Curriculum Vitae

Gan Liang

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For more information about me, see webpage of **Gan Liang**

Education:

1990 Ph. D. in Experimental Solid State Physics, *Rutgers University*, New Brunswick, New Jersey.
Dissertation Topic: *Mixed-Valent, Kondo, and Heavy-Fermion Behavior in* $CeMn_2Si_2$*-Based 3d Magnetic Host Series*
Dissertation Advisor: Professor Mark C. Croft

1982 B. S. in Nuclear Physics, Peking University, Beijing, China.

Professional History:

2002-Present *Professor*, Department of Physics, Sam Houston State University, Huntsville, Texas.

1996-2002 *Associate Professor*, Department of Physics, Sam Houston State University, Huntsville, Texas.

1990-96 *Assistant Professor*, Department of Physics, Sam Houston State University, Huntsville, Texas.

1990-1996 *Research Scientist*, Houston Advanced Research Center, The Woodlands, Texas

1989-90 *Postdoctoral Research Associate*, Department of Physics, Rensselaer Polytechnic Institute, Troy, New York.

1985-89 *Research Assistant*, Department of Physics, Rutgers University, New Brunswick, New Jersey.

1983-85 *Teaching Assistant*, Department of Physics, Rutgers University, New Brunswick, New Jersey.

1982-1983 *Teaching Assistant*, Department of Technical Physics, Beijing University, Beijing, China

Award

- Recipient of the 2000 Excellence in Research Award of Sam Houston State University.
- Received consecutively three Texas ARP/ATP grant awards.

Research Interests:

- Study of high-temperature superconductors and MgB_2-related materials.
- Study of rare-earth intermetallic compounds which show strong transition metal-host magnetism, valence instability, Kondo-effect, and heavy-fermion behavior.
- Study of Li-ion Battery materials including LiFePO4-based cathode material
- Magnetic nanoparticle systems for medical applications.
- Laser optical imaging.
- Applied superconductivity with concentration at the fabrication and characterization of high-temperature superconducting wires/tapes and cables.
- Superconducting magnet technology which includes design of superconducting magnets, superconducting joints, winding and epoxy impregnation of superconducting magnet coils.

Scientific and Technical Expertise

- Synchrotron x-ray absorption spectroscopy (XAS) and x-ray photoemission spectroscopy (XPS) study of electronic properties of material systems.
- X-ray diffraction measurement of crystal structure of crystalline materials
- Magnetization measurement of magnetic materials using Superconducting Quantum Interference Devices (SQUID).
- Measurement of temperature dependent electrical resistivity using both four-lead and field-decay techniques.
- Measurement of low temperature specific heat.
- Measurement of critical current of superconducting materials.
- Synthesis of materials using both solid state reaction and arc-melting techniques.
- Design of superconducting magnets using OPUS
- Fabrication of various superconducting joints for NMR superconducting magnets.
- Winding and impregnation of superconducting magnet coils.
- Fabrication of high-temperature superconducting films using MOCVD method and laser deposition method
- Fabrication high-temperature superconductor wire, tape, and cables

Professional Memberships

- American Physical Society (APS)
- Materials Research Society (MRS)
- American Association of University Professors (AAUP)
- Overseas Chinese Physics Association (OCPA)
- Chinese Association of Professionals in Science and Technology (CAPST)

Grant History

I am the principal investigator of the following grants:

[1] "A Novel Study of the Origin of the Enhancement of Electronic Conductivity and Properties of Cation-doped $LiFePO_4$ Cathode Materials", Founded by National Science Foundation (NSF). Funding Period: August 15, 2007 to July 31, 2010.

[2] " A Novel Approach to Resolve the Controversy about the Origin of the Electronic Conductivity in Cation-doped LiFePO4 Cathode Materials", Funded by Research Corporation. Funding Period: May 15, 2007 to May 14, 2009.

[3] "Study of the Origin of the Enhancement of Electronic Conductivity in LiFePO4-based Li-ion Battery Cathod Materials", Funded by the Enhancement Grant for Research (EGR) program of SHSU. Funding period: April 1, 2007 to March 31, 2008.

[4] "Development of Lightweight and High Electric Current Carrying MgB_2 Superconducting Wires", Funded by the Enhancement Grant for Research (EGR) program of SHSU. Funding period: April 1, 2006 to March 31, 2007.

