene, T. Venkatesan, and L. J. Martínez-Miranda, J. Appl. Phys. **97**, 093512 (2005)

42. *Origin of the anomalous low temperature upturn in the resistivity of the electron-doped cuprate superconductors*, Y. Dagan, M. C. Barr, W. M. Fisher, R. Beck, T. Dhakal, A. Biswas, R. L. Greene, Phys. Rev. Lett. **94**, 057005 (2005)

43. *First-order nature of the ferromagnetic phase transition in (La-Ca)MnO3 near optimal doping*, C. P. Adams, J. W. Lynn, V. N. Smolyaninova, A. Biswas, R. L. Greene, W. Ratcliff, S. W. Cheong, Y. M. Mukovskii, and D. A. Shulyatev, Phys. Rev. B **70**, 134414 (2004)

44. *Substrate-induced strain effects on* $Pr_{0.6}Ca_{0.4}MnO_3$ *films*, C. S. Nelson, J. P. Hill, D. Gibbs, M. Rajeswari, A. Biswas, S. Shinde, R. L. Greene, T. Venkatesan, A. J. Millis, F. Yokaichiya, C. Giles, D. Casa, C. T. Venkataraman, and T. Gog, J. Phys.: Condens. Matter **16**, 13-27 (2004)

45. *Charge order to two-dimensional metal crossover in $Pr_{0.5}(Sr_{1-y}Ca_y)_{0.5}MnO_3$*, V. N. Smolyaninova, A. Biswas, C. Hill, B. G. Kim, S. W. Cheong, and R. L. Greene, Journal of Magnetism and Magnetic Materials **267**, 300-306 (2003)

46. *Point-contact spectroscopy of the electron-doped cuprate superconductor $Pr_{2-x}Ce_xCuO_4$: The dependence of conductance-voltage spectra on cerium doping, barrier strength, and magnetic field*, M. M. Qazilbash, Amlan Biswas, Y. Dagan, R. A. Ott, and R. L. Greene, Phys. Rev. B **68**, 024502 (2003)

47. *Substrate induced strain effects in epitaxial $La_{0.67-x}Pr_xCa_{0.33}MnO_3$ thin films*, T. Wu, S. B. Ogale, S. R. Shinde, Amlan Biswas, T. Polletto, R. L. Greene, T. Venkatesan, and A. J. Millis, J. Appl. Phys. **93**, 5507 (2003)

48. *Direct Observation of Percolation in a Manganite Thin Film,* Liuwan Zhang, Casey Israel, Amlan Biswas, R. L. Greene, and Alex de Lozanne, Science, **298,** 805 (2002)

49. *Evidence of a d to s-wave pairing symmetry transition in the electron-doped cuprate superconductor $Pr_{2-x}Ce_xCuO_4$*, Amlan Biswas, P. Fournier, M. M. Qazilbash, V. N. Smolyaninova, Hamza Balci, and R. L. Greene, Phys. Rev. Lett. **88**, 207004 (2002)

50. *Strain driven charge ordered state in $La_{0.67}Ca_{0.33}MnO_3$,* Amlan Biswas, M. Rajeswari, R. C. Srivastava, T. Venkatesan, R. L. Greene, Q. Lu, A. L. de Lozanne, A. J. Millis, Phys. Rev. B **63**, 184424 (2001)

51. *Gapped tunneling spectra in the normal state of $Pr_{2-x}Ce_xCuO_4$*, Amlan Biswas, P. Fournier, V. N. Smolyaninova, R. C. Budhani, J. S. Higgins and R. L.Greene, Phys. Rev. B **64**, 104519 (2001)

52. *Electroresistance and Electronic Phase Separation in Mixed-Valent Manganites*, T. Wu, S. B. Ogale, J. E. Garrison, B. Nagaraj, Amlan Biswas, Z. Chen, R. L. Greene, R. Ramesh, T. Venkatesan, and A. J. Millis, Phys. Rev. Lett. **86**, 5998 (2001)

53. *Development of an in situ ultra-high-vacuum scanning tunneling microscope in the beamline of the 15 MV tandem accelerator for studies of surface modification by a swift heavy ion beam*, A. Tripathi, J. P. Singh, R. Ahuja, R. N. Dutt, D. Kanjilal, A. Guha, A. Biswas, and A. K. Raychaudhuri, Rev. Sci. Instrum. **72**, 3884 (2001)

54. *Strain-induced local distortions and orbital ordering in $Nd_{0.5}Sr_{0.5}MnO_3$ manganite films*, Q. Qian, T. A. Tyson, C.-C. Kao, W. Prellier, J. Bai, A. Biswas, R. L. Greene, Phys. Rev. B **63**, 224424 (2001)

55. *Spin-polarized transport across an LSMO/YBCO interface: the role of Andreev bound states*, Z. Y. Chen, Amlan Biswas, Igor Zutic, T. Wu, S. B. Ogale, R. L. Greene, T. Venkatesan, Phys. Rev. B **63**, 212508 (2001)

56. *Anomalous field-dependent specific heat in charge-ordered $Pr_{1-x}Ca_xMnO_3$ and $La_{0.5}Ca_{0.5}MnO_3$*, V. N. Smolyaninova**, Amlan Biswas, X. Zhang, K. H. Kim, Bog-Gi Kim, S-W. Cheong, R. L. Greene, Phys. Rev. B **62**, R6093 (2000)

57. *Two-phase behavior in strained thin films of hole-doped manganites*, Amlan Biswas, M. Rajeswari, R. C. Srivastava, Y. H. Li, T. Venkatesan, R. L. Greene and A. J. Millis, Phys. Rev. B **61,** 9665 (2000)

58. *Collapse of the charge ordering gap of $Nd_{0.5}Sr_{0.5}MnO_3$ in an applied magnetic field*, Amlan Biswas, A. Arulraj, A. K. Raychaudhuri, C. N. R. Rao, J. Phys.:Condens. Matter **12,** L101 (2000)

59. *Properties of the ferrimagnetic double perovskites A_2FeReO_6 (A = Ba and Ca)*, W. Prellier, V. N. Smolyaninova, Amlan Biswas, C. Galley, R. L. Greene, K. Ramesha, J. Gopalakrishnan, J. Phys.:Condens. Matter **12,** 965 (2000)

