

CURRICULUM VITAE OF  
NAUSHAD ALI  
Department of Physics

I. PERSONAL

- A. Date of Birth: March 10, 1953
- B. Present Home Address: 104 N. Lark Lane, Carbondale, IL 62901
- C. Present University Department or Unit: Physics

II. EDUCATION

- Ph.D. Experimental Solid State Physics, University of Alberta, Canada, Nov. 1984
- M.S. Physics, Memorial University of Newfoundland, Canada, 1978
- M.Sc. Physics, Aligarh University, India, 1975. First Class.
- B.Sc. (Hons) Physics, Aligarh University, India, 1973. First Class.

III. PROFESSIONAL EXPERIENCE

- July 1993-Present Professor, Dept. of Physics, SIUC.
- May 1990-June 1993 Associate Professor, Dept. of Physics, SIUC.
- Aug. 1986-Aug. 1990 Assistant Professor, Dept. of Physics, SIUC.
- Jan. 1985-July 1986 Post-doctoral Fellow, Dept. of Physics,  
McMaster University, Hamilton, Ontario, Canada.

IV. AWARDS AND HONORS

- Canadian National Postdoctoral Fellowship, NRC Canada, 1986.
- Graduate Scholarship, Memorial Univ. of Newfoundland, Canada. 1976-78.
- Post-Graduate Research Scholarship, Indian Institute of Technology, Delhi, India. 1975-76.
- Post-Graduate Merit Scholarship, Aligarh Univ., India. 1973-75.
- Visiting Fellowship at the Chalk River Nuclear Laboratories, Atomic Energy of Canada in Chalk River, 1986 (Accepted faculty position at SIUC instead.)
- Nominated and selected for American Men and Women of Science (1991)

V. UNIVERSITY SERVICE

DEPARTMENTAL COMMITTEES

I am the organizer of the colloquium/seminar in the department. Setting up of seminars is basically my responsibility. Since fall, 1986, I have been able to start a regular seminar in physics with major emphasis in solid state physics. We are very pleased with the outcome of this seminar series. A point to note is that we have had active participation from graduate students.

1. Member Seminar/Colloquium Committee, Fall 1986 and Spring 1987.
2. Member Seminar/Colloquium Committee, Fall 1987 and Spring 1988.
3. Member of Undergraduate Committee, Spring 1987.
4. Judge, Illinois Junior Academy of Science Fair, Spring 1987.
5. Helped with 1987 Annual Telefund.
6. Graduation Ceremonies: Spring 1988, Spring 1990, and Spring 1991
7. Member Graduate Committee, Fall 1988 and Spring 1989.
8. In charge of Seminar FY '90, FY '91, and FY '92..
9. In charge of Colloquium FY '90 and FY '91.
10. Member Undergraduate Committee FY '93 (Fall)
11. Many Departmental Search Committees
12. Graduate Committee
13. Departmental Personnel Committee

COLLEGE AND UNIVERSITY COMMITTEES

1. College of Science Curriculum Committee FY '92 and FY '93.
2. Molecular Science Executive Committee FY '92 and FY '93.
3. Doctoral Dissertation Award Committee (4 years)
4. College Personnel Committee (3 years)
5. ORDA Research Committee (6 years)

## VI. TEACHING EFFORT

### Courses Taught Over the Years

PHYS 100, PHYS 101  
PHYS 203A, PHYS 203B  
PHYS 253A, PHYS 253B  
PHYS 205C, PHYS 255C  
PHYS 425, PHYS 470  
PHYS 575, PHYS 565  
PHYS 600, PHYS 599

### Other Teaching Efforts

Developed a senior level laboratory course: Applied Solid State and Materials Science Lab. This project is waiting for resources.

Enhanced the Modern Physics Laboratory (Physics 255C).

## VII. PROFESSIONAL SERVICE

1. Member of American Physical Society
2. Reviewed 10 chapters of "College Physics" by Paul A. Tipler, Worth Publ., Dec. 1986
3. Referee to Journal of Applied Physics
4. Referee to Canadian Journal of Physics
5. Referee to J. Industrial and Engineering Chemistry Research
6. Session chair, 37th Conf. on Magnetism and Magnetic Materials (1992)

## VIII. RESEARCH

### Research Interests

Magnetism  
Superconductivity  
Electrorheology

### Current Research Projects

1. Re-entrant magnetic phase transitions in systems such as  $Ce(Fe_{1-x}M_x)_2$  where  $M = Al, Co, Ru, etc.$
2. Magnetism in quasi-one dimensional and two dimensional systems
3. Study of multicritical points in magnetic phase diagrams using a system such as Ce-Mn-Ge-Si
4. Electrorheology and solid-gas fluidization using superconducting materials
- 5a. Determination of magnetic structure in  $Ce(Fe_{1-x}M_x)_2$  (where  $M = Al, Co, Ru, etc.$ ) using small angle neutron scattering at Chalk River National Laboratory and McMaster University in Canada
- 5b. Neutron scattering studies on the Ce-Mn-Ge-Si and Er-Ga-Co systems at Oak Ridge National Laboratory in Tennessee
6. Patterning of high- $T_c$  superconducting thick films and the development of infra-red detectors from high- $T_c$  materials
7. Enrichment of phases of high- $T_c$  superconductors by magnetic separation

### Research Grants

1. "Study of Electrical and Magnetic Properties of Rare Earth compounds", Special research award, ORDA, SIUC, FY 1987, \$9448.
2. "A Mini-Sabbatical to Aid Research", ORDA, SIUC, Summer 1987, \$1000. This award was given to help set up a capacitance dilatometer for thermal expansion measurements which we successfully achieved.
3. "Summer Research Fellowship", ORDA, SIUC, Summer 1987, \$3,111 (one month summer salary).
4. "Characterization of Carbon Composites", Materials Technology Center, SIUC, January 1988 - July 1988, \$19,250.  
Equipment fund to buy high temperature oven of SQUID Magnetometer.
5. "Study of the Evolution of Mn Magnetic Moment in  $RMn_2$  and  $(Y_{1-x}Ce_x)Mn_2$  Systems", Materials Technology Center, SIUC, August 1988 - July 1989, \$21,827.
6. Special Research Award, ORDA, SIUC, FY 1988, \$10,216.
7. Special Research Award, ORDA, SIUC, FY 1989, \$10,150.51.
8. Special Research Award, ORDA, SIUC, FY 1990, \$ 9,458.02.
9. MTC-SIUC, July 89-June 90. \$20,000.