[5] "X-ray Absorption Spectroscopy (XAS) Study on some Electronic, Magnetic, and Superconducting Materials", Texas Excellence Fund. May-August, 2005

[6] " Phase Diagram and Microstructures Study of the Titanium doped MgB_2 Superconductors" –Funded by SHSU Faculty Research Council, June – August, 2004.

[7] "Development of Thick Superconducting Tapes for High Current Applications by Photo-assisted MOCVD" – Funded by Technology Development and Transfer (TD&T) Program of the Texas Higher Education Coordinating Board, 10/29/99-8/31/2002.

[8] "Practical Splicing Technology for High Temperature Superconductor Cables" – Funded by the Faculty Research Council of SHSU, 12/8/99-8/31/2000.

[9] "Practical Cable Technology for High-Temperature Superconductors", Funded by Texas Advanced Technology Program(ATP), 1/1/98-8/31/2000.

[10] "Development of New Type Practical Cable Using High Temperature Superconductor" Funded by the Faculty Research Council of Sam Houston State University, 1997-98.

[11] "Study of the Interplay of Ce-Spin Fluctuation with Strong Host Magnetism", Funded by the Texas Advanced Research Program(ARP). 1/1/96-8/31/98

[12] "XAS Studies of the Electronic Structures of High-T_c Superconducting Materials", Funded by Research Corporation, 1996-98.

[13] "Development of Superconducting Joint Technology for the Application of High Temperature Superconducting Materials", Funded by the Faculty Research Council of SHSU, 1995-96.

[14] "Development of Superconducting Joint Technology for Large-scale Application of High Temperature Superconductors", Funded by the Faculty Research Council of SHSU, 1996-97.

[15] "Fabrication of Nb_3Sn Superconducting Joints for TWC Wires", Funded by Teledyne Wah Chang Company, 1995-96.

[16] "Electronic Structure Studies on the Iodine-intercalated and Electron Doped High-Tc Superconductors By X-ray Absorption Spectroscopy", Funded by the SHSU Faculty Research Council, 1992-93.

[17] "X-ray Absorption Study of Several High-T_c Cuprate Superconductor Systems", Funded by Research Corporation, 1991-92.

[18] "X-ray Absorption Study of Several High-T_c Superconductor Systems", Funded by the SHSU Faculty Research Council, 1991-92.

[19] "X-ray Absorption Study of Some Cuprate Oxide Systems" Funded by National Synchrotron Light Source, 1992.

[20] "High-field Superconducting Magnet", Funded by SHSU Matching Funds, 1991-92.

[21] "X-ray Absorption Spectroscopy Study of Several Cuprate Oxide Superconductor Systems", Funded by SHSU Faculty Research Council, 1990-91.

Social and Community Services

- President of the Overseas China Education Foundation, 1999 – Jan., 2006, and Oct. 2007 - Present
- President of the Sam Houston State University (SHSU) Chapter of American Association of University Professors (AAUP). June 2006 - Present
- Board member of the SHSU Chapter of AAUP 2004-2006.
- Member of the Faculty Research Council (FRC) of SHSU, 2004-2007.
- Advisor of the Beijing University Alumni Association in Houston Area, 1999-present.
- President of Beijing University Alumni Association in Houston Area, 1998-1999
- Vice President of the Houston Zhi-Qing Association, 1998-1999.

PUBLICATIONS (subject to peer or vigorous editorial review):

1. **G. Liang** and F. Yen, "Magnetic Phase Diagram of $Ce(Mn_{1-x}Cu_x)_2Si_2$", Accepted for publication in *J. Appl. Phys.* (2008)

2. **G. Liang**, K. Park, J. Li, R. Benson, D. Vaknin, J. T. Markert, and M. Croft "Anisotropy in magnetic properties and electronic structure of single crystal $LiFePO_4$", submitted to *Phys. Rev. B*, (2007).

3. K. Park, **G. Liang**, X. Ji, Z. P. Luo, C. Li, M. Croft, and J. T. Markert, "Structural and Magnetic Properties of Gold and Silica Doubly Coated γ-Fe_2O_3 Nanoparticles", Accepted for publication in *J. Phys. Chem. C*, (2007).

