

## BOOK CHAPTER

- Derman Vatansever, Ravi L. Hadimani, Tahir Shah and Elias Siore, "Chapter 7: **Smart Woven Fabrics in Renewable Energy Generation**", Woven Fabrics, ISBN 978-953-307-1452-7, (2011)

## INVITED MAGAZINE ARTICLE

- R. L. Hadimani, L. J. Crowther and D. C. Jiles, "*Magnetic Stimulation of the Brain*" **Magnetics Technology International**, Annual, pp. 4-8, 2014

## SELECTED PEER-REVIEWED JOURNAL PAPERS

1. R. L. Hadimani, Y. Mudryk, T. E. Prost, V. K. Pecharsky, K. A. Gschneidner, and D. C. Jiles "*Growth and Characterization of Pt-protected Gd<sub>5</sub>Si<sub>4</sub> thin films*" **Journal of Applied Physics**, vol. 115, issue 17, pp. 17A113, (2014)
2. L. J. Crowther, R. L. Hadimani, A. G. Kanthasamy, D. C. Jiles, "*Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models*", **Journal of Applied Physics**, vol. 115, issue 17, pp. 17B303, (2014)
3. N. Soin, T. Shah, S. Anand, J. Geng, W. Pornwannachai, P. Mandal, D. Reid, S. Sharma, R. L. Hadimani, D. Vatansever Bayramol, and E. Siore, "Novel '3-D spacer' all fibre piezoelectric textiles for energy harvesting applications," **Energy Environ. Sci.**, vol. 7, issue 5, pp. 1670, (2014)
4. Vijaylakshmi Dayal, Punith K. V., R. L. Hadimani and D. C. Jiles "*Evolution of Griffiths Phase in La<sub>0.4</sub>Bi<sub>0.6</sub>Mn<sub>1-x</sub>Ti<sub>x</sub>O<sub>3</sub> Perovskite Oxide*" **Journal of Applied Physics**, vol. 115, issue 17, pp. 17A111, (2014)
5. H. Fu , R. L. Hadimani, Z. Ma, M. X. Wang, B. H. Teng, D.C. Jiles, "*Magnetocaloric effect in GdCo<sub>x</sub>Al<sub>2-x</sub> system for (0.15≤x≤1) compositions*", **Journal of Applied Physics**, vol. 115, issue 17, pp. 17A914, (2014)
6. S. D. March, S. McAtee, R. L. Hadimani, M. Senter, K. Spoth, D. R. Stiner, L. J. Crowther and D. C. Jiles "*Thermal and Mechanical Analysis of Novel Transcranial Magnetic Stimulation Coil for Mice*", **IEEE Transactions on Magnetics**, vol. 50, issue 9 p. 5100805, (2014)
7. Yevgen Melikhov, R. L. Hadimani, Arun Raghunathan, "Phenomenological modelling of first order phase transitions in magnetic systems", **Journal of Applied Physics**, vol. 115 pp. 183902, (2014)
8. Han Man-Gui, Guo, Wu Yan-Hui, Liu Min, R. L. Hadimani, Deng Long-Jiang, "*Electromagnetic wave absorbing properties and hyperfine interactions of Fe-Cu-Nb-Si-B nanocomposites*", **Chinese Physics B**, 23, 8, 083301, (2014)
9. Vijaylakshmi Dayal, Punith K. V., R. L. Hadimani and D. C. Jiles "*Critical behavior study in Ti-doped La<sub>0.4</sub>Bi<sub>0.6</sub>Mn<sub>1-x</sub>Ti<sub>x</sub>O<sub>3</sub>*" **Journal of Applied Physics**, accepted, (March 2014).
10. D. Vatansever Bayramol, N. Soin, T. H. Shah, E. Siore and R.L. Hadimani "*Effect of Addition of Multiwalled Carbon Nanotubes on the Piezoelectric Properties of Polypropylene Filaments*" **Journal of Nanoscience and Nanotechnology**, accepted to be published in vol. 15, issue 6, p. xx, (August 2014)