10. (with S. Lalvani) "Electrodeposition of Thin Films of High T<sub>c</sub> Y-Ba-Cu-O Superconductors." Illinois Dept. of Energy, 1989, \$25,000.
11. (with R. Tao) "Electrorheology" MTC-SIUC, July 90-June 91, \$30,000.
12. (with R. Tao) "New Electro-Rheology Fluid from Superconductors" IDENR, April 1990 - April 1991, \$40,000 and MTC, SIUC, matching \$15,000.
13. (with S. Lalvani) "Electrodeposition of High T<sub>c</sub> Superconductor" IDENR, April 1990 - April 1991, \$40,000 and MTC, SIUC, matching \$15,000.
14. Equipment Funds to purchase a susceptometer, Vice-President's Office, SIUC, FY 1991, \$31,500.
15. "High Temperature Superconductivity Research," ORDA-SIUC, July 1991 - June 1992, \$7,848.
16. (with R. Tao) "New Electro-Rheology Fluid From Superconductors," IDENR, May 1991 - Aug. 1992, \$50,000 and MTC, SIUC, matching \$5,000.
17. (with S. Lalvani) "Electrodeposition of High T<sub>c</sub> Superconductor," IDENR, May 1991 - Aug. 1992, \$50,000, and MTC, SIUC, Matching \$5,000.
18. Extension to Sabbatical leave, ORDA, SIUC, summer salary 1993.
19. (with S. Dhali) "Enrichment of Phases of High-T<sub>c</sub> Superconductors by Magnetic Separation" IDENR, February 1992 -August 1993, \$55,000; MTC, SIUC, Matching \$5,000; College of Science, SIUC, matching \$5,000, and College of Engineering, SIUC, matching \$15,000.
20. Giant Magnetoresistance in Granular Thin Film Alloys, MTC, July 1993-June 1995; \$44,230.
21. Summer Undergraduate Research Program, SIUC, \$30,000, 1993 and 1994.
22. Extension to Sabbatical Leave, ORDA, Summer Salary, 1993.
23. Investigation of New Geo-Physical Technique for Direct Detection and Monitoring of Subsurface Contaminant Leakage" UPIIP, ORDA, January to June, 1995, \$6000 (with Dr. D. Ravat, Department of Geology).
24. Investigation of a New Geo-Physical Technique for Direct Detection and Monitoring of Subsurface Contaminant Leakage, UPIIP, ORDA, 15 December 1995 to 30 June 1996, \$6000.00 with Dr. D. Ravat, Department of Geology.
25. Magnetoresistive Sensor Development, Special Research Award, ORDA, July 1995 to June 1997, \$21,000.00.
26. X-ray Magnetic Scattering Study, UC-NWU-IHE, September 1995 to August 1996, \$33,610. MTC-Cost Share \$10,000.00.
27. Summer Undergraduate Research Program, Office of the Provost, 1995, \$15,000.00.
28. X-ray magnetic Scattering Study of rare earth and re-entrant magnetic system using synchrotron radiation. CARS-Univ. of Chicago, September 1, 1996 to August 31, 1997, \$51,023.00.
29. X-Ray magnetic scattering study of rare earth and re-entrant magnetic system using synchrotron radiation, CARS-Univ. of Chicago September 1, 1998 to August 31, 1998, \$47,270.00.
30. X-ray magnetic scattering studies using synchrotron radiation, MTC-SIUC, July 1, 1997 to June 30, 1998, \$15,438.00
31. Magnetic studies of Colossal magnetoresistive Materials Using Synchrotron radiation, CARS-Univ. of Chicago, September 1998-August 1999, \$110,000.00
32. (N. Ali, Co-P.I.) with Yu Galkin, E. Fawcett and Make Stiles, Properties of Bulk Chromium Alloys..." NATO-Linkage Grant #973279, 780,000 Belgian Francs, Grant administered by Univ. of Toronto, Canada.
33. Magnetic studies of colossal magnetoresistive materials using synchrotron radiation, CARS-Univ. of Chicago, September 1999 to August 2000, \$110,000
34. Research Initiation in Permanent magnets, ORDA, SIUC Special Research Award, August 1999 to June 2001, \$23,628.00
35. Search for Novel Permanent Magnetic Materials, Materials Technology Center, SIUC, \$39,000.00 July 1999-june 2001.
36. Photoinduced Magnetization Pilot Equipment Grant, ORDA, SIUC, \$5,000.00
37. Magnetic Studies of CMR materials, CARS-Univ. of Chicago, Sept. 2000-Aug.2001, \$110,000.00
38. CMR and Magnetic Materials Study using synchrotron Radiation, CARS-Univ. of Chicago, Sept. 2001 - Aug. 2003, \$90,000.00
39. "Understanding Ferromagnetic Shape-memory effects in Heusler alloy thin films," Shane Stadler and Naushad Ali, MTC SIUC \$14,000. July 2004 - June 2005.
40. NSF: Exploring magnetocaloric effect in manganese-based alloys, \$528,143, (Project Dates: July 1, 2006—June 30, 2009).
41. USDOE: Understanding compound phase transitions in new Heusler alloy colossal

- magneto- caloric materials, \$623,520, (Project Dates: July 1, 2006—June 31, 2010)
42. RESEARCH CORPORATION: Investigation of Giant Magnetocaloric Effect in Ni-Mn-Ga based heusler Alloys,\$50000.June2006---May2008.

## IX. SUPERVISION OF GRADUATE STUDENTS

### A. Masters Students

X. Zhang  
Margaret P. Hill  
F. Willis  
John Eynon  
Shibaji Saha  
Malika Roy  
Brian Watson  
Robert Baer  
Michael Loenard  
Jeffrey Gebhardt  
Sujoy Roy  
M.Khan  
D. Edoth  
Arjun Pattak  
Bhoj Gautam

### B. Ph.D. Students

Sunil Labroo  
Arthur Chin  
Margaret P. Hill  
Xianfeng Zhang  
Shibaji Saha  
Sujoy Roy  
Mahmud Khan  
Arjun Pathak

### C. Undergraduate Research Students

Chanthien T. Trinh  
Patric Buller  
Marc Decker  
Eric Carlson  
Eric Hilemma  
Tod Policandriotes  
Ronald Jerome  
Diana Hallenbeck  
Jeffrey Gebhardt  
Manuel Liong  
Bradley Frazer  
Anita Crouse  
Jeremy Scott  
Aaron Cole  
Mahmud Khan  
Jonathan Craig  
Erin Condon  
Jonathan Craig

### D. Post Doctoral Fellow and Associates

Dr. David Marx  
Dr. Alexander Ignatov  
Dr. Igor Dubenko  
Dr. Margaret Hill  
Dr. Venkatesh Shankar  
Dr. Yongquan Guo