60. *Electrical transport and magnetic properties of a possible electron-doped layered manganese oxide*, Y. G. Zhao, Y. H. Li, S. B. Ogale, M. Rajeswari, V. N. Smolyaninova, T. Wu, Amlan Biswas, L. Salamanca-Riba, R. L. Greene, R. Ramesh, T. Venkatesan, J. H. Scott, Phys. Rev. B **61,** 4141 (2000)

61. *Temperature-dependent scattering rate and optical mass of ferromagnetic metallic manganites*, J. R. Simpson, H. D. Drew, V. N. Smolyaninova, R. L. Greene, M. C. Robson, Amlan Biswas, M. Rajeswari, Phys. Rev. B **60,** R16263 (1999)

62. *Effect of oxygen content on the structural, transport, and magnetic properties of $La_{1-\delta}Mn_{1-\delta}O_3$ thin films*, Y. G. Zhao, M. Rajeswari, R. C. Srivastava, Amlan Biswas, S. B. Ogale, D. J. Kang, W. Prellier, Z. Y. Chen, R. L. Greene, T. Venkatesan, J. Appl. Phys. **86,** 6327 (1999)

63. *Effect of substrate-induced strain on the charge-ordering transition in $Nd_{0.5}Sr_{0.5}MnO_3$ thin films*, W. Prellier, Amlan Biswas, M. Rajeswari, T. Venkatesan, R. L. Greene, Appl. Phys. Lett. **75,** 397 (1999)

64. *Density of states of hole-doped manganites: A scanning-tunneling-microscopy/spectroscopy study*, Amlan Biswas, S. Elizabeth, A. K. Raychaudhuri, H. L. Bhat, Phys. Rev. B **59,** 5368 (1999)

65. *Charge-ordered state in $Y_{0.5}Ca_{0.5}MnO_3$ with a very small radius of the A-site cations*, A. Arulraj,R. Gundakaram, C.N.R. Rao, Amlan Biswas, N. Gayathri and A.K. Raychaudhuri, J.Phys.:Condens. Matter **10,** 4447 (1998)

66. *Reentrant transition from an incipient charge-ordered state to a ferromagnetic metallic state in a rare-earth manganate*, Anthony Arulraj, Amlan Biswas, A. K. Raychaudhuri, C. N. R. Rao, P. M. Woodward, T. Vogt, D. E. Cox, A. K. Cheetham, Phys. Rev. B**57,** R8115 (1998)

67. *Temperature-dependent vacuum tunneling spectroscopy of rare-earth manganates showing colossal magnetoresistance and charge ordering*, A. Biswas, A.K. Raychaudhuri, A. Arulraj and C.N.R. Rao, Applied Physics A **66,** S1213 (1998)

68. *Direct measurement of the charge ordering gap in* $Nd_{0.5}Sr_{0.5}MnO_3$, Amlan Biswas, A.K. Raychaudhuri, R. Mahendiran, A. Guha, R. Mahesh and C.N.R. Rao, J. Phys.: Condens. Matter **9,** L355 (1997)

69. *Tunneling spectroscopy and the density of states of* $La_{0.8}Ca_{0.2}MnO_3$, Amlan Biswas and A. K. Raychaudhuri, J. Phys.: Condens. Matter **8,** L739 (1996)

b) Refereed Conference Proceedings

1. Low temperature transport measurements on atomically smooth metallic and oxygen deficient strontium titanate, C. S. Barquist, I. H. Kwak, J. Bauer, T. Edmonds, A. Biswas and Y. Lee, Journal of Physics: Conference Series **568**, 052004 (2014)

2. Low temperature transport measurements on manganite thin films, P. Bhupathi, S. H. Yun, M. Spencer, A. Biswas, and Y. Lee, Journal of Physics: Conference Series **150**, 022006 (2009)

3. Effect of Strain and Growth Morphology on the Evolution of the Domain Structure of Ferromagnetic Manganites, Holly Miller, J.S. Higgins, Y. Mukovskii, R.L. Greene, and Amlan Biswas, Mater. Res. Soc. Symp. Proc. **819,** N 5.7 (2004)

c) Invited publication

1. Point contact spectroscopy of anisotropic superconductors at high magnetic fields, Sung Hee Yun, Bing Liang, R. L. Greene, and Amlan Biswas, NHMFL Reports **13**, 14 (2006)

d) Submitted, under review

1. *Modified Kondorsky Domain Reversal in Microstructured Phase-Separated Manganites*, Monique Kubovsky, Dylan, Tagrin, and Amlan Biswas, under review at Physica Status Solidi
   doi: 10.48550/arXiv.2512.09306

II. LECTURES, SPEECHES OR POSTERS PRESENTED AT PROFESSIONAL CONFERENCES/MEETINGS

a) Invited Presentations at Conferences

1. Strain and Electric Field Dependence of Magnetic Anisotropy in Manganite Microstructures, 8th European Conference on Crystal Growth, Warsaw, Poland, July 22, 2024

2. Controlling Magnetic Anisotropy of Manganites using Electric Fields, 2019 Annual Symposium, Florida Chapter of the AVS Science and Technology Society: Orlando, FL, March 11, 2019

3. Enhanced magnetic properties in microstructured manganites, 2018 Conference on Electronic and Advanced Materials: Orlando, FL, January 18, 2018

4. Tuning Magnetic Properties of Manganites using Strain and Microstructured Patterns, International Conference on Thin Films: New Delhi, India, November 14, 2017

5. Strain Induced Dielectrophoretic Behavior in Electronically Phase Separated Manganite Thin Films, Energy Materials Nanotechnology conference, Orlando, FL, January 27, 2015

6. Dielectrophoretic behavior in electronically phase separated manganite thin films, Physics of Emergent Correlated Materials, Telluride, CO, June 6, 2013

7. Magnetoelectric effects in centrosymmetric materials, 2013 Energy Materials Nanotechnology West, Houston, TX, January 7, 2013 (Did not attend)

8. Effect of sub-micrometer scale magnetic inhomogeneity on the magnetoelectric coupling in manganites, 2012 Energy Materials Nanotechnology Meeting, Orlando, FL, April 20, 2012

9. Effect of Sub-Micrometer Scale Magnetic Inhomogeneity on the Magnetoelectric Coupling in Manganites, American Vacuum Society 59th Annual International Symposium and Exhibition, Tampa, FL, November 1, 2012

10. Effect of strain on phase-separation and multiferroism in manganites, Workshop on competing interactions and colossal responses in transition metal compounds, August 10, 2009, Telluride, CO

11. Effect of strain on phase-separation and multiferroism in manganites, Villa Conference on Complex Oxide Heterostructures, November 4, 2008, Orlando, FL

12. Origin of colossal piezoresistance and electroresistance in phase separated manganites, Study of Matter at Extreme Conditions, April 18, 2007, Miami Beach, FL

13. Origin of colossal piezoresistance and electroresistance in phase separated manganites, STRIPES, December 21, 2006, Rome, Italy

14. Tunneling spectroscopy of n-doped cuprates, APS meeting, March 3, 2003, Austin, Texas.

15. Tunneling studies of n-doped cuprates, Gordon Research Conference on Superconductivity, September 10, 2001, Queen's College, Oxford, UK

16. Two-phase co-existence in Epitaxial Thin Films of the Perovskite Manganites, APS meeting, March 24, 2000, Minneapolis, Minnesota.