11. L. J. Crowther, R. L. Hadimani, and D. C. Jiles, "Effect of Brain Development on Induced Electric Fields During Transcranial Magnetic Stimulation" **IEEE Transactions on Magnetics**, accepted, to be published in vol. 50, issue 11, p. xxx, (2014)
12. R. L. Hadimani, Y. Melikhov, D. L. Schlagel, T. A. Lograsso, K. W. Dennis, R. W. McCallum and D. C. Jiles, "Second order phase transition temperature of single crystals of  $Gd_5Si_{1.3}Ge_{2.7}$  and  $Gd_5Si_{1.4}Ge_{2.6}$ ", **Journal of Applied Physics**, accepted, to be published in vol. 117, issue 17, (2015)
13. Y. Meng, R. L. Hadimani, J. Qu, Z. Xu, L. J. Crowther, and D. C. Jiles, "Development of Variable "Halo Coil" Configuration for Deep Brain Transcranial Magnetic Stimulation", **Journal of Applied Physics**, accepted, to be published in vol. 117, issue 17, (2015)
14. N. Prabhu Gaunkar, N. R. Y. Bouda, I. C. Nlebedim, R. L. Hadimani, R. J. Weber, M. Mina, K. Ganesan, I. Bulu, Y. Q. Song, D. C. Jiles, "Analysis of ringing effects due to magnetic core materials in pulsed NMR circuits", **Journal of Applied Physics**, accepted, to be published in vol. 117, issue 17, (2015)
15. R. L. Hadimani, D. V. Bayramol, N. Sion, T. Shah and E. Siores "Continuous Production of Piezoelectric PVDF Fibres and Characterization" **Smart Materials and Structures**, vol. 22, issue 7, pp. 075017, (2013)
16. R. L. Hadimani, Y. Melikhov and D.C. Jiles, "Fine structure observation in magnetostriction near the critical temperature in  $Gd_5Si_{1.95}Ge_{2.05}$ ", **IEEE Transactions on Magnetics**, Vol. 49, issue 2, pp. 820- 823, (2013)
17. L. J. Crowther, K. Porzig, R. L. Hadimani, H. Brauer, and D. C. Jiles, "Realistically modeled TMS coils for stress and Lorentz force calculations during MRI", **IEEE Transaction on Magnetics**, vol. 49, issue 7, pp. 3426-3429, (2013)
18. L. J. Crowther, R. L. Hadimani, and D. C. Jiles, "A Numerical Dosimetry Study for Pediatric Transcranial Magnetic Stimulation", proceedings of the 6th International **IEEE EMBS** Conference on Neural Engineering, pp. 239-242 (2013)
19. S. D. March, S. McAtee, M. Senter, K. Spoth, D. R. Stiner, L. J. Crowther, R. L. Hadimani, and D. C. Jiles, "Focused and Deep Brain Magnetic Stimulation Using New Coil Design in Mice," proceedings of the 6th International **IEEE EMBS** Conference on Neural Engineering, pp. 125-128, (2013)
20. R. L. Hadimani, Y. Melikhov, T. A. Lograsso, D. L. Schlagel and D.C. Jiles, "Study of the Second Order "Hidden" Phase Transition of the Monoclinic Phase in the Mixed Phase Region of  $Gd_5(Si_xGe_{1-x})_4$ ", **IEEE Transaction on Magnetics**, Vol. 48, issue 10, pp. 4070-4073, (2012)
21. R. L. Hadimani, Y. Melikhov, M. Han and D.C. Jiles, "Magnetocrystalline Anisotropy in Single Crystal  $Gd_5Si_{2.7}Ge_{1.3}$  and  $Gd_5Si_2Ge_2$ ", **IEEE Transaction on Magnetics**, Vol. 48, issue 10, pp. 3989-3991, (2012)
22. L. J. Crowther, R. L. Hadimani, and D.C. Jiles, "Calculation of Lorentz forces on coils for transcranial magnetic stimulation", **IEEE Transaction on Magnetics**, Vol. 48, issue 10, pp. 4058-4061, (2012)
23. D.Vatansever, R. L. Hadimani, T. Shah and E. Siores "Voltage response of piezoelectric PVDF films in vacuum and at elevated temperatures" **Smart Materials and Structures**, vol. 21, pp. 085028 (2012)
24. R. L. Hadimani, I. C. Nlebedim, Y. Melikhov and D.C. Jiles, "Growth and Characterisation of  $Gd_5(Si_xGe_{1-x})_4$  Thin Film", **Journal of Applied Physics**, vol. 113, 17, pp. 17A935, (2012)