## X. RESEARCH PAPERS PRESENTED AT PROFESSIONAL MEETINGS

1. N. Ali and J. G. Alder, "Inelastic Electron Tunneling Spectroscopy of Formic Acid Chemisorbed on Various Surfaces," March Meeting, American Physical Society, 1981, Bulletin of the Am. Phys. Soc., 26, #3, 426, JP13 (1981).
2. N. Ali and S. B. Woods, "Low Temperature Electrical Resistance of Single Crystal  $\text{NdB}_6$  and  $\text{PrB}_6$  and Critical Scattering Near their Néel Temperature," Third Joint Intermag - Magnetism and Magnetic Materials Conf., Montreal, Canada, 1982.
3. N. Ali and S. B. Woods, "Magnetoresistance of  $\text{PrB}_6$  and  $\text{NdB}_6$ ," Canadian Association of Physicists Congress, University of Victoria, 1983, Bull. Can. Assoc. Phys., 39, #3, 46, DC3 (1983).
4. N. Ali and S. B. Woods, "Transport Properties of Dilute Rare-earth Yttrium Alloys," Canadian Association of Physicists Congress, University of Victoria, 1983, Bull. Can. Assoc. of Physicists, 39, #3, 46, DC3 (1983).
5. N. Ali and S. B. Woods, "Transport Properties of Kondo Lattice  $\text{CeB}_6$ ," 30th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1984.
6. N. Ali and S. B. Woods, "Transport Properties of  $\text{GdB}_6$  and  $\text{DyB}_6$ ," Bull. Can. Assoc. of Physicists, 40, #3, 63PM17 (1984).
7. N. Ali, S. B. Woods, G. Kozlowski, and A. Rojek, "Magnetoresistance of  $\text{GdRh}_{1.1}\text{Sn}_{4.2}$ ," Bull. Can. Assoc. of Physicists, 40, #3, 63PM18 (1984).
8. N. Ali and W. R. Datars, "Resistivity and Hall Effect in  $\text{Y}_9\text{Co}_7$ ," Bull. Amer. Phys. Soc., 31, #3, 546 (1986).
9. N. Ali and W. R. Datars, "Superconductivity and Magnetism in Lu-Rh-Sn," 17th Rare Earth Research Conference, June 1986.
10. N. Ali and W. R. Datars, "Hall Effect and Resistivity of Magnetically Ordered Heavy Fermion  $\text{URu}_2\text{Si}_2$ ," 34th Midwest Solid State Conference, October 24, 1986, Appl. Phys. Comm. 7, #1Z2, 100 (1987).
11. N. Ali and S. B. Woods, "Magnetoresistance of Antiferromagnetic Metals with Localized Moments," 31st Annual Conference on Magnetism and Magnetic Materials, Baltimore, Maryland, November 1986.
12. N. Ali, W. R. Datars, C. V. Stager, and S. B. Woods, "Low Temperature Electrical and Magnetic Properties of the Apparently Simple Antiferromagnetic Metal  $\text{GdB}_6$ ," Bull. Amer. Phys. Soc. 32, #3 (1987).
13. N. Ali, "Anomalous Electrical and Magnetic Properties of Gadolinium Hexaboride," 32nd Annual Conference on Magnetism and Magnetic Materials, Chicago, Illinois, November 1987.
14. N. Ali and S. Labroo\*, "Electrical and Magnetic Properties of Rare Earth Disilicides," Bull. Amer. Phys. Soc. 33, #3, 271 (1988).
15. Naushad Ali, Xuesong Zhang\*, Peggy Hill\*, and Sunil Labroo\*, "Effect of Fe and Ni Substitution in High- $T_c$  Y-Ba-Cu-O Superconductors," 18th Rare Earth Research Conference, September 1988.
16. Naushad Ali, Peggy Hill\*, Sunil Labroo\*, and Xuesong Zhang\*, "Electrical and Magnetic Properties of  $\text{R}_2\text{Mo}_2\text{O}_7$  (R = Nd, Sm, Gd, Tb, and Y)," 18th Rare Earth Research Conference, September 1988.
17. Naushad Ali, Sunil Labroo\*, Peggy Hill\*, and Xuesong Zhang\*, "Observation of Valence Fluctuation Phenomena in  $\text{YbSi}_2$ ," 18th Rare Earth Research Conference, September 1988.
18. Naushad Ali, Sunil Labroo\*, Xuesong Zhang\*, and Peggy Hill\*, "Electrical And

- Magnetic Properties of Antiferromagnetic Rare Earth Disilicides," 18th Rare Earth Research Conference, September 1988.
19. Naushad Ali (with Sunil Labroo\*), "Electrical, Magnetic, and Thermal Properties of  $\text{RMn}_2$  Compounds (R = Y and Rare Earths)," 2nd Cooperative Conference on Recent Advances in Materials Research, SIUC, MTC, Carbondale, Illinois, April 1989.
  20. Naushad Ali (with Sunil Labroo\*), "Magnetoresistance of Rare Earth Disilicides," Bull. Amer. Phys. Soc. 34, #3, 565 (1989).
  21. Naushad Ali (with Sunil Labroo\* and J. E. Greedan), "Ferromagnetism and Spin Glass Behavior in Pyrochlore Compounds  $\text{2Mo}_2\text{O}_7$  (R = Nd, Sm, Gd, Tb, and Y)," Bull. Am. Phys. Soc. 34, #3, 649 (1989).
  22. Naushad Ali (with Sunil Labroo\*), "Magnetic and Electrical Properties of  $\text{RMn}_2$  Compounds (R = Heavy rare earths and Y)," Bull. Amer. Phys. Soc. 34, #3, 650 (1989).
  23. Naushad Ali (with Frank Willis\*), "Observation of 'Spin-slip' Structures in Holmium and Erbium Single Crystals," 37th Midwest Solid State Conference, Rolla, Missouri, October 13 - 14, 1989.
  24. Naushad Ali (with Arthur Chin\* and J. T. Masden), "Effects of Localization on the Magnetic Transition on Thin Gadolinium Wires," 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Massachusetts, November 28 - December 1, 1989.
  25. Naushad Ali (with Sunil Labroo\* and P. Robinson), "Magnetic Properties of  $\text{RMn}_2$  Compounds (R = Heavy Rare Earths)," 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Massachusetts, November 28 - December 1, 1989.
  26. Naushad Ali (with Sunil Labroo\*), "Magnetism of Rare Earth Disilicides," 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Massachusetts, November 28 - December 1, 1989.
  27. Naushad Ali (with Frank Willis\*, M. O. Steinitz, M. Kahrizi, and D. A. Tindall), "Observation of Spin Slip Structures and Splitting of the Néel Temperature of Holmium in Magnetic Fields," 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Massachusetts, November 28 - December 1, 1989.
  28. Naushad Ali (with Sunil Labroo\* and Frank Willis\*), "Influence of Mn Moments on the Properties of  $\text{RMn}_2$  Compounds (R = Y and Light rare earths)," 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Massachusetts, November 28 - December 1, 1989.
  29. Naushad Ali (with D. R. Noakes, D. A. Tindall, and M. O. Steinitz), "Observation of a Commensurate Temperature Plateau Induced by a c-axis Applied Magnetic Field in Holmium," 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Massachusetts, November 28 - December 1, 1989.
  30. Naushad Ali and Frank Willis\*, "New Magnetic Structure in the Magnetization of Ho and Er Single Crystals," Bull. Amer. Phys. Soc. 35, #3, 794 (1990).
  31. Naushad Ali and John Eynon\*, "Re-entrant Phase Transition in  $\text{Ce}(\text{Fe}_{1-x}\text{M}_x)_2$  (M = Al, Cu, and Ni)," Bull. Amer. Phys. Soc. 35, #3, 696 (1990).
  32. A. J. Weston, S. Lalvani, and Naushad Ali, "Electrodeposition of High  $T_c$ , Y-Ba-Cu-O Superconducting Films," Meeting of the Electrochemical Society, Montreal, Canada, May 1990.
  33. Arthur Chin\*, Naushad Ali, and J. T. Masden, "Magnetic Transition in Thin Wires of Rare Earth Metals," 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1990.
  34. Peggy Hill\*, Frank Willis\*, and Naushad Ali, "Magnetic and Electrical Properties of the Ferromagnetic Dense Kondo Lattice System  $\text{CeSi}_x$ ," 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1990.
  35. John Eynon\* and Naushad Ali, "Magnetic and Electrical Properties of Re-entrant

