SARATH WITANACHCHI

DEPARTMENT OF PHYSICS
UNIVERSITY OF SOUTH FLORIDA
TAMPA, FL, F0.28 683.VERL, F0.28, FM3ARTw 15.72()-1 LA, F0.28

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11. DOE, DE-FG02-96ER12199, $368,541 (8/15/96 to 8/14/99). "Experimental and Theoretical Investigation of Dual-laser Ablation for Stoichiometric Large-area Multicomponent CuInGaSe2 Film Growth".

12. NSF, Grant # DMI-9622114, $258,735 (12/1/96 to 11/30/99), "Pulsed Laser Ablation for Manufacturing: A Novel Dual-laser Film Growth Process".

13. NSF Research Initiation Award, $100,000 (Aug. 1993-Aug. 1996)

Professional Societies:

Charter Members, Academy of Inventors at USF
Materials Research Society (MRS)

Publications

102 refereed papers and 135 conference presentations

List of Publications

Publications

1. A. Chanda, D. Rani, D. DeTellem, N. Alzahrani, D. A. Arena, S. Witanachchi, R. Chatterjee, M.H. Phan, and H. Srikanth, "Large thermo-spin effects in Heusler alloy-based spin-gapless semiconductor thin films", ACS Applied Materials and Interfaces 2023;15:53697

2. C.M. Hung, D.T.X. Dang, A. Chanda, D. Detellem, N. Alzahrani, N. Kapuruge, Yen T. H. Pham, M.Z. Liu, D. Zhou, H.R. Gutierrez, D.A. Arena, M. Terrones, S. Witanachchi, L.M. Woods, H. Srikanth, and M.H. Phan, " Enhanced Magnetism and Anomalous Hall Transport through Two-dimensional Tungsten Disulphide Interfaces", Nanomaterials 2023;13:771

3. M.-H. Phan, V. Kalappattil, V. O. Jimenez, Y. Thi Hai Pham, N. W. Y. A. Y.

   "Exchange Bias and Interface-Related Effects in Two-Dimensional van Der Waals Magnetic

6. Amit Chanda, Derick DeTellem, Yen Thi Hai Pham, Jenae E. Shoup, Anh Tuan Duong, Raja Das, Sunglae Cho, Dmitri V. Voronine, M. Tuan Trinh, Dario A. Arena, Sarath Witanachchi, Hariharan Srikanth, and Manh-Huong Phan, “Spin Seebeck Effect in Iron Oxide Thin Films: Effects of Phase Transition, Phase Coexistence, And Surface Magnetism”, ACS Appl. Mater. Interfaces, 14 (11), 13468–13479 (2022).

7. 3 ×6 *KRVK ' 'H7HOOHP - 5HQ 6 :LWDQDFKFKL 6 0D
Unusual Properties of Hydrogen-Bonded Ferroelectrics: The Case of Cobalt Formate
Phys. Rev. Lett. 128, 077601 (2022)

8. C.M. Hung, R.P. Madhogaria, B. Muchharla, E.M. Clements, A.T. Duong, R. Das, P.T. Huy, S.L. Cho, S. Witanachchi, H. Srikanth, and M.H. Phan, “MnP films with desired magnetic, magnetocaloric and thermoelectric properties for a perspective magneto-thermo-electric cooling device”. Physica Status Solidi A: Applications and Materials Science Volume219, Issue3 (2022).

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15. D. Mukherjee, S. Witanachchi, P. Mukherjee, “Laser ablation for multiferroic heterostructures”, Laser Ablation: Fundamentals, Methods, and Applications”, Chapter 3, p45, Edit. Christoph Gerhard, Stephan Wieneky, and Wolfgang Vilo, Nova publishers, NY 2015.