25. I. C. Nlebedim, R. L. Hadimani, R. Prozorov and D. C. Jiles "Structural, Magnetic and Magnetoelastic Properties of Magnesium Substituted Cobalt Ferrite" **Journal of Applied Physics**, vol. **113**, 17, pp. 17A928, (2012)
26. A. R. Horrocks, B. Kandola, G. J. Milnes, A. Sitpalan and R. L. Hadimani, "The Potential for Nanoparticles to Confer Improved Flame Resistance to Fibre-Forming Polymers" **Polymer Degradation and Stability**, **97**, 12, pp. 2511-2523 (2012)
27. Ilker Mistik, Tahir Shah, R. L. Hadimani and Elias Siores "An Investigation of Compression and Thermal Conductivity Characteristics of Magnetorheological Fluid Filled Spacer Fabric Structures" **Intelligent Materials Systems and Structures**, **23**, pp. 1277-1283, (2012)
28. R. L. Hadimani, P. A. Bartlett, Y. Melikhov, J. E. Snyder and D. C. Jiles, "Field and Temperature induced colossal strain in  $Gd_5(Si_xGe_{1-x})_4$  for actuator applications", **Journal of Magnetism and Magnetic Materials**, **323**, Issue 5, pp. 532-534, (2011)
29. D. Vatansever, R.L. Hadimani, T. Shah and E. Siores "Investigation of Energy Harvesting from Renewable Sources with PVDF and PZT" **Smart Materials and Structures**, **20**, 055019, (2011) **Selected by editors as the 'Highlights of 2011' collection.**
30. R. L. Hadimani and D.C. Jiles, "Resistivity recovery in  $Gd_5Si_{2.09}Ge_{1.91}$  by annealing", **Journal of Applied Physics**, **107**, pp. 09C501, (2010)
31. R. L. Hadimani and D.C. Jiles, "Theory of Irrecoverable and Recoverable Resistivity in  $Gd_5(Si_xGe_{1-x})_4$ ", **IEEE Magnetics Letters**, **Volume-1**, pp. 6000104, (2010)
32. R. L. Hadimani, Y. Melikhov, J.E. Snyder, D.C. Jiles, "Field induced phase transition at high temperatures above the Curie point in  $Gd_5(Si_xGe_{1-x})_4$ ", **Journal of Applied Physics**, **105**, pp. 07A927, (2009)
33. R. L. Hadimani, Y. Melikhov, J.E. Snyder, D.C. Jiles, "Anomalous behaviour in electrical transport properties in single crystal  $Gd_5Si_{1.8}Ge_{2.2}$  and polycrystalline  $Gd_5Si_{2.09}Ge_{1.91}$ ", **IEEE Transaction on Magnetics**, **45**, pp. 4368 – 4371, (2009)
34. R. L. Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles, "Determination of the Projected Second Order Phase Transition Temperature of the Orthorhombic Phase of  $Gd_5(Si_xGe_{1-x})_4$ ", **Journal of Applied Physics**, **103**, pp. 033906, (2008)
35. R. L. Hadimani, D.C. Jiles, Y. Melikhov, J.E. Snyder, "Determination of Curie Temperature by Arrott plot Technique in  $Gd_5(Si_xGe_{1-x})_4$ ", **Journal of Magnetism and Magnetic Materials**, **320**, Issue 20, pp. e696-698, (2008)

## SUBMITTED

36. R. L. Hadimani, K. Porzig, L. J. Crowther, H. Brauer, H. Toepfer, D. C. Jiles, "The Effect of Variation of Permittivity and Conductivity on Induced Electric Field in the Brain during Transcranial Magnetic Stimulation", **IEEE Transactions on Magnetics**, submitted, (Sept. 2014).
37. Z. Y. Huang, H. Fu, R. L. Hadimani, E. Agurgo Balfour, B. H. Teng, D. C. Jiles, "Enhancement of Magnetocaloric Effect in the  $Gd_2Al$  Phase by Co Alloying", **Journal of Applied Physics**, submitted, (August 2014)
38. R. L. Hadimani, J.H. Belo, A.M. Pereira, D. L. Schlager, T. A. Lograsso, Y. Ren, J.P. Araújo, D.C. Jiles "Thin film of  $Gd_5Si_{1.3}Ge_{2.7}$  displaying magnetostructural transition: a pathway towards magnetic refrigeration and magnetostrictive devices at nanoscale", **Advanced Materials**, submitted, (Nov 2013)

39. R. L. Hadimani, S. Gupta, S. M. Harstad, V. K. Pecharsky and D. C. Jiles, “*Investigation of nanoparticles of magnetocaloric  $Gd_5Si_4$* ”, **Journal of Applied Physics**, submitted, (September 2014)
40. Vijaylakshmi Dayal, Punith K. V., R. L. Hadimani and D. C. Jiles “*Structural and Magnetic properties of  $La_{0.4}Bi_{0.6}Mn_{1-x}Ti_xO_3$  ( $x=0.05, 0.1, 0.5$  and  $1.0$ )*” **Journal of Alloys and Compounds**, submitted (March 2014).