- Ce(Fe<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub>," 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1990.
36. Naushad Ali, Frank Willis\*, J. C. Holzer, and K. F. Kelton, "Magnetic Properties of Icosahedral Phase of Ti Transition Metal Alloys," 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1990.
  37. D. A. Tindall, M. O. Steinitz, D. Noakes, and Naushad Ali, "Investigation of the Helimagnetic Phases of Ho in a c-axis Magnetic Field," 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1990.
  38. Frank Willis\* and Naushad Ali, "Evidence of c-axis Magnetic Moment in Single Crystal Dysprosium," 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1990.
  39. Frank Willis\* and Naushad Ali, "Magnetization and Thermal Expansion of Single Crystal Erbium and Thulium," 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, November 1990.
  40. Frank Willis\*, Peggy Hill\*, and Naushad Ali, "A Study of Spin-slip Structures in Single Crystal Erbium," Bull. Amer. Phys. Soc. 36, #3, 442 (1991).
  41. S. Shaheen, X. Xu, Peggy Hill\*, and Naushad Ali, "Structural, Magnetic, and Transport Properties of the Ce-Si System," Bull. Amer. Phys. Soc. 36, #3, 557 (1991).
  42. Arthur Chin\*, Naushad Ali, and J. T. Masden, "Electrical Resistance of Thin Wires of Heavy Rare Earth Metals," Bull. Amer. Phys. Soc. 36, #3, 591 (1991).
  43. Peggy Hill\*, Xianfeng Zhang\*, John Eynon\*, and Naushad Ali, "Re-entrant Phase Transition in Ce(Fe<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub>," Bull. Amer. Phys. Soc. 36, #3, 807 (1991).
  44. Frank Willis\* and Naushad Ali, "Magnetism in Single Crystal Dy below 10 K," 5th Joint Magnetism and Magnetic Materials - Intermag Conference, Pittsburgh, Pennsylvania, June 18 - 21, 1991.
  45. A. Weston, S. Lalvani, Frank Willis\*, and Naushad Ali, "Electrodeposition of 1-2-3 Superconductor Precursor Films," 19th Rare Earth Research Conference, Lexington, Kentucky, July 14 - 19, 1991.
  46. Naushad Ali, Peggy Hill\*, Xianfeng Zhang\*, and Frank Willis\*, "Magnetization and Thermomagnetically Induced Magnetization Studies of Tb<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>," 19th Rare Earth Research Conference, Lexington, Kentucky, July 14 - 19, 1991.
  47. Frank Willis\* and Naushad Ali, "Effect of Spin-slip Structures on the Resistivity of Er and Ho," 19th Rare Earth Research Conference, Lexington, Kentucky, July 14- 19, 1991.
  48. Naushad Ali, "Field Induced Solidification of Electrorheological Fluids," 39th Annual Midwest Solid State Conference, Ames, Iowa, September 27 - 28, 1991.
  49. A. J. Weston, Naushad Ali, and S. B. Lalvani, "Synthesis of Superconducting Films via an Electrochemical Pathway," Meeting of the Electrochemical Society, St. Louis, Missouri, May 1992.
  50. Naushad Ali, Xianfeng Zhang\*, and Peggy Hill\*, "First Order Phase Transition from a Ferro- to Antiferromagnetic State in the Ce(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub> System," Bull. Amer. Phys. Soc. 37, #1, 325 (1992).
  51. Peggy Hill\* and Naushad Ali, "Investigation of the Transition from Ferromagnetic to Antiferromagnetic Order in the System CeMn<sub>2</sub>(Ge<sub>x</sub>Si<sub>1-x</sub>)<sub>2</sub>," Bull. Amer. Phys. Soc. 37, #1, 133 (1992).
  52. Y. S. Yang, Naushad Ali, and B. D. Gaulin, "Small Angle Neutron Scattering Studies of Ce(Fe<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub>," Bull. Amer. Phys. Soc. 37, #1, 296 (1992).
  53. Naushad Ali and David T. Marx<sup>+</sup>, "Fabrication and Characterization of Superconducting (Bi,Pb)-Sr-Ca-Cu-O Thick Films on Sr-Ca-Cu-O Substrates," International Conference on the Physics of Transition Metals, Darmstadt, Germany, July 20 - 24, 1992.