4. **G. Liang**, H. Fang, Z. P. Luo, C. Hoyt, F Yen, S Guchhait, B Lv, J T Markert, "Negative effects of crystalline-SiC doping on the critical current density in Ti-sheathed $MgB_2(SiC)_y$ superconducting wires", *Supercond. Sci. Technol.* **20,** 697-703 (2007)

5. **G. Liang** and M. Croft, "Thermal Variation of Ce Valence in Mixed Valence-Kondo Lattice Systems $CeT_2(Si_{1-x}Ge_x)_2$ with T = Mn and Ni", Accepted for publication in *Physica B* (2007).

6. **G. Liang**, R. Benson, J. Li, D. Vaknin, and L. M. Daniels, "$LiNi_{0.66}Fe_{0.34}PO_4$", *Acta Cryst. E 63*, i73-i74(2007).

7. X. Ji, R. Shao, A. M. Elliott, R. J. Stafford, E. Esparza-Cross, J. A. Bankson, **G. Liang**, Z. P. Luo, K. Park, J. T. Markert, C. Li, "Bifunctional Gold Nanoshells with a Superparamagnetic Iron Oxide Core Suitable for Both MR Imaging and Photo-Thermal Therapy", *J. Phys. Chem. C*, 111, 6245-6251 (2007).

8. **G. Liang** , M. Alessandrini, F. Yen, M. Hanna, H. Fang, C. Hoyt, B. Lv, J. Zeng, and K. Salama, "Effects of MgO impurities and micro-cracks on the critical current density of Ti-sheathed MgB_2 wires", *Physica C*, **457**, 47-54 (2007).

9. **G. Liang,** F. Yen, S. Keith, and M. Croft, "Magnetic Ordering in $CeMnCuSi_2$", *J. Magn. Magn. Mater.* **314**, 53-59 (2007).

10. M. Alessandrini, R. Musenich, R. Penco, G. Grasso, D. Nardelli, R. Marabotto, M. Modica, M. Tassisto, H. Fang, **G. Liang**, F.R. Chang Díaz and K.Salama, "Behavior of a 14 cm bore solenoid with multifilament MgB_2 tape", Accepted for publication to *IEEE Trans. on Applied Superconductivity*, in press (2007), in press.

11. **G. Liang**, H. Fang, M. Hanna, F. Yen, B. Lv, M. Alessandrini, S. Keith, C. Hoyt, Z. Tang, and K. Salama, "Development of Ti-sheathed MgB_2 Wires with High Critical Current Density", *Supercond. Sci. Technol.* **19**, 1146-1151 (2006).

12. **G. Liang,** Q. Yao, H. Xi, K. Mochizuki, J. T. Markert, M. Croft, - "Kondo effect in 3d-host ferromagnetic $Sm_{1-x}Ce_xMn_2Ge_2$" , *Journal of Alloys and Compounds*, Vol. **414**, 8-13 (2006).

13. **G. Liang**, H. Fang, D. Katz, Z. Tang, and K. Salama, - " Phase Formation in Cu-Sheathed MgB_2 Wires" , *Physica C*, Vol. **442**, 113-123 (2006).

14. **G. Liang**, Z. Tang, H. Fang, D. Katz, and K. Salama, - "Synthesis and X-ray Diffraction Pattern for $MgCu_2$" – *Journal of Alloys and Compounds*, Vol. 422, 73-77 (2006).

15. **G. Liang** and Q. Yao, S. Zhou, and D. Katz, - "X-ray absorption near-edge structure study of $Bi_{2-x}Pb_xSr_2(Sm_{0.85}Ce_{0.15})_2Cu_2O_{10+y}$" *Physica C*, Vol. **424**, 107-115 (2005).

16. H. Fang, P. Gijavanekar, Y. X. Zhou, **G. Liang**, P. T. Putman, and K. Salama, - "High Critical Current of Cu-sheathed MgB_2 Wire at 20 K" – IEEE Transactions on Applied Superconductivity, Vol. **15**, No.2, 3215 (2005).

17. **G Liang**, "Ce 4*f*-ligand Dehybridization in CeT_2X_2-based Kondo Lattice/Heavy Fermion Systems" - *International Journal of Modern Physics B*, Vol. **16**, 2815-2822 (2002).