Invitations declined: (1) Superstripes 2016, Quantum In Complex Matter, Ischia, Italy June 23-29, 2016, (2) Energy Materials Nanotechnology meeting, HI, March 21-24, 2016 (3) Energy Materials Nanotechnology summer meeting, Cancun, Mexico, June 5-9, 2016

b) Department Colloquia and Seminars

1. Controlling Ferromagnetic Domains and Magnetic Anisotropy of Manganites using Electric Fields, University of Sherbrooke, Sherbrooke (Québec), Canada, May 19, 2023

2. Magnetoelectric Effect in BiMnO3 Thin Films due to Inhomogeneous Magnetism, Laboratoire CRISMAT, CNRS UMR 6508/ENSICAEN/UNICAEN, Caen, Cedex, France, July 18, 2022

3. Controlling Ferromagnetic Domains and Magnetic Anisotropy of Manganites using Electric Fields, Laboratoire CRISMAT, CNRS UMR 6508/ENSICAEN/UNICAEN, Caen, Cedex, France, July 11, 2022

4. "Magnetoelectrism" in crystals: Controlling magnetic anisotropy with strain and electric fields, Department of Physics, College of William and Mary, Williamsburg, VA, September 20, 2019 (Department colloquium)

5. Dielectrophoretic behavior in electronically phase separated manganite thin films, Department of Physics and Astronomy, Ithaca College, Ithaca, NY, February 11, 2014

6. Effect of Sub-micrometer Scale Magnetic Inhomogeneity on the Magnetoelectric Coupling in Manganites, Materials Science and Engineering, University of Florida, Gainesville, FL, January 18, 2012

7. Magnetoelectric Coupling in Perovskite Oxides, Department of Physics and Astronomy, University of Kentucky, Lexington, KY, August 30, 2011

8. Effect of strain on phase-separation and multiferroism in manganites, University of South Florida, October 24, 2008, Tampa, FL

9. How Ferromagnetic Oxides cope with Stress and Strain, Oak Ridge National Laboratory, May 22, 2008, Oak Ridge, TN

10. How Ferromagnetic Oxides cope with Stress and Strain, Northwestern University, May 8, 2008, Evanston, IL

11. How Ferromagnetic Oxides cope with Stress and Strain, Universite de Sherbrooke, November, 2007, Sherbrooke, Canada

12. Is There a Pseudogap in the Normal State of Electron-Doped Cuprate Superconductors, National High Magnetic Field Laboratory, October 14, 2005, Tallahassee, FL

13. Colossal Magnetocapacitance in Manganites, Laboratoire CRISMAT, CNRS UMR 6508, July 5, 2005, Caen, France

14. Stress driven switching between ferromagnetic and antiferromagnetic phases in manganese oxides, Department Colloquium, March 26, 2002, Syracuse University, NY

15. Strain Driven Charge-Ordering and Phase Separation in Hole-Doped Manganites, March 7, 2002, University of Pennsylvania, PA

16. Strain Driven Charge-Ordering And Phase Separation In Hole-Doped Manganites, Department Colloquium, January 10, 2002, Oakland University, MI

17. Intrinsic phase separation in hole-doped manganites: A blessing in disguise, IBM Almaden Research Center, May 2001, San Jose, CA

c) Contributed presentations (person presenting underlined)

1. Ferromagnetic Domain Movement in Hole-doped Manganites at Low Current Densities, Monique J. Kubovsky (ug student) and Amlan Biswas, APS Global Physics Summit, Anaheim, CA, March 18, 2025

2. Phase Coexistence-Induced Out-of-Plane Magnetization in Manganite Thin Films, Dylan Tagrin and Amlan Biswas, APS Global Physics Summit, Anaheim, CA, March 21, 2025

3. Electric Field Effects on the Magnetic Anisotropy of Phase-separated Manganites, Joseph Jung and Amlan Biswas, APS Global Physics Summit, Anaheim, CA, March 21, 2025

4. Electric field induced changes in coercive field in thin film manganite microstructures, Dylan Tagrin and Amlan Biswas, APS March Meeting, Minneapolis, MN, March 5, 2024

5. Anisotropic Magnetoresistance (AMR) of Phase Separated (La0.4Pr0.6)0.67Ca0.33MnO3 thin films, Haben Belai (ug student), APS March Meeting, Las Vegas, NV, March 6, 2023

6. Length Scale Dependence of Anisotropic Magnetoresistance in Phase-Separated (La1-yPry)1-xCaxMnO3 Thin Film Microstructures, Ashkan Paykar, Haben Belai (ug student), and Amlan Biswas, March 7, 2023 APS March Meeting, Las Vegas, NV

7. Simulation and experimental evidence of dielectrophoresis in manganite thin films: Nicole R Burg (ug student), Ambika Shakya, and Amlan Biswas, APS March Meeting, Chicago, IL, March 14, 2022

8. Advanced numerical modeling of light-matter interactions at nanometer length scales, Haoyue Jiang, Patrick McArdle, David J Lahneman, Mumtaz Qazilbash, Tetiana Slusar, Hyun-Tak Kim, Amlan Biswas, and Jingyi Chen, APS March Meeting, Chicago, IL, March 16, 2022

9. Temperature Dependence of Planar Hall Effect and Anisotropic Magnetoresistance in Phase-Separated (La1-yPry)1-xCaxMnO3 Thin Films, Ashkan T Paykar and Amlan Biswas, APS March Meeting, Chicago, IL, March 18, 2022

10. Dynamic in-plane magnetic tunnel junctions formed in manganites using non-uniform-electric-fields, Ambika Shakya, Nicole R Burg, and Amlan Biswas, APS March Meeting, Chicago, IL, March 18, 2022