16. D. Mukherjee, M. Hordagoda, P. Lampen, M. H. Phan, H. Srikanth, S. Witanachchi, and P. Mukherjee, “Simultaneous enhancements of polarization and magnetization in epitaxial $Pb(Zr_{0.52}Ti_{0.48})O_3/La_{0.7}Sr_{0.3}MnO_3$ multiferroic heterostructures enabled by ultrathin $CoFe_2O_4$ sandwich-layers”, Physical Review B 91, 054419 (2015). R

17. D. Mukherjee, A. Datta, C. Kons, M. Hordagoda, S. Witanachchi and P. Mukherjee, “Intrinsic Anomalous Ferroelectricity in Vertically-Aligned $LiNbO_3$-type $ZnSnO_3$ Hybrid Nanoparticle-Nanowire Arrays”, Applied Physics Letters 105, 212903 (2014). R

18. A. Datta, D. Mukherjee, C. Kons, S. Witanachchi and P. Mukherjee, “Evidence of Superior Ferroelectricity in Structurally Welded $ZnSnO_3$ Nanowire Arrays”, Small 10, 4093 (2014).

19. D. Mukherjee, J. Devkota, A. Ruiz, S. Witanachchi, P. Mukherjee, H. Srikanth, and M.H. Phan “Impact of coating amorphous and crystalline cobalt ferrite films on the magneto-impedance response of a soft ferromagnetic amorphous ribbon”, Journal of Applied Physics 116, 123912 (2014). R

20. A. Datta, D. Mukherjee, S. Witanachchi and P. Mukherjee, "On-the-surface photoconductive response of pelletized thin In_2S_3 nanosheets", Materials Research Bulletin 55, 176-181 (2014). R

21. A. Datta, D. Mukherjee, S. Witanachchi and P. Mukherjee, “Hierarchically-Ordered Nano-Heterostructured PZT Thin Films with Enhanced Ferroelectric Properties”, Advanced Functional Materials 24, 2638-2647 (2014).

22. D. Mukherjee, M. Hordagoda, P. Lampen, M. H. Phan, H. Srikanth, S. Witanachchi, and P. Mukherjee, "Enhanced magnetism and ferroelectricity in epitaxial $Pb(Zr_{0.52}Ti_{0.48})O_3/CoFe_2O_4/La_{0.7}Sr_{0.3}MnO_3$ multiferroic heterostructures grown using dual-laser ablation technique", Journal of Applied Physics 115, 17D707 (2014).

23. D. Mukherjee, M. Hordagoda, R. Hyde, N. Bingham, H. Srikanth, S. Witanachchi, and P. Mukherjee, "Nano-columnar Interfaces and Enhanced Magnetic Coercivity in Preferentially oriented Cobalt ferrite Thin Films grown using Oblique-angle Pulsed Laser Deposition", ACS Applied Materials and Interfaces, 5(15), 7450 (2013). DOI: http://dx.doi.org/10.1021/am401771z

24. A. Datta, D. Mukherjee, M. Hordagoda, S. Witanachchi, and P. Mukherjee, "Controlled Ti Seed Layer Assisted Growth and Field Emission Properties of $Pb(Zr_{0.52}Ti_{0.48})O_3$ Nanowire Arrays", ACS Applied Materials and Interfaces, 5(13), 6261 (2013). DOI: http://dx.doi.org/10.1021/am4012879

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C. Tamargo and Martín Muñoz, “Photoreflectance spectroscopy
CdTe/ZnTe superlattices” J. Appl. Phys. 110, 093703 (2011).

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37. Ted Wangensteen, Marek Merlak, Tara Dhakal, Pritish Mukherjee, and Sarath Witanachchi (University of South Florida), Bed Poudel and Giri Joshi (GMZ Energy, Inc., Waltham, Massachusetts), “Growth of nanoparticulate films of $Ca_3Co_4O_9$ by a microwave plasma–assisted spray process” J. Mater. Res., Vol. 26 (15), 1940-1945 (2011).