18. R. Soika, N. Diaczenko, T. Elliott, W. Henchel, E. Hill, P. McIntyre, L. Motowidlo, and **G. Liang**, - "Fabrication and Prototype Testing of a Strain-Tolerant Bi-2212 Cable" – *IEEE Transactions on Applied Superconductivity*. **Vol. 11**, No. 1, 2142-2145 (2001).

19. P. McIntyre, N. Diaczenco, T. Elliott, R. Soika, M. Yavuz, L. Motowildo, **G. Liang**, --"Stran-tolerant Cable Using Bi-2212 Superconductor", *IEEE Transactions on Applied Superconductivity*. **Vol. 10**, No. 1, 1142-1145 (2000).

20. N. Diaczenko, T. Elliott, **G. Liang**, P. M. McIntyre, L. R. Motowildo, R. Soika, M. Yavuz – "Stran-tolerant Cable Using Bi-2212 Superconductor", ***Physica C***, **341-348**, 2551-2554 (2000).

21. **G. Liang**, R. S. Liu, and L. V. Wang, - "XANES Study of the Valence of Pb in $(Tl_{0.5}Pb_{0.5})Sr_2Ca_{1-x}Y_xCu_2O_{7-\delta}$", *International Journal of Modern Physics B*, Vol. **13**, No. 29-31, 3693 (1999).

22. **G. Liang**, Y. Yi, R. F. Jardim and L. V. Wang, "Cu K-Edge Studies of the Charge Carries in Th-doped Cuprate System $R_{2-x}Th_xCuO_{4-\delta}$" - *International Journal of Modern Physics B*, Vol. **13**, No. 29-31, 3750 (1999).

23. N. Diaczenko, T. Elliott, D. A. Cross, P. McIntyre, D. Sattarov**, G. Liang**, - "Stress Management of HTS Conductor" - *IEEE Transactions on Applied Superconductivity*, Vol. **9**, 142 (1999).

24. L. V. Wang and **G. Liang** – "Absorption Distribution of an Optical Beam Focused into a Turbid Medium", Applied Optics, Vol. 38, No. 22, 4951(1999).

25. **G. Liang**, C. R. Meitzler, T. Binford, L. Crow, J. Zeigler, T. Man, and J. Hunter, - "Development of Superconducting Joints for NMR superconducting Magnet Application" – *Proceedings of Fifteenth International Conference on Magnet Technology*, 885 (1998).

26. **G. Liang** , J. Zeigler, L. Crowe, J. Hunter, and T. Man, - " Development of Superconducting Joints for TWC High-J_c Nb_3Sn wires for NMR Superconducting Magnet Application" *Advances in Cryogenic Engineering*, Vol. **44**, 889 (1998)

27. **G. Liang**, R. S. Liu, and L. V. Wang, - "Cu K-edge Study of $(Tl_{0.5}Pb_{0.5})Sr_2Ca_{1-x}Y_xCu_2O_{7-\delta}$", *International Journal of Modern Physics B*, Vol. **12**, No. 29-31, 3296 (1998).

28. **G. Liang**, M. Li, J. T. Markert, and L. V. Wang, - "Cluster Model Description of Polarized Cu K-Edge Spectra of $Nd_{2-x}Ce_xCuO_{4-\delta}$" - *International Journal of Modern Physics B*, Vol. **12**, No. 29-31, 3299 (1998).

29. **G. Liang**, K. Mochizuki, H. Xi, M. Croft, J. T. Markert, E. Roberts, T. Binford, - "Lattice, Ce L_3 Edge, Transport, and Magnetic Results on Mixed Valent/Kondo System $Ce_{1-x}La_xMn_2Si_2$", - *J. Appl. Phy*. Vol. **81**, 4924 (1997).

30. H. Xi, **G. Liang**, K. Mochizuki, B. Tang, and J. T. Markert, - "Magnetic Properties of the $Sm_{1-x}Ce_xMn_2Ge_2$ System", - *J. Magn. Magn. Mater*., Vol. **175**, 319 (1997).

31. **G. Liang**, C. Luo, L. Crowe, J. Zeigler, G. Shotzman, Y. Wu, and R. Teodorescu, - " Study of Impregnating Epoxy Resins for High Field NMR Superconducting Magnets"- *Advanced Cryogenic Engineering* Vol. **41**, 465 (1996).