## IN PREPARATION

41. R. L. Hadimani, J.H. Belo, A.M. Pereira, D. L. Schlagel, T. A. Lograsso, J.P. Araújo, D.C. Jiles, *Deposition of Nanoparticulate Thin Film of GdSiGe Using Femto Second Laser*, **Surface Science**, to be submitted by end of August 2014
42. Yiwen Meng, R. L. Hadimani, Vellareddy Anantharam, A. G. Kanthasamy and D. C. Jiles “*Differential Effect of Magnetic Field Orientation on the Growth Rate of Dopaminergic Neurons during Transcranial Magnetic Stimulation*”

## INTERNATIONAL CONFERENCE PRESENTATIONS (Underlined author is the presenter)

1. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles, “*Estimation of first order and second order phase transition temperatures in  $Gd_5(Si_xGe_{1-x})_4$* ” **18<sup>th</sup> Soft Magnetic Materials Conference**, Cardiff, September 2007 **Awarded the best poster presentation.**
2. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles, “*Determination of the Projected Second Order Phase Transition Temperature of Orthorhombic Phase of  $Gd_5(Si_xGe_{1-x})_4$* ” **Magnetism and Magnetic Materials Conference**, Tampa, Florida, USA, November 2007- Oral presentation.
3. D.C. Jiles, Y. Melikhov, J.E. Snyder and R.L. Hadimani. “*Phase Transitions in Nanostructured Ternary Rare Earth Compounds  $Gd_5(Si_xGe_{1-x})_4$  and  $Pr_{(n+2)}(n+1)Ni_{(n-1)+2Si_{(n+1)}}$  (Invited)*”, **International Workshop on Amorphous and Nanostructured Magnetic Materials**, Iasi, Romania, August 29-31, 2007. (Invited)
4. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. “*Magnetostriction close to the phase transition in  $Gd_5(Si_xGe_{1-x})_4$* ”, **APS March Meeting**, New Orleans, Louisiana, March 10-14, 2008.
5. R. L. Hadimani, Y. Melikhov, J.E. Snyder, D.C. Jiles, “*Fine structure observation near critical temperature in  $Gd_5Si_{1.95}Ge_{2.05}$* ”, **INTERMAG 2008 Conference**, Madrid Spain, May 4-8, 2008- oral presentation.
6. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles, “*Determination of Transition Temperatures and Colossal Magnetostriction in  $Gd_5(Si_xGe_{1-x})_4$* ”, **IEEE Magnetic Society Summer School**, Colorado Springs, USA, August 2008, poster presentation.
7. R.L.Hadimani, P.A.Bartlett, Y.Melikhov, J.E.Snyder and D.C.Jiles, “*Temperature induced Colossal magnetostriction in  $Gd_5(Si_xGe_{1-x})_4$  for actuator applications*”, **European Magnetic Sensors and Actuators Conference**, Cean, France, June 2008, Poster.
8. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles, “*Field induced phase transition in  $Gd_5(Si_xGe_{1-x})_4$  series at high magnetic field strengths*”, International Workshop on **1&2 Dimensional Magnetic Measurement and Testing**, Cardiff, 1-3 September 2008. Poster.
9. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles, “*Field induced structural phase transition at higher temperatures in  $Gd_5(Si_xGe_{1-x})_4$* ” **Magnetism and Magnetic Materials Conference**, Austin, Texas, USA, November 2008- Oral presentation.

10. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. "Examination of the Coupled Magnetic-Structural Phase Transition in Gadolinium-Silicon-Germanium Magnetocaloric alloys at temperatures well above  $T_c$ ", **APS March Meeting**, Pittsburgh, Pennsylvania, March 16-20, 2009. Oral presentation.
11. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles, "Anomalous behaviour in electrical transport properties in single crystal  $Gd_5Si_{1.8}Ge_{2.2}$  and polycrystalline  $Gd_5Si_{2.09}Ge_{1.91}$ ", **INTERMAG 2009 Conference**, Sacramento, California, USA, May 2009- oral presentation.
12. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles, "Electrical transport and magnetic properties in giant magnetocaloric  $Gd_5(Si_xGe_{1-x})_4$ ", **EUROMAT 2009**, Glasgow, UK, September 2009- oral presentations.
13. R. L. Hadimani, and D.C. Jiles, "Resistivity recovery in  $Gd_5Si_{2.09}Ge_{1.91}$  by annealing", **Magnetism and Magnetic Materials Conference -INTERMAG Joint Conference**, Washington DC, January 2010- Poster.
14. R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. "Magnetocrystalline anisotropy in single crystal  $Gd_5Si_{2.7}Ge_{1.3}$ ", **APS March Meeting**, Portland, Oregon, March 15-19, 2010. Oral presentation.
15. R. L. Hadimani, D. Vatansever and E. Siores, "Piezoelectric PVDF Wind/Rain Energy Harvesting Device", **ISAF and ECAPD joint conference**, Edinburg, UK, August 2010, poster.
16. D. Vatansever, R. L. Hadimani, E. Siores, "Comparative Investigation of PVDF and PZT Based Piezoelectric Smart Structures for Rain and Wind Energy Generation and Polymer Based Piezoelectric Fibre Production ", **Energy Harvesting 2011**, London, 07-02 2011, Poster.
17. A R Horrocks, B Kandola, G J Milnes, A Sitpalan and R L Hadimani "The Potential for Nanoparticles to confer Improved Flame Resistance to Fibre-Forming Polymers", **13<sup>th</sup> Fire Retardancy and Protection of Materials Conference (FRPM 2011)**, 26-30 June 2011, Alessandria, Italy, **Invited**.
18. R. L. Hadimani, D. Vatansever, T. Shah, E. Siores, "Hybrid Photovoltaic-Piezoelectric Flexible Device for Energy Harvesting from Sun, Rain and Wind", **3rd International Conference on Smart Materials and Nanotechnology in Engineering (SMN2011)**, 5-8 December, Shenzhen, China, Oral presentation.
19. D. Vatansever, R. L. Hadimani, T. Shah, E. Siores, "Characterisation of Polymer Based Energy Generating PolyVinylidene Fluoride (PVDF) Based Piezoelectric Filament", **20<sup>th</sup> Processing and Fabrication of Advanced Materials**, 15-18 December 2011, Hong Kong SAR, China, Oral Presentation.
20. E. Siores, R. L. Hadimani, D. Vatansever "Smart Multifunctional Fibre for Harvesting Energy from Nature", **IDTechEx Energy Harvesting & Storage Conference**, Munich, Germany, June 2011, **Invited**.
21. R. L. Hadimani, D. Vatansever, T. Shah, E. Siores, "RED Fibre: A Hybrid Approach to Integrated Flexible Energy Harvesters from Nature", **IDTechEx Energy Harvesting & Storage Conference**, June 2011, Munich, Germany, Poster.
22. R. L. Hadimani, D.Vatansever, T. Shah and E. Siores, "Smart Multifunctional Fibre for Harvesting Energy from Nature" **IDTechEx Energy Harvesting Conference**, Boston, USA, November 2011, **Invited**.