38. Devajyoti Mukherjee, Tara Dhakal, Manh-Huong Phan, Hariharan Srikanth, Pritish Mukherjee, Sarath Witanachchi, “Role of crystal orientation on the magnetic properties of $CoFe_2O_4$ thin films grown on Si(100) and Al2O3 (0 001) substrates using pulsed laser deposition”, Physica B 406, 2663–2668 (2011).

39. D. Mukherjee, T. Dhakal, R. Hyde, P. Mukherjee, H. Srikanth, and S. Witanachchi, “Role of Epitaxy in Controlling the Magnetic and Magnetostrictive Properties of Cobolt Ferrite-PZT Bilayers”, Journal of Physics D: Applied Physics, Vol. 43, pg. 485001 (2010).

40. A. Chaturvedi, T.P. Dhakal, S. Witanachchi, A.T. Le, M.H. Phan, and H. Srikanth “Critical Length and Giant Magnetoimpedance in $Co_{69}Fe_{4.5}Ni_{1.5}Si_{10}B_{15}$ Amorphous Ribbons”, Materials Sci. Eng. B-Advanced Functional Solid-state Materials, Vol. 172, No. 2, pg. 146-150 (2010).

41. T. Dhakal, D. Mukherjee, R. Hyde, P. Mukherjee, M.H. Phan, H. Srikanth, and S. Witanachchi. “Magnetic Anisotropy and Field Switching in Cobalt Ferrite Thin Films Deposited by Pulsed Laser Ablation”, Journal of Applied Physics, Vol. 107, No. 5, pg. 053914 1-6 (2010).

42. A. Chaturvedi, T.P. Dhakal, S. Witanachchi, A.T. Le, M.H. Phan, and H. Srikanth, “Correlation Between Magnetic Softness, Sample Surface and Magnetoimpedance in $Co_{69}Fe_{4.5}X_{1.5}Si_{10}B_{15}$ (X=Ni, Al, Cr) Amorphous Ribbons”, Physica B-Condensed Matter, Vol. 405, No. 13, pg. 2836-2839 (2010).

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44. T. Dhakal, D. Mukherjee, P. Mukherjee, M. Phan, H. Srikanth, and S. Witanachchi, "Magnetic Anisotropy and Field Switching in Cobalt Ferrite Thin Films Deposited by Pulsed Laser Ablation", Journal of Applied Physics, Vol. 107, No. 5, pg. 053914 (2010).

45. H. Verma, D. Mukherjee, S. Witanachchi, P. Mukherjee, and M. Batzill, "Comparative Study of ZnO Thin Film and Nano-Pillar Growth on YSZ(111) and Sapphire (0001) Substrates by Pulsed Laser Deposition", Journal of Crystal Growth, Vol. 312, pg 2012-2018 (2010).

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76. A. J. Kontkiewicz, A.M. Kontkiewicz, J. Siejka, S. Sen, G. Nowak, A.M. Hoff, P. Sakthivel, K. Ahmed, P. Mukherjee, S. Witanachchi, and J. Lagowski, " Evidence that blue luminescence of oxidized porous silicon originates from Si02", Applied Physics Letters. 65, 1436-1438, 1994.

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79. S. Witanachchi, K. Ahmed, P. Sakthivel and P. Mukherjee, "An Ion Probe Study of Plasma Assisted Laser Depos Plasma

99. H.S. Kwok, P. Mattocks, D.T. Shaw, L. Shi, X.W. Wang, S. Witanachchi, Q.Y. Ying, J.P. Zheng, and P. Bush, "Laser Evaporation Deposition of YBCO Thin Films", High Temperature Superconductors, Ed. by M.B. Brodsky, R.C. Dynes, K. Kitazawa and H.C. Tuller, MRS proc., Vol. 99, pp 735-738, Pittsburgh,1988.