54. Naushad Ali and Xianfeng Zhang\*, "Magnetic Phase Transitions in the  $Ce(Fe_{1-x}Co_x)_2$  System," International Conference on the Physics of Transition Metals, Darmstadt, Germany, July 20 - 24, 1992.
55. Naushad Ali, J. T. Masden, Peggy Hill\*, and Arthur Chin\*, "Magnetic Transition in Quasi- One Dimensional Wires and Thins Films of Gadolinium," International Conference on the Physics of Transition Metals, Darmstadt, Germany, July 20 - 24, 1992.
56. David T. Marx<sup>+</sup> and Naushad Ali, "Fabrication and Patterning of Superconducting (Bi, Pb)-Sr-Ca-Cu-O Thick Films on Pb-Sr-Ca-Cu-O Substrates," Applied Superconductivity Conference, Chicago, Illinois, August 24 - 27, 1992.
57. Peggy Hill\* and Naushad Ali, "Investigation of the Transition from Ferromagnetic to Antiferromagnetic Order in the System  $CeMn_2(Ge_xSi_{1-x})_2$ ," 37th Annual Conference on Magnetism and Magnetic Materials, Houston, Texas, December 1 - 4, 1992.
58. Y. S. Yang, B. D. Gaulin, J. A. Fernandez-Baca, Naushad Ali, G. D. Wignall, "Small Angle Neutron Scattering Studies of  $Ce(Fe_{1-x}Al_x)_2$ ," 37th Annual Conference on Magnetism and Magnetic Materials, Houston, Texas, December 1 - 4, 1992.
59. Xianfeng Zhang\* and Naushad Ali, "Competition between Magnetocrystalline Anisotropy and Exchange Interaction in the  $Ce_{1-x}Y_x(Fe_{0.8}Co_{0.2})_2$  System," 40th Annual Midwest Solid State Conference, Urbana, Illinois, October 2 - 3, 1992.
60. Shibaji Saha\*, Naushad Ali, and J. T. Masden, "Magnetic Transitions in Thin Films of Heavy Rare Earth Metals," 40th Annual Midwest Solid State Conference, Urbana, Illinois, October 2 - 3, 1992.
61. Peggy Hill\* and Naushad Ali, "Study of the Crossover from Ferromagnetic to Antiferromagnetic Order in the System  $CeMn_2(Ge_xSi_{1-x})_2$ ," 40th Annual Midwest Solid State Conference, Urbana, Illinois, October 2 - 3, 1992.
62. Xianfeng Zhang\* and Naushad Ali, "Investigation of the Role of Ce in  $CeFe_2$ " 20th Rare Earth Research Conference, Monterey, California, September 12-19, 1993
63. Xianfeng Zhang\* and Naushad Ali, " Entropy Change at AM-AFM Transition in Intermetallic Compound  $Ce(Fe_{1-x}Co_x)_2$ ", 20th Rare Earth Research Conference, Monterey, California, September 12-19, 1993
64. Naushad Ali and Xianfeng Zhang\*, "Magnetization and Time Dependent Effects in  $ErCo_3Ga_2$  Compound" 20th Rare Earth Research Conference, Monterey, California, September 12-19, 1993
65. Xianfeng Zhang\* and Naushad Ali, "Effects of Co and Y Substitution on Magnetic Properties of  $CeFe_2$ ", 20th Rare Earth Research Conference, Monterey, California, September 12-19, 1993
66. D. T. Marx and Naushad Ali, "Magnetoresistance Studies of Spin-slip in Single Crystal Holium", 20th Rare Earth Research Conference, Monterey, California, September 12-19, 1993
67. Naushad Ali, A. Chin and J. T. Masden, " Magnetic Transition in Thin Wires of Rare Earth Metals", 20th Rare Earth Research Conference, Monterey, California, September 12-19, 1993
68. Xianfeng Zhang\* and Naushad Ali, "Effects of Co and Y Substitution on Magnetic Properties of  $CeFe_2$ ", 38th Annual Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15-18, 1993
69. Naushad Ali and Xianfeng Zhang, "Unusual Magnetic Properties and Time Dependent Magnetization in  $ErCo_3Ga_2$ ", 38th Annual Conference on Magnetism and Magnetic Materials, Minneapolis, Minnesota, USA, November 15-18, 1993
70. X. Zhang and N. Ali, "Competition Between Magnetocrystalline Anisotropy and Exchange Interaction in  $Ce_{1-x}Y_x(Fe_{0.2}Co_{0.2})_2$  system," *Bull.Am.Phys.Soc.*, 38, #1, 818



- (1993)
71. P. Hill and Naushad Ali, "The Formation of Local Moment in Dilute Cr-V Alloys," Midwest Solid State Conf. , Ames, Iowa, Sept. 24-25, 1994.
  72. Xianfeng Zhang and N. Ali, "Ferrimagnetic behavior of two sublattices in  $\text{ErCo}_3\text{Ga}_2$ , 6th Joint MMM-Intermag Conference, Albuquerque, New Mexico, June 1994.
  73. Xianfeng Zhang and N. Ali, "Magnetism of 3d and 4f electrons in  $\text{CeFe}_2$ ," 6th Joint MMM-Intermag Conference, Albuquerque, New Mexico, June 1994.
  74. Brian Watson and N. Ali, "Spin-Slip Structures and Magnetic Phase Diagram of Erbium," 42nd Midwest Solid State Conf., Kansas City, USA, Oct. 14, 1994.
  75. Shibaji Saha and N. Ali, "Effect of Cr on the Re-Entrant Magnetic Phase Transition of  $\text{SmMn}_2\text{Ge}_2$ ," 42nd Midwest Solid State Conf., Kansas City, USA, Oct. 14, 1994.
  76. Tod Policandriotes and N. Ali, "Magnetic Properties of Ce-Cu-Sb and Ce-Ni-Sb Kondo Systems," 42nd Midwest Solid State Conf. Kansas City, USA, Oct. 14, 1994.
  77. K. Lafdi, A. Chin and N. Ali, "Cobalt doped carbon nanotubes: Preparation, texture and Magnetic Properties," 43rd Midwest Solid State Conference, Oct 1995.
  78. Shibaji Saha and N. Ali, "Disappearance of Antiferromagnetic Phase in  $\text{SM}(\text{Mn}_{1-x}\text{Cr}_x)_2\text{Ge}_2$ ," 43rd Midwest Solid State Conference, Oct 1995.
  79. J.R.Gebhardt, R.A. Baer and N. Ali, "Magnetic Phase Diagram of Holmium using Magnetoresistance Measurements," 43rd Midwest Solid State Conference, Oct. 1995.
  80. Shibaji Saha and N. Ali, "Magnetic Properties of the  $\text{SmMn}_2(\text{Ge}_{1-x}\text{Si}_x)_2$  System," 40th Magnetism Magnetic Materials Conference, Philadelphia, Nov. 1995.
  81. J.A. Fernandez-Baca, P. Hill, B.C. Chakoumakos and N. Ali, "Neutron diffraction study of the magnetic structures of  $\text{CeMn}_2\text{Ge}_2$  and  $\text{CeMn}_2\text{Si}_2$ ," 40th Magnetism Magnetic Materials Conference, Philadelphia, Nov. 1995.
  82. K. Lafdi, A. Chin and N. Ali, "Cobalt doped carbon nanotubes," 40th Magnetism Magnetic Materials Conference, Philadelphia, Nov. 1995.
  83. V. Galkin, P.C. de Camargo, N. Ali, J. Schaf and E. Fawcett, "A new type of spin glass in spin-density-wave CrMn alloys," 40th Magnetism Magnetic Materials Conference, Philadelphia, Nov. 1995.
  84. V. Galkin, P.C. de Camargo, N. Ali, J. Schaf and E. Fawcett, "Magnetic Behavior of  $\text{SDW}(\text{Cr}-2.7\%\text{Fe})_{1-x}(\text{MnV})_x$  Alloys," 40th Magnetism Magnetic Material Conference, Nov. 1995.
  85. Shibaji Saha and N. Ali, "Magnetic Properties of the  $\text{Pr}_{1-x}\text{La}_x\text{MnGe}$  System," 41st Conference on Magnetism and Magnetic Materials, U.S.A. (1996)
  86. V. Yu Galkin, P.C. de Camargo, N. Ali and E. Fawcett, "Magnetic phase diagram of the spin-density-wave CrFe alloy system from susceptibility measurements," 41st Conference on Magnetism and Magnetic Materials, Atlant, USA, (1996)
  87. Shibaji Saha and N. Ali, "Study of the Antiferromagnetic Phase in  $\text{Sm}(\text{Mn}_{1-x}\text{Cr}_x)_2$ ," 21st Rare Earth Research Conference, Deluth, USA (1996)
  88. G. R. Gebhardt, R.A. Baer, and N. Ali, "Magnetic Phase Diagram of Holmium," 21st Rare Earth Research Conference, Deluth, USA, (1996)
  89. M.T. Alkhafaji and N. Ali, "Magnetic Phase Diagram of Dysprosium," 21st Rare Earth Research Conference, Deluth, USA (1996)
  90. B. Watson and N. Ali, "C and B-axes Magnetic Phase Diagram of Erbium," 21st Rare Earth Research Conference, Deluth, USA, (1996)
  91. V. Yu Galkin, P.C. de Camargo, N. Ali, and E. Fawcett, Coexistence of spin glass and