23. L. J. Crowther, I. C. Nlebedim, R. L. Hadimani and D. C. Jiles, "Developments in Deep Brain Stimulation using Time Dependent Magnetic Fields" **Magnetism and Magnetic Materials Conference**, Scottsdale, Arizona, USA, November 2011, Poster.
24. R.L. Hadimani, Y. Melikhov, D.C. Jiles "Determination of Second Order Phase Transition Temperature of Monoclinic Phase  $Gd_5(Si_xGe_{1-x})_4$ ", **APS March Meeting** 2012, Baltimore, Poster
25. R. L. Hadimani, Y. Melikhov, D. C. Jiles, " Estimation of second order phase transition temperature of monoclinic phase in mixed phase region of  $Gd_5(Si_xGe_{1-x})_4$ " **INTERMAG Conference**, Vancouver, Canada, May 2012, oral presentation
26. R. L. Hadimani, Y. Melikhov, D. C. Jiles, "Magnetocrystalline anisotropy in single crystal  $Gd_5Si_{2.7}Ge_{1.3}$ " **INTERMAG Conference**, Vancouver, Canada, May 2012, poster, accepted
27. L. J. Crowther, R. L. Hadimani and D. C. Jiles, "Calculation of Lorentz forces on coils for transcranial magnetic stimulation during magnetic resonance imaging", **INTERMAG Conference**, Vancouver, Canada, May 2012, Oral presentation
28. Mangui Han, R. L. Hadimani, Longjiang Deng, "Microwave permeability of single cobalt nanotube studied by the Generalized Snoek's law", **International Conference on Microwave Magnetics**, Kaiserslautern, Germany, August 2012
29. K. Porzig, R. L. Hadimani, L. J. Crowther, H. Brauer, H. Toepfer and D. C. Jiles, "Effect of Permittivity and Conductivity Variation on Induced Electric Field During Transcranial Magnetic Stimulation (TMS)", **34<sup>th</sup> EMBC**, San Diego, Aug 2012, Poster
30. R. L. Hadimani, C. I. Nlebedim, Y. Melikhov, D. C. Jiles, "Growth and Characterization of  $Gd_5(Si_xGe_{1-x})_4$  Thin Film " **Joint MMM-INTERMAG Conference**, Chicago, Jan. 2013, oral presentation.
31. L. J. Crowther, K. Porzig, R. L. Hadimani, H. Brauer, and D. C. Jiles, "Realistically modeled TMS coils for stress and Lorentz force calculations during MRI", **Joint MMM-INTERMAG Conference**, Chicago, Jan. 2013, poster presentation
32. C. I. Nlebedim, R. L. Hadimani, , Y. Melikhov, D. C. Jiles, " Structural, Magnetic and Magnetoelastic Properties of Magnesium Substituted Cobalt Ferrite " **Joint MMM-INTERMAG Conference**, Chicago, Jan. 2013, **Awarded the best poster presentation.**
33. R. L. Hadimani, C. I. Nlebedim, Y. Melikhov, D. C. Jiles, " First successful growth of magnetic thin films of meta-stable monoclinic  $Gd_5(Si_xGe_{1-x})_4$  " **APS March Meeting**, Baltimore, March. 2013, oral presentation
34. A. H. Unsal, R. L. Hadimani and D. C. Jiles, "Effect of Transcranial Magnetic Stimulation on Neuronal Networks" **APS March Meeting**, Baltimore, March. 2013, oral presentation
35. L. J. Crowther, R. L. Hadimani, D. C. Jiles, "Improved transcranial magnetic stimulation coil design with realistic head modeling" **APS March Meeting**, Baltimore, March. 2013, oral presentation
36. R. L. Hadimani, K. Porzig, L. J. Crowther, H. Brauer, H. Toepfer, D. C. Jiles, " The Effect of Variation in Permittivity and Conductivity of Different Tissues on Induced Electric Field in the Brain during Transcranial Magnetic Stimulation" **APS March Meeting**, Baltimore, March. 2013, oral presentation
37. Yevgen Melikhov, R. L. Hadimani, Arun Raghunathan "Gd<sub>5</sub>(Si<sub>x</sub>Ge<sub>1-x</sub>)<sub>4</sub> SYSTEM – UPDATED PHASE DIAGRAM", **JEMS**, Rhodes, Greece, August 2013