100. H.S. Kwok, P. Mattocks, D.T. Shaw, L. Shi, X.W. Wang, S. Witanachchi, Q.Y. Ying and J.P. Zheng, "Growth of Highly Oriented CdSxSe1-x Thin Films by UV Laser Evaporation Deposition", Lasers and Particle-Beam Processing of Semi-conductors, Ed. by D.J. Ehrlich, G.S. Higashi and M.M. Oprysko, MRS Proc., Vol. 101, pp 337-342, Pittsburgh, 1988.

101. H.S. Kwok, P. Mattocks, D.T. Shaw, L. Shi, S.W. Wang, S. Witanachchi, Q.Y. Ying and J.P. Zheng, "Sensing, Discrimination and Signal Processing and Superconducting Materials and Instrumentation", SPIE Proc., Vol. 879, Ed. by J.A. Ionson and R. Nicols, pp 153-158, 1988,

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<u>CONFERENCE PRESENTATIONS</u>

1. Derick DeTellem, Christian Coris, Gina Pantano, Brianna Pecourt, and Sarath Witanachchi, "Solar-Thermal hybrid method of Energy harvesting in Rural Africa", MRS Spring meeting, April 2023, San Francisco,.CA
2. Nivarthana W.Y.A.Y. Mudiyanselage, Chang-Ming Hung, Derick DeTellem, Amit Chanda, Janae E. Shoup, Noha Alzahrani, Anh Tuan Duong, Johannes Frisch, Marcus Bär, Dario Arena, Hariharan Srikanth, Sarath Witanachchi, and Manh-Huong Phan, "Proximity-mediated Magnetotransport in Ferromagnetic/Helimagnetic Fe/MnP Bilayers" IEEE MMM 2023, Dallas, TX, USA.
3. Nivarthana W.Y.A.Y. Mudiyanselage, Chang-Ming Hung, Derick Detellem, Amit Chanda,m Hariharan Srikanth, Sarath Witanachchi, and Manh-Huong Phan, "Time dependent Magnetic Properties and Coupling Nature of Fe3GeTe2 (FGT)" IEEE summer school 2023, Bari, Italy.
4. Alexander Prieto, Nivarthana W.Y.A.Y Yapa Mudiyanselage, Thi Hai Yen Pham, Chang-Ming Hung, Derick DeTellem, J Marcelo J Lopes, Sarath Witanachchi, and Manh-Huong Phan, "Current Controlled Magneto-Optic Kerr Effect of Two-Dimensional Fe3GeTe2", Emerging material symposium 2023 at University of Central Florida, Orlando FL, USA
5. "Energy harvesting with Solar and Thermoelectric materials: A hybrid concept" Derick DeTellem, and Sarath Witanachchi, Murape Davison Munyaradzi, Presentation at the Spring MRS meeting, Hawaii, May 10, 2022.
6. Functional WS

Derick Detellem, Baleeswaraiah Muchharla, Nivarthana Waruni Yapa Mudiyanselage,

Embedded $CH_3NH_3PbI_{3-x}Cl_x$ Perovskite Solar Cells”, Materials Research Society Meeting, Phoenix, AZ, April 2016.

17. D. Torres, R. Das, J. Alonso, H. Srikanth, M.H. Phan, S. Witanachchi, “Anisotropic Magnetic Nanostructures For Enhanced Hyperthermia”. Materials Research Society Meeting, Phoenix, AZ, April 2016.

18. C. L. Hettiarachchi, N. Valdes, P. Mukherjee and S. Witanachchi, “A novel single-step growth process for the deposition of $CH_3NH_3PbI_{3-x}Cl_x$ perovskite films from CH_3NH_3Cl and PbI_2 precursors”, Materials Research Society, 2015 MRS Spring Meeting, San Francisco, CA (April 6th – 10th, 2015).

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19. D. J. Denmark, G. Marcus, D. Mukherjee, S. Witanachchi and P. Mukherjee, “A fundamental understanding of the competing Neel and Brownian relaxation mechanisms in the remote RF heating of thermo-responsive polymers using Fe_3O_4 magnetic nanoparticles”, Materi-6.9 (es-5.1 (ear)-11 (ch)-4 (S)-18 (o)-4 (ci)-6 (et)-6 (y)-4 (,)]T.04 0.278 r 1

Conference and Exposition on Advanced Ceramics and Composites, Daytona Beach, Fl (Jan. 26th-31st, 2014) (invited).