11. Evidence of phase separation in a (La,Pr,Ca)MnO3 thin film by ferromagnetic resonance: Diego Carranza-Celis, Elizabeth Skoropata, Amlan Biswas, Michael Fitzsimmons, Ivan Schuller, and Juan G. Ramirez, APS March Meeting (virtual), March 17, 2021

12. Near-field infrared nanospectroscopy of insulating and metallic SrTiO3: Haoyue Jiang, David Lahneman, Patrick McArdle, Muhammad M Qazilbash, Amlan Biswas, Yasin C. Durmaz, and Fritz Keilmann, APS March Meeting (virtual), March 18, 2021

13. Progress in numerical modeling of near-field infrared phenomena at nanometer length scales: Patrick McArdle, David Lahneman, Haoyue Jiang, Muhammad M Qazilbash, Tetiana Slusar, Hyun-Tak Kim, Amlan Biswas, Fritz Keilmann, and Jingyi Chen, APS March Meeting (virtual), March 18, 2021

14. Electric-field control of ferromagnetic regions to form intrinsic tunnel junctions in dynamically phase separated manganites: Ambika Shakya and Amlan Biswas, APS March Meeting (virtual), March 18, 2021

15. Magnetic Anisotropy, Anisotropic Magnetoresistance, and Planar Hall Effect in Phase-Separated (La1-yPry)1-xCaxMnO3 Thin Films: Ashkan Paykar and Amlan Biswas, APS March Meeting (virtual), March 18, 2021

16. Electrically Controlled Intrinsic Tunneling in Dynamically Phase Separated Manganites, Ambika Shakya and Amlan Biswas, APS March Meeting 2020, Denver, CO, March 2, 2020 (meeting cancelled)

17. Single-domain to Multi-domain Transition Due to Phase Separation in (La1-yPry)1-xCaxMnO3 Thin Films, Ashkan Paykar and Amlan Biswas, APS March Meeting 2020, Denver, CO, March 2, 2020 (meeting cancelled)

18. Detection of Phase Transitions in Phase Separated (La1-yPry)1-xCaxMnO3 Thin Films, Jonathan DeStefano and Amlan Biswas, APS March Meeting 2020, Denver, CO, March 2, 2020 (meeting cancelled)

19. Experimental and numerical studies of near-field infrared phenomena at nanometer length scales, P. McArdle, D. Lahneman, H. Jiang, M. M. Qazilbash, T. Slusar, H.-T. Kim, A. Biswas, F. Keilmann, and J. Chen, APS March Meeting 2020, Denver, CO, March 2, 2020 (meeting cancelled)

20. Emergent properties in films of transition metal oxides, D. Lahneman, P. McArdle, H. Jiang, M. M. Qazilbash, T. Slusar, H.-T. Kim, A. Biswas, and F. Keilmann, APS March Meeting 2020, Denver, CO, March 5, 2020 (meeting cancelled)

21. Quantitatively accurate numerical modeling of amplitude and phase contrast in broadband near-field infrared spectroscopy, Patrick McArdle, David Lahneman, Muhammad Qazilbash, and Amlan Biswas, APS March Meeting 2019, Boston, MA, March 7, 2019

22. Application of Direct Stress Using a Multilayered Actuator to tune Transport Properties of Manganites, Julian Brodie, Ambika Shakya, Ashkan Paykar, and Amlan Biswas, APS March Meeting 2018, Los Angeles, CA, March 5, 2018

23. Coercive Field Enhancement in Microstructured (La1-yPry)1-xCaxMnO3 thin films, Ashkan Paykar, Ambika Shakya, and Amlan Biswas, APS March Meeting 2018, Los Angeles, CA, March 5, 2018
24. Effect of non-uniform electric field in microstructured (La1-yPry)1-xCaxMnO3 thin films, Ambika Shakya, Ashkan Paykar, and Amlan Biswas, APS March Meeting 2018, Los Angeles, CA, March 8, 2018

25. Giant electroresistance in strained ultrathin La0.67Sr0.33MnO3 films, In Hae Kwak, Ambika Shakya, Ashkan Paykar, Hector Lacera Otalora, and Amlan Biswas, APS March Meeting, New Orleans, LA, March 15, 2017

26. Step-induced magnetic phase separation in La0.67Sr0.33MnO3/SrTiO3 (100) thin films, Inhae Kwak and Amlan Biswas, APS March Meeting, Baltimore, MD, March 14, 2016

27. Temperature dependent near field infrared microscopy of La0.67Sr0.33MnO3 thin films, Peng Xu, T. J. Huffman, M. M. Qazilbash, Inhae Kwak, and Amlan Biswas, APS March Meeting, Baltimore, MD, March 14, 2016

28. Colossal Piezoresistance in strained La0.67Sr0.33MnO3 thin films, Maria Viitaniemi, In Hae Kwak, and Amlan Biswas, APS March Meeting, San Antonio, Texas, March 2, 2015

29. Determination of the dielectric function of materials with scattering-type scanning near field optical microscopy, Peng Xu, T.J. Huffman, M.M. Qazilbash, Inhae Kwak, and Amlan Biswas, APS March Meeting, San Antonio, Texas, March 3, 2015

30. Bismuth Manganite Thin Film Characterization, Daniel Pajerowski, Lisa Krayer, Bruce Ravel, Julie Borchers, Hyoung Jeen Jeen, and Amlan Biswas, APS March Meeting, San Antonio, Texas, March 3, 2015

31. Thickness effect on magnetic and electronic response in phase separated manganite thin films, Hyoung Jeen Jeen and Amlan Biswas, APS March Meeting, San Antonio, Texas, March 5, 2015

32. Phase separation in strained ultrathin La0.67Sr0.33MnO3/SrTiO3(100) films, In Hae Kwak, Sarah Toth, and Amlan Biswas, APS March Meeting, San Antonio, Texas, March 5, 2015

33. Magnetic coercive field changes in microstructured (La1−yPry)1−xCaxMnO3 thin films, Daniel Grant, Michael Ryan, and Amlan Biswas, APS March Meeting, San Antonio, Texas, March 5, 2015

34. Optimization of growth conditions for (La1−yPry)1−xCaxMnO3 thin films on annealed oxide substrates, Brian Schaefer, Daniel Grant, and Amlan Biswas, APS March meeting, Denver, CO, March 3, 2014

35. Colossal piezoresistance in phase separated manganites, Maria Viitaniemi, In Hae Kwak, and Amlan Biswas, APS March meeting, Denver, CO, March 3, 2014