38. Yevgen Melikhov, R. L. Hadimani, Arun Raghunathan, "*JILES-ATHERTON THEORY FOR SYSTEMS WITH FIRST ORDER PHASE TRANSITION*", **JEMS**, Rhodes, Greece, August 2013
39. Mangui Han, R. L. Hadimani, "*Studies on nanocrystallization of FeCuNbSiB nanocomposite by Mössbauer spectroscopy*" **ChinaNANO2013**, Beijing, China, September 2013
40. N. Soin, D.V. Bayramol, S.M. Gillon, P. Mandal, R. L. Hadimani, T.H. Shah, E. Siores, International Congress on Materials and Renewable Energy 1-3 July 2013, Athens, Greece
41. Yevgen Melikhov, R. L. Hadimani, Arun Raghunathan "*Modeling of Magnetization Curves for Systems with the First Order Phase Transition*", **MMM**, Denver, USA, November 2013
42. R. L. Hadimani, Y. Mudryk, T. E. Prost, V. K. Pecharsky, K. A. Gschneidner, and D. C. Jiles, "*Growth and Characterization of Pt-protected Gd<sub>5</sub>Si<sub>4</sub> thin films*", **MMM**, Denver, USA, November 2013
43. Vijaylakshmi Dayal, Punith Kumar.V, R. L. Hadimani and D. C. Jiles, "*Evolution of Griffiths Phase in La<sub>0.4</sub>Bi<sub>0.6</sub>Mn<sub>1-x</sub>Ti<sub>x</sub>O<sub>3</sub> Perovskite Oxide*", **MMM**, Denver, USA, November 2013
44. L. J. Crowther, R. L. Hadimani, A. G. Kanthasamy, D. C. Jiles, "*Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models*", **MMM**, Denver, USA, November 2013
45. R. L. Hadimani, S. D. March, S. McAtee, D. R. Stiner, M. Senter, K. Spoth, L. J. Crowther and D. C. Jiles, "*Thermal and Mechanical Analysis of Novel Transcranial Magnetic Stimulation Coil for Mice*", **MMM**, Denver, USA, November 2013
46. H. Fu, R. L. Hadimani, Z. Ma, M. X. Wang, B. H. Teng, D. C. Jiles, "*Magnetocaloric effect in GdCo<sub>x</sub>Al<sub>2-x</sub> system for (0.15≤x≤1) compositions*", **MMM**, Denver, USA, November 2013
47. L. J. Crowther, R. L. Hadimani and D. C. Jiles, "*A Numerical Dosimetry Study for Pediatric Transcranial Magnetic Stimulation*", **IEE Neural Engineering**, San Diego, USA, November 2013
48. Rachana Kaul, R. L. Hadimani, L. J. Crowther and D. C. Jiles Neural Engineering "*New Coil Designs for Deep Brain Transcranial Magnetic Stimulation using Halo Coil Configurations*", **IEE Neural Engineering**, San Diego, USA, November 2013
49. S. D. March, S. McAtee, M. Senter, K. Spoth, D. R. Stiner, L. J. Crowther, R. L. Hadimani, and D. C. Jiles, "*Focused and Deep Brain Magnetic Stimulation Using New Coil Design in Mice*", **IEE Neural Engineering**, San Diego, USA, November 2013
50. Alexandria Carr, Gary Zenitsky, Lawrence J. Crowther, Ravi L. Hadimani, Vellareddy Anantharam, Anumantha Kanthasamy, David C. Jiles, "*Treatment for Traumatic Brain Injury in Mice Using Transcranial Magnetic Stimulation: A Preliminary Study*" **APS March Meeting**, Denver, USA, March 2014
51. L. J. Crowther, R. L. Hadimani and D. C. Jiles, "*A Numerical Dosimetry Study for Pediatric Transcranial Magnetic Stimulation*", **APS March Meeting**, Denver, USA, March 2014
52. R. L. Hadimani, Y. Mudryk, T. E. Prost, V. K. Pecharsky, K. A. Gschneidner, and D. C. Jiles, "*Pulsed Laser Deposition of Thin Films of Binary Compounds of Gd and Si using Femto-Second Laser*", **APS March Meeting**, Denver, USA, March 2014
53. R. L. Hadimani, Mangui Han, and D. C. Jiles, "*High frequency magnetic properties of FeCoSiB thin films*", **APS March Meeting**, Denver, USA, March 2014