26. M. Hordagoda, D. Mukherjee, D. Ghosh, J. L. Jones, S. Witanachchi, and P. Mukherjee, "Role of dilute La

laser ablation", American Chemical Society (Florida Section), 2013 Florida Annual Meeting and Exposition (FAME), Tampa, FL (May 10th, 2013).

34. A. Datta, D. Mukherjee, S. Witanachchi and P. Mukherjee, "Growth of low-dimensional $Pb(Zr_xTi_{1-x})O_3$ nanostructures by combined physical and wet-chemical synthesis approaches with enhanced electronic properties", Materials Research Society, 2013 MRS Spring Meeting & Exhibit, San Francisco, CA (April 1st-5th, 2013).

35. D. Mukherjee, M. Hordagoda, N. Bingham, H. Srikanth, S. Witanachchi, and P. Mukherjee "Challenges and solutions to the stoichiometric growth of high quality epitaxial $PbZr_{0.52}Ti_{0.48}O_3/La_{0.7}Sr_{0.3}MnO_3$ multiferroic heterostructures using single and dual laser ablation processes", Materials Research Society, 2013 MRS Spring Meeting & Exhibit, San Francisco, CA (April 1st-5th, 2013).

36. D. Mukherjee, R. Hyde, M. Hordagoda, N. Bingham, M. H. Phan, H. Srikanth, S. Witanachchi, and P. Mukherjee, "Growth and characterization of high quality epitaxial $La_{0.7}Sr_{0.3}MnO_3$ thin films using dual-laser ablation technique", Magnetism and Magnetic Materials, 12th Joint MMM/INTERMAG Conference, Chicago, IL (Jan. 14th -

approaches with enhanced electronic properties", Materials Research Society, 2013 MRS Spring Meeting & Exhibit, San Francisco, CA (April 1st-5th, 2013).

42. D. Mukherjee, M. Hordagoda, N. Bingham, H. Srikanth, S. Witanachchi, and P. Mukherjee "Challenges and solutions to the stoichiometric growth of high quality epitaxial $PbZr_{0.52}Ti_{0.48}O_3/La_{0.7}Sr_{0.3}MnO_3$ multiferroic heterostructures using single and dual laser ablation processes", Materials Research Society, 2013 MRS Spring Meeting & Exhibit, San Francisco, CA (April 1st-5th, 2013).

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44. M. Hordagoda, D. Mukherjee, N. Bingham, D. Ghosh, J. L. Jones, H. Srikanth, P. Mukherjee, and S. Witanachchi, "Effect of La doping in PZT on the magnetic and ferroelectric properties of epitaxial PZT/LSMO multiferroic heterostructures", Magnetism and Magnetic Materials, 12th Joint MMM/INTERMAG Conference, Chicago, IL (Jan. 14th -18th, 2013).

45. D. Mukherjee, R. Hyde, M. Hordagoda, N. Bingham, H. Srikanth, P. Mukherjee, and S. Witanachchi, "Magnetic properties of preferentially-oriented nanostructured cobalt ferrite thin films grown using oblique-angle pulsed laser deposition", Magnetism and Magnetic Materials, 12th Joint MMM/INTERMAG Conference, Chicago, IL (Jan. 14th -18th, 2013).

46. D. Mukherjee, M. Hordagoda, R. Hyde, D. S. Hromalik, N. Bingham, H. Srikanth, S. Witanachchi, and P. Mukherjee, "Magnetic polaron percolation in epitaxial Mn doped ZnO thin films grown at higher doping concentrations using dual-laser ablation technique", Magnetism and Magnetic Materials, 12th Joint MMM/INTERMAG Conference, Chicago, IL (Jan. 14th-18th, 2013).