36. Magnetic coercive field changes due to electric field generated anisotropy in (La1−yPry)1−xCaxMnO3 thin films, Daniel Grant, Brian Schaefer, and Amlan Biswas, APS March meeting, Denver, CO, March 3, 2014

37. Optimization of atomically smooth and metallic surface of SrTiO3 for the growth of ultra-thin manganite films, In Hae Kwak, Sima Varnoosfaderan, Arthur Hebard, Amlan Biswas, APS March meeting, Denver, CO, March 5, 2014

38. Infrared study of metallicity in vacuum annealed strontium titanate, Peng Xu, T.J. Huffman, M.M. Qazilbash, In Hae Kwak, and Amlan Biswas, APS March meeting, Denver, CO, March 6, 2014

39. Determination of the surface spin-polarization of perovskite oxides using point-contact Andreev reflection spectroscopy, Everett Grimley and Amlan Biswas, APS March meeting, Baltimore, MD, March 18, 2013

40. Low Temperature Probe for Measuring Anisotropic Magnetotransport, Galin Dragiev, Daniel Grant, and Amlan Biswas, APS March meeting, Baltimore, MD, March 18, 2013

41. Magnetic field effects on dielectrophoresis in manganites, Daniel Grant, Galin Dragiev, and Amlan Biswas, APS March meeting, Baltimore, MD, March 19, 2013

42. Doping dependence of the gap of cobalt doped BaFe2As2 from Point Contact Spectroscopy, John Timmerwilke, Brendan Faeth, J.S. Kim, G.R. Stewart, and Amlan Biswas, APS March meeting, Baltimore, MD, March 21, 2013

43. Atomic Steps on Thermally Annealed Oxide Substrates, Icon Mazzaccari, Rafiya Javed, and Amlan Biswas, APS March meeting, Boston, MA, February 27, 2012

44. Deposition of Photomagnetic CoFe Prussian Blue Analogue Films on Thin LPCMO Substrates, M. F. Dumont, P. A. Quintero, D. M. Grant, E. S. Knowles, H. J. Jeen, A. Biswas, D. R. Talham, and M. W. Meisel, The 13th International Conference on Molecule-based Magnets, Orlando, FL, October 8, 2012

45. Fluid-like conducting regions in solid manganite thin films, Rafiya Javed, Hyoungjeen Jeen and Amlan Biswas, APS March meeting, Boston, MA, February 27, 2012

46. ab Plane Point Contact Spectroscopy of Co-doped Iron Pnictide Superconductors, John Timmerwilke, J.S. Kim, G.R. Stewart and Amlan Biswas, APS March meeting, Boston, MA, February 28, 2012

47. Transport Properties of Films of Prussian Blue Analogues and Manganites, P.A. Quintero, D.M. Grant, E.S. Knowles, M.F. Dumont, J.H. Jeen, A. Biswas, M.W. Meisel, and D.R. Talham, APS March meeting, Boston, MA, February 29, 2012

48. Magnetic non-uniformity in (La_0.4Pr_0.6)_0.67Ca_0.33MnO_3 films and measurement of the strain-magnetization coupling coefficient, S. Singh, M.R. Fitzsimmons, T. Lookman, H. Jeen, M.A. Roldan, M. Varela and A. Biswas, APS March meeting, Boston, MA, February 29, 2012

49. Temperature dependent optical properties of thin films of the doped manganite La_0.67Ca_0.33MnO_3, Naween Anand, Naveen Margankunte, David Tanner, Hyoungjeen Jeen and Amlan Biswas, APS March meeting, Boston, MA, February 29, 2012
50. *Scanning Tunneling Microscopy of Manganites*, APS March meeting, Dallas, TX, March 21, 2011, Icon Mazzaccari, Hyoungjeen Jeen, and Amlan Biswas

51. *Point contact spectroscopy of Co-doped pnictide superconductors*, APS March meeting, Dallas, TX, March 21, 2011, John Timmerwilke, Alessandra Gallastegui, J.S. Kim, G.R. Stewart, N.H. Sung, M.S. Kim, B.K. Cho, and Amlan Biswas

52. *Magnetoelectric coupling in the strain-induced multiferroic BiMnO$_{3}$*, APS March meeting, Dallas, TX, March 22, 2011, Patrick Mickel, Hyoungjeen Jeen, Amlan Biswas, and Arthur Hebard

53. *Coupling of strain and magnetism in LPCMO films*, APS March meeting, Dallas, TX, March 22, 2011, Surendra Singh, M. Fitzsimmons, Hyoungjeen Jeen, and Amlan Biswas

54. *Substrate induced strain effects on the multiferroism of BiMnO$_{3}$ thin films*, APS March meeting, Dallas, TX, March 23, 2011, Hyoung Jeen Jeen, Patrick Mickel, A.F. Hebard, Amlan Biswas, and Valentin Craciun

55. *Photoinduced effects in ferromagnetic state of manganites*, APS March meeting, Dallas, TX, March 23, 2011, Vera Smolyaninova, Grace Yong, Rajeswari Kolagani, Amlan Biswas, and Kilhwan Wang

56. *Magnetic and Transport Properties of Heterostructured Films of Prussian Blue Analogues and Manganites*, APS March meeting, Dallas, TX, March 23, 2011, P.A. Quintero, H. Jeen, E.S. Knowles, A. Biswas, M.W. Meisel, M.J. Andrus, and D.R. Talham

57. *Thickness Dependent Electric/Magnetic Response and Electric Field Induced Anisotropic Transport Properties of Phase Separated (La_0.4Pr_0.6)_0.67Ca_0.33MnO_3 thin films on NdGaO_3 Substrates*, MRS Fall Meeting, Boston, MA, November 30, 2010, Hyoung Jeen Jeen, Rafiya Javed and Amlan Biswas

58. *Magnetoelectric coupling in the strain induced multiferroic BiMnO3*, Physical phenomena at high magnetic fields, Dec. 4, 2010, Tallahassee, FL, Patrick R. Mickel, Hyoung Jeen Jeen, Amlan Biswas, and Arthur F. Hebard

59. *Magnetic properties of $BiMnO_3$ thin films*, APS March meeting, Portland, OR, March 15, 2010, Kristen Voigt, Hyoung Jeen Jeen, Guneeta Singh-Bhalla, Sefaattin Tongay, Patrick Mickel, Arthur Hebard, and Amlan Biswas