32. R. Teodorescu, J. Colvin, G. Shotzman, T. Vick, J. Zeigler, **G. Liang**, L. Crowe, C. Abshire, T. Mann, Z. Parakh, and W. Shen, - "400 MHz/89 mm Actively Shielded High Resolution NMR Magnet" - IEEE Trans. MAC. **32**, 2647 (1996).

33. A. Sahiner, M. Croft, Z. Zhang, M. Greenblatt, 1. Perez, P. Metciaf, H. Jhahns, **G. Liang**, Y. Jeon, - "Electronic Structure Anisotropy and *d*-Configuration in Ni-Based Materials"- *Phys. Rev. B* **53**, 9745 (1996).

34. P. McIntyre, Y. Wu, **G. Liang**, and C. Meitzler, - "Fabrication of Nb_3Sn Superconducting Joint for Very High Magnetic Field NMR Spectrometers"- *IEEE Trans. Appl. Supercond*., **5**, 238 (1995).

35. **G. Liang**, Y. Guo, W. Xu, D. Badresingh, M. Croft, J. Chen, J. Peng, Beorn-Hoan O, J. T. Markert - " X-ray Absorption Study of the Electron Doping and Band Shifts in $R_{2-x}Ce_xCuO_{4-\delta}$ (R=Pr, Nd, Sm, Eu, Gd) "- *Phys. Rev. B* **51**, 1258 (1995).

36. **G. Lang**, R. Barber, Y. Tang, M. Croft, J. L. Cobb, and J. T. Markert,- "Transition from a Mixed-Valent System to a Magnetically Ordered Kondo Lattice in $Ce(NiSi)_{2-x}(CuGe)_x$,"- *Phys. Rev. B* **51**, 214 (1995).

37. Sahiner, M. Croft, S. Guha, 1. Perez, Z. Zhang, M. Greenblatt, P. A. Metcalf and H. Jahns, and **G. Liang**, - "Polarized XAS Studies of Ternary Nickel Oxides" - *Phys. Rev. B* **51**, 5879 (1995).

38. **G. Liang**, A. Sahiner, M.Croft, W. Xu, X. -D. Xiang, D. Badresingh, Weiguang Li, J. Chen, J. Peng, A. Zettle, and F. Lu - " X-Ray Aabsorption Near-edge Structure Study of $Bi_2Sr_2CaCu_2O_y$" - *Phys. Rev. B* **47**, 1029 (1993).

39. S. Li, M. Greenblatt, Y. Jeon, J. Chen, **G. Liang**, and M. Croft -" X-ray Absorption Measurements on $Tl_{1-x}Bi_xSr_2CuO_5$ and $Tl_{0.5}Bi_{0.5}Sr_2CaCu_2O_7$ " Physica C **173**, 239(1991).

40. T. M. Fertak, L. Wang, E. A. Greek, P. Samanta, T. M. Hayes, C. Kendall, W. Li, **G. Liang**, and C. -M. Lo, - "Extended X-ray Absorption Fine Structure Study of Copper Monolayer on a Platinum Electrodes" Electrochimica Acta **36**, 1869 (1991).

41. **G. Liang**, J. Chen, M. Croft, K. V. Raman 'achary, M. Greenblatt, and M. Hegde - "Magnetic properties of the electron-doped superconductor $Nd_{2-x}Ce_xCuO_{4-\delta}$" - Physica B **163**, 17 (1990).

42. **G. Liang**, N. Jisrawi, M. Croft - "Experimental Results on the Kondo System $(Ce,La)Ni_2Sn_2$" - Physica B**163**, 134 (1990).

43. Y. Jeon, **G. Liang**, J. Chen, M. Croft, M. Ruckman, D. Di Marzio, S. M. Heald, M. S. Hegde – "A Photoemission Study of $(Ba,K)BiO_3$" - Phys. Rev. B **41**, 4066 (1990).

44. **G. Liang**, J. Chen, 1. Perez, Y. Jeon, M. Croft, and A. Edelstein - "Ce-valence Variations within the Anderson Model Framework" - Physica B**163**, 355 (1990).