47. A. Ruiz, D. Mukherjee, J. Devkota, M. Hordagoda, P. Mukherjee, S. Witanachchi, H. Srikanth, M. H. Phan, "Enhanced GMI effect in soft ferromagnetic amorphous ribbons with pulsed laser deposition of cobalt ferrite", Magnetism and Magnetic Materials, 12th Joint MMM/INTERMAG Conference, Chicago, IL (Jan. 14th-18th, 2013).

48. D. Mukherjee, M. Hordagoda, R. H. Hyde, N. Bingham, H. Srikanth, P. Mukherjee, and S. Witanachchi, "Epitaxial Growth of Multiferroic Heterostructures of Magnetic and Ferroelectric Oxides using the Dual-laser Ablation Technique", American Vacuum

Society 59th International Symposium and Exhibition, Tampa, Fl (Oct. 28th - Nov. 2nd, 2012).

49. D. Mukherjee, M. Hordagoda, R. H. Hyde, N. Bingham, H. Srikanth, P. Mukherjee, and S. Witanachchi, "Role of Dual-laser Ablation in Controlling Mn Oxide Precipitation during the Epitaxial Growth of Mn Doped ZnO Thin Films with Higher Doping Concentrations", American Vacuum Society 59th International Symposium and Exhibition, Tampa, Fl (Oct. 28th - Nov. 2nd, 2012).

50. C. Hettiarachchi, D. M. Feliciano, D. Mukherjee, P. Mukherjee, S. Witanachchi, "Improvement of Carrier Transport in PbSe Quantum-Dot Embedded Polymeric Solar Cells Fabricated by a Laser Assisted Spray Process", American Vacuum Society 59th International Symposium and Exhibition, Tampa, Fl (Oct. 28th - Nov. 2nd, 2012).

51. D. Mukherjee, S. Witanachchi, R. Hyde, and P. Mukherjee, "Advantages of Dual-laser Ablation in the Growth of Multicomponent Thin Films", 2012 International High Power Laser Ablation Conference, Santa Fe, NM, (April, 2012)

52. D. Mukherjee, M. Hordagoda, R. Hyde, P. Mukherjee, H. Srikanth, S. Witanachchi, "Dual Laser Ablation: A Novel Technique for the in-situ Growth of Epitaxial Multiferroic Heterostructures of Ultra-thin Films", NANOSMAT-USA-2012 Conference, Tampa, FL, (March, 2012)

53. C.L. Hettiarachchi, D. Ferizovic, D. Mukherjee, R. Hyde, S. Witanachchi, P. Mukherjee, "Structural and Optical Properties of Surfactant-free Coatings of PbSe Quantum Dots deposited by a Laser Assisted Spray Process", NANOSMAT-USA-2012, Tampa, FL, (March, 2012)

54. M. Hordagoda, D. Mukherjee, R. Hyde, P. Mukherjee, S. Witanachchi, "Growth and Characterization of Epitaxial $Pb(Zr_{0.52}Ti_{0.48})O_3$ Ultra-thin Films using a Novel Dual Laser Deposition Technique", NANOSMAT-USA-2012, Tampa, FL, (March, 2012)

55. A. Datta , M. Hordagoda, D. Mukherjee, S. Witanachchi, P. Mukherjee, "Growth of one dimensional $Pb(Zr_{x}$

deposited epitaxial PZT thin films and their ferroelectric characterization”, The Materials on Advanced Ceramics & Composites, The American Ceramic Society, Daytona Beach, Florida, Jan. 21, 2007.

78. R. Hyde, M. Beekman, D. Mukherjee, G. Nolas, P. Mukherjee, and S. Witanachchi, "Growth and characterization of germanium-based type I clathrate thin films deposited by pulsed laser ablation" 31st International Conference on Advanced Ceramics & Composites, The American Ceramic Society, Daytona Beach, Florida, Jan. 21, 2007.