60. *In-plane magnetic anisotropy and domain transition in phase separated* $(La_{0.4}Pr_{0.6})_{0.67}Ca_{0.33}MnO_3$ *thin films on orthorhombic* $NdGaO_3$ *substrates*, APS March meeting, Portland, OR, March 16, 2010, Hyoung Jeen Jeen and Amlan Biswas

61. *Competing Dielectric Phases and Detailed Balance in Thin Film Manganites*, APS March meeting, Portland, OR, March 16, 2010, Patrick Mickel, Amlan Biswas, and Arthur F. Hebard

62. *Low Temperature Transport in Networks Based on Multi-layer Graphene Nanoribbons*, APS March meeting, Portland, OR, March 17, 2010, Ashkan Behnam, Jason Johnson, Yanbin An, Amlan Biswas, and Ant Ural

63. *Effect of strain on the magnetic domain transition in* $(La_{0.4}Pr_{0.6})_{0.67}Ca_{0.33}MnO_3$ *thin films grown on tetragonal (001)* $SrLaGaO_4$ *substrates*, APS March meeting, Portland, OR, March 17, 2010, John Timmerwilke, Hyoung Jeen Jeen, Rafiya Javed, Arthur Ianuzzi, and Amlan Biswas

64. *Phase Transitions of a* $(La_{0.5}Pr_{0.5})_{0.67}Ca_{0.33}MnO_3$ *Thin Film Repeated with Increasing Voltage as Probed by Low Temperature Magnetic Force Microscopy*, APS March meeting, Portland, OR, March 17, 2010, Frank Ruzicka, Alfred Lee, Alex de Lozanne, Amlan Biswas, Tara Dhakal, and Jacob Tosado

65. *Colossal electroresistance in phase separated manganite nanobridges*, APS March meeting, Pittsburgh, PA, March 16, 2009, G. Singh-Bhalla, A. Biswas, and A. F. Hebard

66. *Mapping the phase boundaries in thin-film manganites using scale-invariant dielectric response*, APS March meeting, Pittsburgh, PA, March 16, 2009, P. Mickel, G. Singh-Bhalla, S. Tongay, A. Biswas, and A. F. Hebard

67. *Phase modification of* $La_{1/4}Pr_{3/8}Ca_{3/8}MnO_3$ *thin films by light, magnetic field and applied stress*, APS March meeting, Pittsburgh, PA, March 16, 2009, Justin Olamit, Mikhail Zhernenkov, Mike Fitzsimmons, Haile Ambaye, Valeria Lauter, Hyoung Jeen Jeen, and Amlan Biswas

68. *Coulomb Blockade I-V Characteristics in Nanowires*, APS March meeting, Pittsburgh, PA, March 16, 2009, Sarah Joy, Guneeta Singh-Bhalla, Arthur Hebard, Amlan Biswas, and Selman Hershfield

69. *A quartz tuning fork as a force sensor for atomic force microscopy, APS March meeting*, Pittsburgh, PA, March 16, 2009, Arthur Ianuzzi, Julia Neff, John Timmerwilke, and Amlan Biswas

70. *Electric field induced anisotropic transport properties of phase separated* $(La_{1-y}Pr_y)_{0.67}Ca_{0.33}MnO_3$ *thin films*, APS March meeting, Pittsburgh, PA, March 16, 2009, Hyoung Jeen Jeen, Alessandra Gallastegui, and Amlan Biswas

71. *Growth and characterization of multiferroic* $BiMnO_3$ *thin films*, APS March meeting, Pittsburgh, PA, March 19, 2009, Amlan Biswas, G. Singh-Bhalla, Chelsey Morien, Hyoung Jeen Jeen, Patrick Mickel, Sefaatin Tongay, Julia Neff, and A. F. Hebard

72. Characterization of Anisotropy in Manganite (LPCMO) Thin Films, G. Singh-Bhalla, S. Tongay, T. Dhakal, R. Rairigh, A. Biswas, A. F. Hebard, APS March meeting, March 8, 2007, Denver, CO

73. Temperature- and field-dependent far-infrared studies of $(La_{0.4}Pr_{0.6})_{0.67}Ca_{0.33}MnO_3$ films, Naveen Margankunte, Tara Dhakal, Alexandre Zimmers, D. J. Arenas, Y. J. Wang, Amlan Biswas, D. B. Tanner, APS March meeting, March 8, 2007, Denver, CO

74. Colossal piezoresistance in manganites, Jacob Tosado, Josymir Lopez, Tara Dhakal, Amlan Biswas, APS March meeting, March 5, 2007, Denver, CO

75. Controlling the magnetic phase of a hole-doped manganite with an out-of-plane electric field, Sung Hee Yun, Rajiv Misra, A. F. Hebard, Amlan Biswas, APS March meeting, March 5, 2007, Denver, CO

76. Manipulation of the ferromagnetic domains of a manganite using an electric field, Tara Dhakal, Sinan Selcuk, Arthur F. Hebard, Amlan Biswas, APS March meeting, March 5, 2007, Denver, CO

77. The electric field effect on the electronic soft matter in the manganite $(La_{1-y}Pr_y)_{0.67}Ca_{0.33}MnO_3$ (y = 0.4, 0.5 and 0.6), Tara Dhakal, Jacob Tosado, SungHee Yun, Amlan Biswas, APS March meeting, March 13, 2006, Baltimore, MD

78. Point-contact spectroscopy of the electron-doped cuprate superconductor $Pr_{2-x}Ce_xCuO_4$ in magnetic fields up to 32 tesla, Sunghee Yun, Tara Dhakal, Jacob Tosado, Amlan Biswas, APS March meeting, March 13, 2006, Baltimore, MD

79. Colossal magnetocapacitance and scale-invariant dielectric response in mixed phase manganites, Ryan Rairigh, Amlan Biswas, Arthur Hebard, APS March meeting, March 13, 2006, Baltimore, MD

80. Remarkable doping dependence of the spin magnetoresistance in $Pr_{2-x}Ce_xCuO_4$, Yoram Dagan, M.C. Barr, W.M. Fisher, R.L. Greene, T. Dhakal, and A. Biswas, APS March meeting, March 22, 2005, Los Angeles, CA

81. Point contact spectrscopy of electron-doped cuprates in a magnetic field of 32 tesla, Sung-Hee Yun, Neesha Anderson, Tara Dhakal, and Amlan Biswas, APS March meeting, March 24, 2005, Los Angeles, CA