- Curie-Weiss paramagnetism in SDW CrFeMn alloys," International Conference on Phppysics of Transition Metals, (ICPTM), Japan (1996)
92. V. Yu Galkin, P.C.de Camargo, N. Ali and E. Fawcett, "A new type of spin glass in spin-density-wave CrMn based alloys, Woprkshop in "Itinerant Magnetism," Brasilia (1997)
  93. Y.S.Yang and N. Ali, "Magnetic Properties of PrLaMnGe by neutron scattering Measurements," International Conference on Neutron Scattering, August 17-21, Toronto, Canada, 1997
  94. R.A. Baer and N. Ali, "Magnetic Properties of FGA<sub>2</sub> Compounds," 45th Midwest Solid State Conference, October 1997, Manhattan, Kansas
  95. J.R. Gebhardt and N. Ali, "Magnetic Phase Diagrams of Holmium Determined from Magnetoresistance Measurements," 7th Joint MMM-Intermag. Conf., Jan 6-9, 1998, San Francisco, California
  96. Shibaji Saha and N. Ali, "Magnetic Transitions in Tb-Nd-Mn-Ge<sub>2</sub>," 7th Joint MMM-Intermag. Conf. January 6-9, 1998, San Francisco, California
  97. Michael Leonard, S. Saha and N. Ali, "Magnetic Properties of RTSb<sub>3</sub> (R=La, Ce, Nd, Gd and Dy and T = Gr, V)," Magnetism and Magnetic Materials Conference, Nov. 9-12, 1998, Miami, FL
  98. J.R. Gebhardt and N. Ali, "Colossal Magnetoresistance in Ce<sub>1-x</sub>Sr<sub>x</sub>MnO<sub>3</sub>," Magnetism and Magnetic Materials Conference, Nov. 9-12, 1998, Miami, FL
  99. Bradley Frazer and N. Ali, "Magnetic Phases of Erbium," Magnetism and Magnetic Materials Conference, Nov. 9-12, 1998 Miami, FL
  100. M.L. Leonard, I.S. Dubenko and N. Ali, "An Investigation of Magnetic Phase Transitions of RSB," 22nd Rare Earth Research Conference, Argonne, July 10-15, 1999
  101. S. Roy, A. Ignatov, J. Gebhardt and N. Ali, "Study of the Magnetoresistance Properties of La<sub>0.07</sub>Sr<sub>0.03</sub>Re<sub>y</sub>M<sub>1-y</sub>O<sub>3</sub> Compound," 22nd Rare Earth Research Conference, Argonne, July 10-15, 1999
  102. I. Dubenko, I. Gaidukova, A. Markosyan, M. Leonard and N. Ali, "Magnetic Instability of the CO Subsystem in YCO<sub>3</sub> Caused by Small Variations in Stoichiometry," 22nd Rare Earth Research Conference, Argonne, July 10-15, 1999
  103. A. Yu Ignatov, S. Khalid and N. Ali, "Mn K-edge XANES Study of La<sub>1-x</sub>Ca<sub>x</sub>MnO<sub>3</sub>+ & CMR," 18th Int'l Conference on X-Ray and Inner Shell Processes, Chicago, Aug. 23-27, 1999
  104. A. Yu Ignatov and N. Ali, "Local Structure of the CuO<sub>2</sub> Plane of Nd<sub>1.85</sub>CuO<sub>4</sub>\* Superconductor: A director Cu K-edge SANES Refinement," 18th Int'l Conference on X-ray and Inner-Shell Processes, Chicago, Aug. 23-27, 1999
  105. A. Ignatov, P. Konarev, M. Tischer, A. Ivanov, K. Attenkofer, N. Ali, A.P. Menushenkov, A. Tsvyashehenko and L. Fomicheva, "Local Structure of Yni<sub>2</sub>B<sub>2</sub>C Superconductor Determined by X-ray Absorption Spectroscopy," 18th Int'l. Conference on X-ray and Inner-Shell Processes, Chicago, Aug 23-27, 1999
  106. N. Ali, I. Dubenko, I. Gaidukova, A. Markosyan and V. Rodimin, "Field and Temperature Induced Magnetic Phase Transitions in the Er<sub>1-x</sub>Y<sub>x</sub>CO<sub>3</sub> System," Moscow International Symposium on Magnetism, Moscow, Russia, June 20-24, 1999
  107. N. Ali, I.S. Dubenko, I. Yu Gaidukova, A. S. Markosyan and V. E. Rodimin, "Temperature Induced Magnetic Instability in the itinerant CO sybssystem of the Er<sub>1-x</sub>Y<sub>x</sub>CO<sub>3</sub>," The LI-st Yamada Conference on Strongly Correlated Electron systems, Nagano, Japan, Aug. 24-28, 1999
  108. J. Han, G.K. Marasingh, W. J. James, M. Chen, W. B. Yellon, I. Dubenko and N. Ali, "The atomic and magnetic structure of MdMn<sub>6-x</sub>Fe<sub>x</sub>Ge<sub>6</sub> Intermetallics," J. Magn. Magn Materials Conf., San Jose, California, Nov. 15-18, 1999
  109. J. Nam, G.K. Marasinghe, M. J. Han, W. J. James, M. Chen, Y.B. Yellon, I. Dubenko