79. T. Wangensteen, P. Mukherjee, and S. Witanachchi, " Growth of CoCaO nanoparticle coatings by a laser-assisted spray pyrolysis method for thermoelectric applications", 31st International Conference on Advanced Ceramics & Composites, The American Ceramic Society, Daytona Beach, Florida, Jan. 21, 2007.

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81. Sarath Witanachchi, Robert Hyde, Matt Beekman, Devajyoti Mukherjee, Pritish Mukherjee, and George S. Nolas, "Synthesis and Characterization of Bulk and Thin Film Clathrates for Solid State Power Conversion Applications", 25th International Conference on Thermoelectrics, Viena, Austria, Aug. 2006.

82. Pritish Mukherjee, and Sarath Witanachchi, "Control of nanograin size in laser-assisted spray pyrolysis coatings", presented at the 2006 NSF Design, Service and Manufacturing Grantees & Research Conference, St. Louis, Missouri, July 2006.

83. S. Witanachchi, H. S. Nagaraja, R. Heindl, H. Srikanth, and P. Mukherjee, "Multiferroic characteristics of highly oriented ferrite-ferroelectric multilayered and composite films deposited by laser ablation", Materials Research Society Spring Meeting, San Francisco, April 2006.

84. M. Beekman, R. Hyde, H.S. Nagaraja, P. Mukherjee, S. Witanachchi, and G.S. Nolas "Synthesis and Characterization of Bulk and Thin Film Silicon and Germanium-Based Clathrate Materials", Materials Research Society Spring Meeting, San Francisco, April 2006.

85. S.Witanachchi, P. Mukherjee, H. S. Nagaraja, R. Hyde, M. Beekman, H. F. Rubin, and G. S. Nolas, "Dual-laser Deposition of Type I Clathrate Films", Materials Research Society (MRS) Symposium, Boston, Massachusetts, December 2005.

86. R. Hyde, P. Mukherjee, and S. Witanachchi, "Role of the magnetic field on large-area carbon film growth on silicon in a hollow-anode arc plasma process", Materials Research Society Spring Meeting, San Francisco, April 2002.

87. Pritish Mukherjee, and Sarath Witanachchi, "Formation of Nano-grained TiC

films by laser ablation and laser assisted spray pyrolysis", presented in 2005 NSF Design, Service and Manufacturing Grantees & Research Conference, Phoenix, AZ, Jan. 2005.

88. Uma Choppali, Pritish Mukherjee, and Sarath Witanachchi "Dimensionally controlled growth of nano-grained films on chemically self-assembled gold nanotemplates", presented at Materials Research Society Meeting, , San Francisco, CA, April 12-16, 2004.

89. Pritish Mukherjee, Uma Choppali and Sarath Witanachchi, "Formation of Gold Nanotemplates for the Growth of Monodisperse Nano-grained Films", presented in 2004 NSF Design, Service and Manufacturing Grantees & Research Conference, Dallas, TX, Jan. 2004.

90. Gayan Dedigamuwa, Pritish Mukherjee, and Sarath Witanachchi,
"Deposition of mono-

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109. S. Witanachchi and P. Mukherjee, "A Novel Dual-Laser Ablation Process for Defect Free Epitaxial Film Growth", Materials Research Society Meeting, Boston, MA, December 1995.

110. P. Mukherjee and S. Witanachchi, "Dual-Laser Ablation for Thin Film Growth: A Plume Diagnostic Investigation", Proceedings of the 1995 NSF Design and Manufacturing Grantees Conference, January 1995, pp. 621-622.

111. P. Mukherjee, P. Sakthivel and S. Witanachchi, "Optical Detection of Slow Excited Neutrals in Plasma-Assisted Excimer Laser Ablation", Materials Research Society Meeting, Boston, MA, December 1995.

112. P. Mukherjee, P. Sakthivel and S. Witanachchi, "An Investigatin of the Physical Basis of A Novel Dual-Laser Ablation Process", Materials Research Society Meeting, Boston, MA., December 1995.