45. I. Perez, **G. Liang**, J. B. Zhou, H. Jhans, S. A. Shaheen, M. Croft - "Electron Counting and Valence Instability in CeT_3B_n ystem: L_3 Studies" - Physica B **163**, 618 (1990).

46. **G. Liang**, J. Chen, M. Croft, K. V. Ramanachary, M. Greenblatt, and M. S. Hegde - "Spectroscopic, Transport, and Magnetic Results on the $Nd_{2-x}A_xCuO_{4-\delta}$, A=Ce and Th Systems" - *Phys. Rev. B* **40**, 2646 (1989).

47. J. M. Tranquada, S. M. Heald, A. R. Moodenbaugh, **G. Liang**, and M. Croft - "Nature of the Charge Carriers in Electron-doped Cuprate Superconductors" – *Nature* Vol. **337**, 720 (1989).

48. **G. Liang**, and M. Croft - " Ce Valence Instability in the Antiferromagnetic and Ferromagnetic Host Sries $CeMn_2(Si_{1-x}Ge_x)_2$" - *Phys. Rev. B* **40**, 361(1989).

49. M. W. Ruckman, D. Di Marzio, Y. Jeon, **G. Liang**, J. Chen, M. Croft, M. S. Hegde and P. Barboux - "Resonant Photoemission Study of $Ba_{0.6}K_{0.4}BiO_3$ - *Phys. Rev. B 39*, 7359 (1989).

50. Y. Jeon , N. Jisrawi, **G. Liang**, F. Lu, M. Croft, W. L. McLean, D. L. Hart, N. G. Stoffel, J. Z. Sun, and T. H. Geballe, "Compound Formation and Superconductivity in Au-Si: X-ray Absorption Measurements on Ion-beam-mixed Films" - *Phys. Rev. B* **39**, 5748 (1989).

51. R. N. Neifeld, S.. Gunapala, **G. Liang**, S. A. Shaheen, M. Croft, J. Price, D. Simons, W. T. Hill, III, D. Ginley, R. Pfeffer, W. Savin, C. Wren, _ "Systematics of Excimer Laser Ablation - Thin Film Preparation of High-T_c Material" - Proceeding of Rutgers Conference on Applications of High-T_c Materials by TMS, 1989.

52. G. Huan, M. Greaney, M. Greenblatt, **G. Liang**, M. Croft - "New Rhenium Chalcogenides with $[Re_6X_6]$-cluster Units" - *Solid State Ionics* **32/33**, 134 (1989).

53. D. DiMarzio, **G. Liang**, and M. Croft - "High Pressure Resistivity Results on Mixed Valent Systems in Which Magnetic Order Is Important" - *J. Less Comm. Metals*. **149**, 25 (1989).

54. **G. Liang**, M. Croft, D. C. Jhonston, N. Anbalagan and T. Mihalisin - "Coexistence of Strong 3*d* Antiferrornagnetism and Mixed Valent-Kondo Regime Transition in $Ce(Mn_xCr_{1-x})_2Si_2$" – *Phys. Rev. B* **38**, 5302 (1988).

55. S. A. Shaheen, **G. Liang**, N. Jisrawl, and M. Croft - "The Confirmation of Superconductivity in the Bi-Sr-Ca-Cu-0 system" - *Solid State Commun.*, **66**, 947 (1988).

56. **G. Liang**, 1. Perez, D. Dimarzio, M. Croft, D. C. Jhonston, N. Anbalagan, and T. Mihalisin – "Ce Valence Mixing and Strong 3*d* Antiferromagnetism in $CeMn_2Si_2$" - *Phys. Rev. B* **37**, 5970 (1988).

57. P. H. Ansari, B. Qi, **G. Liang**, 1. Perez, F. Lu and M. Croft - "The Near Edge X-ray Absorption Spectroscopy of RT_2Si_2 and RT_2Ge_2 Compounds" - *J. Appl. Phys.* **63**, 3503 (1988).

58. M. Croft, R. Neifeld, B. Ql, **G. Liang**, I. Perez, S. Gunapia, F. Lu, S. A. Shaheen, E. G. Spencer, N. Stoffel, M. denbore, - "The Role of Compound Eletronic Structure in Ce-Valence Instabilities" - in *Theoretical and Experimental Aspects of Valence Fluctuations and Heavy fermions*, ed's L. C. Gupta and S. K. Malik (Plenum N. Y. 1988).