82. Manipulation of the magnetic nanostructure of a hole-doped manganite using an electric field, Tara Dhakal, Jacob Tosado, Yun Sung-Hee, and Amlan Biswas, APS March meeting, March 25, 2005, Los Angeles, CA

83. Magnetocapacitance in hole-doped perovskite manganite trilayer structures, R.P. Rairigh, A. Biswas, R.L. Greene and A.F. Hebard, 49th Conference on Magnetism and Magnetic Materials, November 2004, Jacksonville, FL

84. Effect of Strain and Growth Morphology on the Evolution of the Domain Structure of Ferromagnetic Manganites, Holly Miller and Amlan Biswas, MRS spring meeting, April 2004, San Fransisco, CA

85. Surface effects in hole-doped perovskite manganite trilayer structures, American Physical Society, March meeting, March 26, 2004, Montreal, Canada

86. Doping dependence of the magnetoresistance in the electron-doped high-Tc superconductor $Pr_{2-x}Ce_xCuO_{4-\delta}$, American Physical Society, March meeting, March 22, 2004, Montreal, Canada.

87. Evidence of a d to s-wave pairing symmetry transition in the electron-doped cuprate superconductor $Pr_{2-x}Ce_xCuO_4$, APS meeting, March 19, 2002, Indianapolis, Indiana

88. Dependence of point contact spectra on barrier strength in $Pr_{2-x}Ce_xCuO_4$, APS meeting, March 19, 2002, Indianapolis, Indiana

89. Tunneling spectroscopy of the normal state of $Pr_{2-x}Ce_xCuO_4$, APS meeting, March 12, 2001, Seattle, Washington

90. Effect of strain induced structural transitions on the properties of hole-doped manganites, APS meeting, March 21, 2000, Minneapolis, Minnesota

91. Effect of biaxial strain in ultra-thin manganite thin films, MRS Fall meeting, December 1, 1999, Boston, Massachusets

92. Collapse of the charge ordering gap of $Nd_{0.5}Sr_{0.5}MnO_3$ in an applied magnetic field, APS meeting, March 23, 1999, Atlanta, Georgia

93. DAE Solid State Physics Symposium, December 27-31, 1995, Indian Association for Cultivation of Sciences, Calcutta, India.

d) Contributed Posters

1. Characterizing the Relationship Between Temperature and Anisotropic Magnetoresistance in Manganite Thin Films, Jonah Beurkens (REU student), March 7, 2023 APS March Meeting, Las Vegas, NV (poster presentation)

2. Thickness dependent electronic/magnetic responses and electric field induced anisotropic transport properties of phase separated (La0.4Pr 0.6)0.67Ca0.33MnO3 thin films on orthorhombic NdGaO3 substrates, 2010 Gordon research conference (Magnetic nanostructures), Aug. 10, 2010, Bates college, Lewiston, ME, Hyoung Jeen Jeen (presenter) and Amlan Biswas

3. The effect of substrate induced strain on the electronic soft matter in thin films of the manganite $(La_{1-y}Pr_y)_{0.67}Ca_{0.33}MnO_3$ (y = 0.5, 0.6), Jacob Tosado (presenter), Tara Dhakal, Sunghee Yun, Amlan Biswas, APS March meeting, March 14, 2006, Baltimore, MD

4. Low temperature Scanning Tunneling Microscopy of Manganites, Jacob Tosado (presenter), Tara Dhakal, and Amlan Biswas, APS March meeting, March 23, 2005, Los Angeles, CA

5. Tunneling spectroscopy of the electron doped superconductor, $Pr_{2-x}Ce_xCuO_4$, Spectroscopies of Novel Superconductors, May 2001, Chicago, Illinois

6. Tunneling spectroscopy of the electron doped superconductor, $Pr_{2-x}Ce_xCuO_{4,}$ Spintronics, August 2001, Georgetown University, Washington DC

7. Andreev Reflection studies of the electron doped superconductor, $Pr_{2-x}Ce_xCuO_{4,}$ Physical Phenomena at High Magnetic Fields IV, October 15-19, 2001, Santa Fe, New Mexico

8. Scanning Tunneling Microscopy/Spectroscopy of hole-doped manganites, 9th International Conference on Scanning Tunneling Microscopy/ Spectroscopy and Related Techniques, July 20-25,1997, Congress Centrum Hamburg, Hamburg, Germany.
9. DAE Solid State Physics Symposium, December 27-31,1994, University of Rajasthan, Jaipur, India

GRANTS, CONTRACTS, AND EXTERNAL FUNDING

List of Funding - External

Role	Reporting Agency	Grant Title	Dates	Awarded/Anticipated	Candidate Allocation ($Amount)
Principal Investigator	NATL SCIENCE FOU (2244024)	REU site: Experimental and Computational Methods for Materials Discovery (AWD14189)	Apr/23 - Mar/27	$322,660 $322,660	$322,660
Co-PD/PI	NATL SCIENCE FOU (1852138)	REU Site: Condensed Matter Physics and Applied Materials (AWD05683)	Apr/19 - May/23	$249,428 $249,428	$0
Principal Investigator	NATL SCIENCE FOU (DMR-1410237)	Electric Field Effects on the Ferromagnetism of Dynamically PhaseSeparated Manganites (00094253)	Jul/14 - Jun/19	$376,014 $376,014	$376,014
Principal Investigator	NATL SCIENCE FOU (DMR-0804452)	The Effect of Strain on the Phase Separation and Magnetoelectric Coupling in Manganites	Aug/08 – Jul/12	$300,000 $300,000	$300,000
Principal Investigator	National High Magnetic Field Laboratory, In-house research program	Investigation of the normal state of electron-doped cuprates in high magnetic field	Oct/03 – Oct/06	$164,000 $164,000	$164,000

List of Funding - Internal

Role	Reporting Agency	Grant Title	Dates	Awarded/Anticipated	Candidate Allocation ($Amount)
Co-PD/PI	UF RESEARCH	OR-DRPD-ROF2021: Improper Ferroelectric Thin Films: New Materials for Memory Devices (00130761)	Jun/21 - May/23	$83,000	$27,679
Co-PD/PI	UF RESEARCH (AGR DTD 06-26-2020)	OR-DRPD-ROF2020: Nickelates: A New Frontier in High Temperature Superconductivity (AWD08498)	Jul/20 - Jul/22	$85,000 $85,000	$20,132
Co-PD/PI	UF DSR Research Opportunity Fund	Photocontrol of Spintronic Devices Based on Molecular Magnets	May/11 – Apr/13	$78,000 $78,000	$8,165