113. K. Ahmed, P. Mukherjee and S. Witanachchi, "Improved in-situ high TC Superconducting Films Grown by Dual-Laser Ablation", Materials Research Society Meeting, Boston, MA., December 1995.

114. K. Ahmed, P. Mukherjee and S. Witanachchi," Epitaxial Growth of Y203 and Nd: YAG films on Si by Dual-Laser Ablation", Materials Research Society Meeting, Boston, MA., December 1995.

115. S. Witanachchi, K. Ahmed, P. Sakthivel and P. Mukherjee," Dual-Laser Ablation of Particulate Free Optical Films" 41st International Symposium of the American Vacuum Society, Denver, CO, Oct. 25, 1994.

116. S. Witanachchi and P. Mukherjee, "Optical Film Growth by Dual-Laser Ablation", Proceedings of CLEO, Optical Society of America, May 1995.

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Graduate Students Supervised

1 G. S. Riser (M.S.), -August 1994.
2. K. Ahmed (Ph.D), -December 1996.
3. P. Panse (M.S.), -August 1994.
4. A. M. Miyawa (M.S.), -August 2000.
5. P. Mahawela (M.S.),- August 2000.
6. H. Abou-Mourad (Ph.D), - April 2005.
7. G. Dedigamuwa (M.S.), – May 2005.
8. H. Weerasinghe (M.S.), - August 2006
9. Robert Hyde (Ph.D),- July 2010.

10. G. Dedigamuwa (Ph.D), -July 2010.
11. Dev Mukherjee (Ph.D), –March 2010.
12. Marek Merlak (M.S), -July 2010.
13. T. Wangensteen (Ph.D), - November 2012.
14. Dino Ferizovic, (Ph.D.) –Dec. 2012.
15. Lakmal Hetiarachchi, (Ph.D.) – June 2017
16. Mahesh Hodagoda, (Ph.D.) – June 2016
17. Dan Denmark, (Ph.D.) – June 2016
18. Domingo Feliciano, (Ph.D.) – June 2018
19. Derick DeTellem (Ph.D.) - Current
20. Nivarthana Waruni Yapa (Ph.D.) - Current

<u>University Service</u>

- CAS Tenure and Promotion Committee (From Fall 2014)
- Executive Committee member, USF Chapter of the National Academy of Inventors (Fall 2011-2015)
- Executive Committee member of the National Academy of Inventors (Fall 2011-2013)
- Chair of the School of Natural Science and Mathematics (SNSM) Core Facilities and Infrastructure Committee (Fall 2008-present)
- Member of the Faculty Senate (Fall 2008-Spring 2011)
- Member of the College Advisory Council (Fall 2006-Spring 2008)
- Chair of the College Advisory Council (Fall 2005-Spring 2006)
- Chair of the Faculty Advisory Committee, Department of Physics (Fall 2001-Spring 2003, Fall 2005-Spring 2006)
- Chair of the Faculty Search Committee (2003-2008)
- Member of the advisory board, Nanotechnology Research and Education (NREC) (Fall 2004-present)
- Member, College Honors and Awards Committee (From Fall 2003)
- Member, College of Arts & Sciences Dean search committee (Fall 2001 & Spring 2002)
- Director of Graduate studies, Department of Physics (Fall 2002-Spring 2010)
- Chair of the Graduate committee (Fall 2002 – Spring 2010)
- Undergraduate Advisor (Fall 1996-Fall 2000)

- Member, Undergraduate committee (1996-2000)
- Member of the Faculty search committee, Department of Physics (1998, 1999, and 2001)
- Member of the search Committee, Center for Microelectronics Research (CMR) (1998-1999)
- Member, College Faculty Advisory Council (1999-2000)
- Member, College Teaching Incentive Program (TIP) Committee (1996 & 1998)
- Member, College Faculty Development Committee (1997-1998).