59. I. Perez, B. Qi, **G. Liang**, F. Lu, M. Croft, D. Wieliczka - " Spectroscopic Results on the Above and Below E_F Electronic Structure of $TA1_2$, T=Au and Pt" - *Phys. Rev. B* **38**, 12233 (1988).

60. R. A. Neifeld, S. Gunapla, **G. Liang**, S. A. Shaheen, M. Croft, J. Price, D. Simons, W. T. Hill III - "Systematics of Thin Films Formed by Eximer Laser Ablation: Results on $SmBa_2Cu_3O_7$" -*Appl. Phys. Lett.* **53**, 703 (1988).

61. **G. Liang**, M. Croft, R. Neifeld, and B. Qi - "Reentrant Kondo-Mixed Valent-Kondo Regime Behavior with T in the 3*d* CeT_2Si_2 Series" - *J. Appl. Phys.* **61**, 3183 (1987).

62. I. Perez, M. Croft, **G. Liang**, J. B. Zhou, S. A. Shaheen, H. Jhans - "Resistivity Effect in the $Ce(Pd,Rh)_3B$, and $Ce(Rh,Ru)_3B_2$ Systems" - *J. Appl. Phys.* **61**, 3180 (1987).

63. Y. Jeon, F. Lu, H. Jhans, S. A. Shaheen, G. Liang, M. Croft, P. H. Ansari, K. V. Ramanujachary, E. A. Hayri, S. M. Fine, S. Li, X. H. Feng, M. Greenblatt, L. H. Greene, and J. M. Tarascon, - "X-ray Absorption Measurement on High-T_c Superconductors: Cu Valence and Cation-bond-length Effect" - *Phys. Rev. B* **36**, 3891 (1987).

ABSTRACTS AND CONFERENCE PRESENTATIONS

1. C. Hoyt, H. Fang, J. Douglas, K. West, **G. Liang**, S. Guchhait, and J. T. Markert, “Effect of Sintering Temperature on Superconductivity in indoped and SiC-doped MgB_2 wires”, Presented at the 2007 Fall Meeting of the TSAAPT/TSAPS/SPS, College Station, Texas, October 18-20, 2007.

2. H. Fang, **G. Liang**, B. Harrison, P. Barnes, “Pinning Enhancement of Tb Doped TFA-MOD YBCO Film”, Presented at the 2007 Fall Meeting of the TSAAPT/TSAPS/SPS, College Station, Texas, October 18-20, 2007.

3. **G. Liang** and M. Croft, “Thermal Variation of Ce Valence in Mixed Valence-Kondo Lattice Systems $CeT_2(Si_{1-x}Ge_x)_2$, with T = Mn and Ni”, Presented at the International Conference on Strongly Correlated Electron Systems, Houston, USA, May 13-18, 2007

4. **G. Liang**, K. Park, J. Markert, Z. P. Luo, X. Ji, C. Li, " Structural and Magnetic Characterizations of Gold and Silica Doubly Coated γ–Fe_2O_3 Nanoparticles", presented at the Texas Section Spring 2007 Meeting of the American Physical Society, Abilene, Texas, March 22-24, 2007.

5. C. Hoyt, J. P. Diehl, H. Fang, and **G. Liang**, "Study of the Physical Properties of Titanium Sheath in Ti-sheathed MgB_2 Superconducting Wires", presented at the 2007 Spring Meeting of the TSAAPT/TSAPS/SPS, Abilene, Texas, March 22-24, 2007.

6. **G. Liang**, H. Fang, C. Hoyt, Z. P. Luo, F. Yen, M. Hanna, A. Alessandrini, and K. Salama, "Effects of Grain Size and Doping Level on the Critical Current Density of the Ti-sheathed MgB2 Superconducting Wires with SiC Doping", - presented at the 2007 March Meeting of the American Physical Society, Denver, Colorado, March 5-9, 2007.

7. **G. Liang**, "Metal Sheathed MgB2 Superconducting Wires", Presented at the Department of Physics, Texas A&M University at Commerce, Commerce, Texasm November 2, 2006.

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