- and N. Ali," Synthesis and characterization of  $\text{Bi}_{1-x}\text{R}_x\text{Mn}$  (R= Rare Earth) Magnetic Intermetallics," Magn, Mang. Materials Conf., San Jose, California, Nov. 15-18, 1999
110. C.Y.Tai, G.K. Marasinghe, M. Karabulut, O.A. Pringle, W. J. James, Michen, W. B. Yellon, I. Dubenko, N. Ali, D. Shuh and D. Caulder, "Submicroscopic and Magnetic structures in  $\text{LaNi}_{15-x}(\text{Fe}/\text{Mn})_x$  Intermetallics," Magn. Magn. Materials Conf., San Jose, California, Nov. 15-18, 1999
  111. P. Hill and N. Ali, "Search for Novel Permanent Magnet Materials," 1999 Materials Research Symposium, Carbondale, IL Nov. 3-5, 1999
  112. S. Roy, I. Dubenko and N. Ali, "Study of the colossal magnetoresistance property of  $\text{La}_{0.7}\text{Sr}_{0.3}\text{Cr}_y\text{Mn}_{1-y}\text{O}_3$ ," American Physical Society, March Meeting, Minneapolis, March 2000
  113. S. Labroo, T. Gibson, M. Oakes, N. Ali, and S. Saha, "Investigation of the High Temperature Magnetic Phase in  $\text{Tb}_{1-x}\text{Nd}_x\text{Mn}_2\text{Ge}_2$ ," American Physical Society, March Meeting, Minneapolis, March 2000
  114. A. Ignatov and N. Ali, "Local Structure of  $\text{La}_{0.66}\text{Ca}_{0.33}\text{MnO}_3$  determined by Ca and Mn K - edge EXAFS," American Physical Society, March Meeting, Minneapolis, March 2000
  115. I. Dubenko, I. Gaidukova, S.A. Granovsky, V. Rodimin, A.S. Markosyan, S. Roy and N. Ali, "Magnetic Properties of  $\text{RNi}_4\text{Mn}$  Intermetallics," The 2000 IEEE International Magnetism Conference, April 9-13, 2000, Toronto Canada
  116. J. Han, G. Marasinghe, W. James, W. Yellon, Ph. I'Heritier, I. Dubenko and N. Ali, "The effect of substituting iron for manganese in  $\text{SmMn}_6\text{Ge}_6$ ," The 2000 IEEE International Magnetic Conference, April 9-13, 2000, Toronto, Canada
  117. A. Ignatov, S. Khalid, S. Roy and N. Ali, "Mn K- edge near-edge structure in  $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$  CMRs, 10<sup>th</sup> APS Users Meeting, Argonne, IL May 1-4, 2000
  118. A. Ignatov, S. Khalid, S. Roy and N. Ali, "Theoretical Study of Mn K- edge near-edge structure in  $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ," XI<sup>th</sup> International Conference on XAFS, July 2000, Aki, Japan
  119. A. Ignatov, S. Khalid, and N. Ali, "Mn K- edge XAS studies of  $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$  CMRs: fluorescent yield vs transmission mode," XI<sup>th</sup> International Conference on XAFS, July 2000, Aki, Japan
  120. A. Galkin, W. Ortiz, N. Ali, and E. Fawcett, "Ferromagnetic-Like Hysteresis and Strong Biasing Effect in Bulk Spin-Density-Wave CrCoV alloys," International Conference on Magnetism, August 2000, Recife, Brazil
  121. V. Galkin, W. Ortiz, N. Ali and E. Fawcett, "Spin Fluctuations in Cr Alloys with Magnetic Impurities," International Conference on Magnetism, August 2000, Recife, Brazil
  122. Y. Hirai, B. Frazer, M. Schneider, S. Rast, M. Onellion, S. Roy, I. Ignatov and N. Ali, "Magnetization and Magnetic Dichroism Study of Colossal Magnetoresistance Materials," International Conference on Magnetism, August 2000, Recife, Brazil
  123. B. Frazer, Y. Hirai, M. Schneider, S. Rast, M. Onellion, S. Roy, A. Ignatov, N. Ali, A. Reginelli, G. Margaritonodo, I. Felner and I. Nowik, "Electronic and Magnetic Properties of Superconductivity and Ferromagnetic Ruthocuprates," International Conference on Magnetism, August 2000, Recife, Brazil.
  124. I. Dubenko, I. Gaidukova, S.A. Granovsky, V. Rodimin, A. Markosyan, S. Roy and N. Ali, "Metamagnetization of the Rare Earth Magnetic Subsystem in  $\text{RNi}_4\text{Mn}$  Intermetallics," 4<sup>th</sup> International Conference on f-elements, September 17-21, 2000, Madrid, Spain.
  125. I. Dubenko, M. Rao, S. Roy, B. Dave and N. Ali, "Magnetic Susceptibility of Nanoclusters prepared in an organosilica Sol-Gel Matrix," 4<sup>th</sup> International Conference on f-elements, September 17-21, 2000, Madrid, Spain