STUDENTS MENTORED

PhD recipients from the Biswas group:

1. Dr. Ashkan Paykar
   Physics Lecturer
   University of Minnesota Rochester
   PhD: 2023
   Thesis: Magnetic Anisotropy and Anisotropic Magnetoresistance in Microstructured (La1-yPry)1-xCaxMnO3 Thin Films

2. Dr. Ambika Shakya
   Engineer
   Intel Corp.
   PhD: 2022
   Thesis: Non-Uniform Electric Field Effects on Dynamically Phase Separated Manganites

3. Dr. Inhae Kwak
   Defect Metrology Engineer
   Intel Corp.
   PhD: 2016
   Thesis: Phase Separation in Strained La0.67Sr0.33MnO3 Thin Films

4. Dr. Daniel Grant
   Generation Engineer
   Public Service Commission, Madison, WI
   PhD: 2015
   Thesis: Effect of Electric Field and Strain on the Magnetic Properties of Phase Separated Manganites

5. Dr. John Timmerwilke
   Characterization Engineering Professional
   IBM Yorktown Heights
   PhD: 2013
   Thesis: Point contact studies of iron based superconductors

6. Prof. Hyoungjeen Jeen
   Professor
   Pusan National University, South Korea
   PhD: 2011
   Thesis: Magnetoelectric effects in manganites

7. Dr. Sunghee Yun
   Primary Examiner
   United States Patent and Trademark Office
   PhD: 2008
   Thesis: Effect of disorder in cuprates and manganites

8. Prof. Tara Dhakal
   Professor
   Binghamton University
   PhD: 2008
   Thesis: Manipulating the magnetic domains of hole-doped manganites by using electric field

Current PhD students:

Student	Expected Thesis Title	Candidacy Admission	Expected Completion
Dylan Tagrin	Electric field induced changes in coercive field in thin film manganite microstructures	**Yes,** 1/31/2025	**Spring 2027**
Joseph Jung	Electric field effects on the magnetic anisotropy of phase-separated manganites	**Yes,** 4/17/2025	**Fall 2027**

Undergraduates Mentored (2021 – 2025, Research):

Student	Student Awards based on Biswas group research	Dates
Monique Kubovsky	1. Goldwater Scholar 2025 2. Oegerle Scholar 2025 3. University Scholars Program (2024-25) 4. CLAS Scholars Program (2023-24)	September 2023 - Present

Student	Student Awards based on Biswas group research	Dates
Xena Machin	CCMS Undergraduate fellowship (2025-26)	February 2025 - Present
Neha Prince	University Scholars Program (2025-26)	September 2024 - Present
Matthew Shapiro	University Scholars Program (2024-25)	January 2024 - Present
Rhett Hoke	University Scholars Program (2023-24)	January 2023 - May 2025
Amilqar Karam		September 2023 - December 2024
Haben Belai	Schaffer Scholarship (Summer 2022)	January 2022 - December 2023
Brian Phillips		September 2022 - December 2022
Tyler George		September 2021 - May 2022
Nicole Burg	University Scholars Program (2021-22)	January 2021 - May 2022

Undergraduates Mentored (Before 2021, Research): approximately 50

AWARDS

1. University of Florida Term Professorship (2018-2021)
2. Physics department teacher of the year (2023)
3. Outstanding Mentor of Undergraduate Research (University of Florida Education Celebration, 2012)
4. College of Liberal Arts and Sciences teacher of the year (2008-2009)
5. Physics department teacher of the year (2006)

MAJOR COMMITTEE ASSIGNMENTS

1. Undergraduate Coordinator (2013 to 2016)
2. Chair, Peer Evaluation of Teaching Committee (2021 to present)
3. Director, Center for Condensed Matter Sciences (2025 to present)
4. Undergraduate Advisor (2006 to 2025)
5. Graduate Student Ombuds (2021 to 2023)
6. Graduate student advisory committee (2020-25)
7. Faculty mentoring committee (chair (1), member (3))
8. Member of department advisory committee (2021-23 and 2024-26)
9. Member biophysics faculty search committee (2024-25)
10. Member computational physics faculty search committee (2023-24)
11. Large course teaching committee (fall, 2023)
12. Member of Helium user committee (2020 to present)

13. Member of prelim exam committee (2025-26)
14. Fall 2021 commencement marshal
15. Spring 2025 commencement marshal
16. Chair, Department Undergraduate Curriculum Committee (2013 to 2016)
17. Co-chair, Applied Physics Task Force (2016-17)
18. Chair, Graduate Recruitment and Admissions Committee (2012-13)
19. Director, Center for Condensed Matter Sciences (2009 to 2011)

PARTICIPATION ON PROFESSIONAL BOARDS, REVIEW PANELS, ADVISORY COMMITTEES (2021 TO 2025)

Grant and Fellowship Review Panels

2024

- **National Science Foundation (NSF)**: Served on the Major Research Instrumentation (MRI) proposal review panel. Reviewed proposals and participated in a formal two-day panel review meeting to provide funding recommendations.

2023

- **Ford Foundation Fellowships (National Academy of Sciences)**: Served as a reviewer for fellowship applications, evaluating candidates for academic excellence and professional potential.

PhD Thesis Reviews

- **University of Sherbrooke** (Quebec, Canada): External Thesis Reviewer (2024).
- **Indian Institute of Technology (BHU)** (Banaras, India): External Thesis Reviewer (2023).
- **Indian Institute of Science Education and Research** (Kolkata, India): External Thesis Reviewer (2022).

Journal Peer Review Service (2021-2025)

Listed in descending order by most recent (2024/2025) Impact Factor (IF).

- **Advanced Materials**: Reviewed 1 article (IF: **26.8**)
- **Advanced Functional Materials**: Reviewed 1 article (IF: **19.0**)
- **Physical Review Applied**: Reviewed 1 article (IF: **4.4**)
- **Vacuum**: Reviewed 1 article (IF: **3.9**)
- **Physical Review B**: Reviewed 8 articles (IF: **3.7**)
- **Journal of Magnetism and Magnetic Materials**: Reviewed 1 article (IF: **3.0**)
- **Physical Review Materials**: Reviewed 1 article (IF: **2.7**)
- **Journal of Physics: Condensed Matter**: Reviewed 2 articles (IF: **2.6**)
- **Review of Scientific Instruments**: Reviewed 1 article (IF: **1.7**)