54. H. A. Khazdozian, R. L. Hadimani, and D. C. Jiles, “*Permanent Magnet Synchronous Generators for Wind Turbines*”, **APS March Meeting**, Denver, USA, March 2014
55. Yan Ni, Nicholas Meyer, Xiaoyu Che, Zhen Zhang, Cajetan I Nlebedim, Ravi L. Hadimani Faxian Xiu, David C. Jiles, “*Enhanced surface state of topological insulators by optimal magnetic doping*”, **APS March Meeting**, Denver, USA, March 2014
56. S. D. March, S. McAtee, L. J. Crowther, R. L. Hadimani, and D. C. Jiles, “*Novel transcranial magnetic stimulation coil for mice*”, **APS March Meeting**, Denver, USA, March 2014
57. R. L. Hadimani, J. H. B. Silva, Andre M. Pereira, Devo L. Schlagel, Thomas A. Lograsso, Y. Ren, X. Zhang, David C. Jiles, Joao P. Araújo, “*Thin film of  $R_5(\text{Si,Ge})_4$  compound displaying magnetostructural transition: a pathway towards magnetic refrigeration and magnetostrictive devices at nanoscale*” **INTERMAG**, Dresden, Germany, May 2014
58. Yevgen Melikhov, R. L. Hadimani, Arun Raghunathan, “*Gd<sub>5</sub>(SixGe<sub>1-x</sub>)<sub>4</sub> System – Updated Phase Diagram*” **INTERMAG**, Dresden, Germany, May 2014
59. Y. Ni, Z. Zhang, X. Che, N. Meyer, I. C. Nlebedim, R. L. Hadimani, G. Tuttle, F. Xiu, and D. C. Jiles, “*Van Der Waals Epitaxy of  $(\text{Sb}_{1-x}\text{Bi}_x)_2\text{Te}_3$  Thin Films on Mica*” **INTERMAG**, Dresden, Germany, May 2014
60. L. J. Crowther, R. L. Hadimani and D. C. Jiles, “*Effect of Brain Development on Induced Electric Fields During Transcranial Magnetic Stimulation*”, **INTERMAG**, Dresden, Germany, May 2014
61. Vijaylakshmi Dayal, Punith Kumar V., R. L. Hadimani, A.M.Awasthi and D. C. Jiles “*Structural, Raman, Magnetic and Dielectric Properties of  $\text{La}_{0.4}\text{Bi}_{0.6}\text{TiO}_3$  Perovskite Oxide*” International conference on magnetic materials and applications (**ICMAGMA-2014**), Pondicherry, India, September 15-17, 2014
62. Y. W. Meng, J. K. Qu, R. L. Hadimani, L. J. Crowther and D. C. Jiles, “*Development of Variable “Halo Coil” Configuration for Deep Brain Transcranial Magnetic Stimulation*” **Minnesota Neuromodulation Symposium**, Minneapolis, USA, April 2014
63. Yiwen Meng, R. L. Hadimani, Vellareddy Anantharam, A. G. Kanthasamy and D. C. Jiles “*Differential Effect of Magnetic Field Orientation on the Growth Rate of Dopaminergic Neurons during Transcranial Magnetic Stimulation*”, **IEEE EMBC**, Chicago, USA, May 2014
64. Yiwen Meng, Jikang Qu, Zhen Xu, L. J. Crowther, R. L. Hadimani, and D. C. Jiles, “*Development of Adjustable “Halo Coil” Configuration for Deep Brain Transcranial Magnetic Stimulation*”, **IEEE EMBC**, Chicago, USA, May 2014
65. L. J. Crowther, R. L. Hadimani, and D. C. Jiles, “*Development of Adjustable “Halo Coil” Computational Analysis of Induced Electric Fields During Transcranial Magnetic Stimulation*”, **IEEE EMBC**, Chicago, USA, May 2014
66. H. A. Khazdozian, R. L. Hadimani, D. C. Jiles, “*Size Reduction of Permanent Magnet Generators for Wind Turbines with Higher Energy Density Permanent Magnets*” **North American Power Symposium**, Pullman, USA, September 2014
67. D. Vatansever Bayramol, N. Soin, T. Shah and E. Siores, R.L. Hadimani, "Piezoelectric characteristics of melt extruded and poled polypropylene monofilaments", 6<sup>th</sup> International Istanbul Textile **Conference on Future Technical Textiles**, Istanbul, Turkey, October 2014
68. R. L. Hadimani, S. Gupta, S. M. Harstad, V. K. Pecharsky and D. C. Jiles, “*Investigation of nanoparticles of magnetocaloric  $\text{Gd}_5\text{Si}_4$* ” **MMM**, Honolulu, USA, November 2014



69. R. L. Hadimani, Y. Melikhov, D. L. Schlagel, T. A. Lograsso, K. W. Dennis, R. W. McCallum and D. C. Jiles, "Second order phase transition temperature of single crystals of  $Gd_5Si_{1.3}Ge_{2.7}$  and  $Gd_5Si_{1.4}Ge_{2.6}$ ", **MMM**, Honolulu, USA, November 2014
70. Yiwen Meng, Jikang Qu, Zhen Xu, L. J. Crowther, R. L. Hadimani, and D. C. Jiles, "Development of Variable "Halo Coil" Configuration for Deep Brain Transcranial Magnetic Stimulation", **MMM**, Honolulu, USA, November 2014
71. L. J. Crowther, R. L. Hadimani, and D. C. Jiles, "Calculation of induced electric fields during transcranial magnetic stimulation", **MMM**, Honolulu, USA, November 2014
72. Z. Zhang, Y. Ni, I. C. Nlebedim, R. L. Hadimani, G. Tuttle, and D. C. Jiles, "Ferromagnetism of Magnetic Doped Topological Insulators in  $Cr_xBi_{2-x}Te_3$  Thin Films", **MMM**, Honolulu, USA, November 2014
73. N. Prabhu Gaunkar, N. R. Y. Bouda, I. C. Nlebedim, R. L. Hadimani, R. J. Weber, M. Mina, K. Ganesan, I. Bulu, Y. Q. Song, D. C. Jiles, "Analysis of ringing effects due to magnetic core materials in pulsed NMR circuits", **MMM**, Honolulu, USA, November 2014
74. R. L. Hadimani, G. D. Zenitsky, A. G. Kanthasamy and D. C. Jiles, "Deep Brain and Focused Transcranial Magnetic Stimulation Coils for Animal Studies" IEEE EMBS **BRAIN Grand Challenges Conference**, Washington, USA, November 2014, **Shortlisted for Young Investigator Award**.