126. I. Dubenko, M. Rao, S. Roy, B. Dave and N. Ali, "Magnetic Properties of Iron-Oxide Nanoclusters Prepared in Organosilica Sol-Gel Matrix," 2000 International Chemical Congress of Pacific Basin Societies, December 2000, Honolulu, Hawaii
127. S. Roy and N. Ali, "Charge Transport and CMR phenomenon in  $\text{La}_{1-x}\text{Zr}_x\text{MnO}_3$ ,  $X=0.05-0.20$ ," The 8th Joint MMM - Intermag Conference, January 7-11, 2001, San Antonio, Texas
128. I. Dubenko, M.P. Hill and N. Ali, "Magnetic Properties of  $\text{LaCr}_{1-x}\text{M}_x\text{Sb}_3$  Small Substitution of V, Mn, Fe, Cu and Al cor Cr," The 8th Joint MMM - Intermag Conference, January 7-11, 2001, San Antonio, Texas
129. K. Marasinghe, W. Priyantha, K. Kamaraju, W. James, W. Yellon, I. Dubenko, M. P. Hill, N. Ali, "Mixed Rare-earth effects in  $(\text{Sm/Gd})_2(\text{Fe/Si})_{17}$  intermetallics," The 8th Joint MMM - Intermag Conference, January 7-11, 2001, San Antonio, Texas
130. V. Shankar, S. Roy and N. Ali, "Temperature depend Mn K - edge NESAFS study of  $\text{La}_{1-x}\text{Na}_x\text{MnO}_3$ ," American Physical Society, March Meeting 2001, Seattle, WA
131. S. Roy, Y. Guo and N. Ali, "Colossal Magnetoresistive Properties of charge disproportionate  $\text{La}_{1-x}\text{NaMnO}_3$ ," American Physical Society, March Meeting 2001, Seattle, WA
132. Hirai, M. Schneider, B. Frazer, S. Rast, M. Onellion, U. Asaf, I. Felner, I. Nowik, N. Ali, S. Roy, M. Prester, D. Drobac, I. Zivkovic, L. Perfetti, A. Reginelli, D. Ariosa and G. Margaritondo, "Magnetic and Electronic Properties of Ruthenocuprates," American Physics Society, March Meeting 2001, Seattle, WA
133. M. P. Hill, S. Roy and N. Ali, "Anomalous Low Temperature Magnetoresistance of  $\text{Tb}_5\text{Si}_3$ ," American Physical Society, March Meeting 2001, Seattle, WA
134. S. Labroo, N. Ali, S. Saha and D. Zych, "Observation of a Weak Ferrimagnetic Phase in  $\text{Pr}_{1-x}\text{La}_x\text{MnGe}$ ," American Physical Society, March Meeting 2001, Seattle, WA
135. V. Galkin, N. Ali, W. Ortiz and E. Fawcett, "Spin Glass Phase in Spin-Density-Wave Cr-Co alloys," The 8th Joint MMM - Intermag Conference, January 7-11, 2001, San Antonio, Texas
136. S. Roy, N. Ali, A. Ignatov, T. Tyson and S. Khalid, "Mn Valence States in  $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ," American Physical Society, March Meeting 2001, Seattle, WA
137. Y. Guo, N. Ali, R. Wappling, R. Mathieu, P. Nordblad and P. Svedlindh, "Crystallographic Magnetic Properties and Magnetoresistance of Nd doped  $(\text{La}, \text{K})\text{MnO}_3$ ," American Physical Society, March Meeting 2001, Seattle, WA
138. Y. Guo, N. Ali, Y. Grin and W. Schnelle, "Crystallographic and Magnetic Properties of  $\text{EuMn}_x\text{Ga}_{3-x}$ ," American Physical Society, March Meeting 2001, Seattle, WA
139. Y. Guo, S. Roy, N. Ali and M. Sardela, "Magnetic and Electronic transport properties of  $\text{Yb}_x\text{Ca}_{1-x}\text{MnO}_3$  compounds," Mang. Magn. Mater. Conf. , Nov. 12-16, Seattle WA (2001)
140. S. Roy, M. Khan, Y. Guo and N. Ali, "Photo-induced change in magnetic properties of  $\text{GdBaCO}_2\text{O}_{5.45}$ ," Magn. Magn. Mater. Conf., Nov. 12-16, Seattle, WA, (2001)
141. Y. Guo, S. Roy, N. Ali and M. Sardela, "Structure and Magnetic Properties of  $\text{RFe}_6-x\text{Ga}_{6+x}$ ," Magn.Magn.Mater. Conf., Nov. 12-16, Seattle, WA (2001)
142. G. K. Marasinghe, J. Han, W.B. Yelon, W. J. James, and N. Ali, "Magnetic interactions within the transition metal sublattice of  $\text{R}(\text{Mn/Fe})_6\text{A}_6$  ( $\text{R}=\text{Md}$  or  $\text{Sm}$ ,  $\text{A} = \text{Ge}$  or  $\text{Sn}$ ) intermetallics," Magn.Magn.Mater. Conf. Nov. 12-16 Seattle, WA (2001)
143. S.R. Mishra, G. J. Long, F. Grandjean, R.P. Hermann, S. Roy and N. Ali, "Magnetic Properties of Iron Nitride-Alumina Nanocomposite Materials Prepared by High-energy ball milling," Magn. Magn. Mater. Conf. Nov 12-16, Seattle, WA (2001)
144. Y.Q. Guo, S. Roy, N. Ali, X. Zhang and R. Wappling, "Unusual electronic transport properties on  $\text{La}_{0.96-x}\text{Nd}_x\text{K}_{0.04}\text{MnO}_3$ ," Magnetism and Magnetic Materials Conference,

Tampa, Nov. 2002.

145. M.P. Hill, D. D. Ederh, S. Roy and N. Ali, "Effect of Yttrium substitution on the magnetic and electrical properties of  $\text{LaBaCo}_2\text{O}_{5+x}$ ," Magnetism and Magnetic Materials Conference, Nov. Tampa, 2002.
146. I.S. Dubencko, M. S. Rao, S. Roy, B. C. Dave and N. Ali, "Magnetic Behavior of iron-oxo clusters prepared in an organosilica sol gel matrix," Magnetism and Magnetic Materials Conference, Tampa, Nov. 2002.
147. I. S. Dubenko, I. Yu Gaidukova, S. A. Granovskyy, K. Inoue, A. S. Markosyan, S. Roy and N. Ali, "Magnetic phase transitions in  $(\text{Tb}, \text{Y}) \text{Mn}_2\text{M}_2$  ( $\text{M} = \text{Ge}$  and  $\text{Si}$ ) Systems," Magnetism and Magnetic Materials Conference, Nov, Tampa, 2002.
148. S. Roy, M. Khan, Y.Q. Guo, J. Craig and N. Ali, "Spin state transitions in  $\text{GdBaCo}_2\text{O}_{5+x}$  compound," Amer. Phys. Soc., March Meeting, Indianapolis, IN 2002
149. S.R.Mishra, G. J. Long, F. Grandjean, R. . Hermann, S. Roy, N. Ali and A. Viano, "Properties of Iron Nitride-Silica nanocomposite materials prepared by high-energy ball milling," International Conf. On NanoScience and Nanomaterials, France 2002.]
150. S. Roy, J. Craig and N. Ali, "Magnetic properties of  $\text{RBaCo}_2\text{O}_{5+x}$  ( $\text{R} = \text{Gd-Yb}$ ) compounds," 23<sup>rd</sup> Rare Earth Research Conf., Davis, CA, July 2002.
151. Y. Yu. Galkin, W. A. Ortiz and N. Ali, "Spin glass-like behavior in spin-density-wave  $\text{CrCoMn}$  alloys," Moscow International Symposium on Magnetism , Moscow, June 2002.
152. J. Losby, S. Mishra, S. Roy and N. Ali, American Physical Soc. March Meeting 2003, Session G28 #10.
153. Magnetic behavior of mechanically milled  $\text{CuO}$ , S. R. Mishra, I. Dubenko, S. Roy, N. Ali, and K. Marasinghe, ICCE-10, July 2003
154. Magnetic behavior of  $\text{FeNi-CoO}$  ferromagnetic-antiferromagnetic nanocomposite, S. Roy, N. Ali, and K. Marasinghe, ICCE-10, July 2003
155. Magnetic properties of mechanically milled ferromagnetic-antiferromagnetic  $\text{FeNi-CoO}$  nanocomposite, S. Roy, N. Ali, and K. Marasinghe, ICCE-10, July 2003
156. Stadler, S., D.L. Harley, J.P. Craig, D.H. Minott, M. Khan, I. Kubenko, N. Ali, J. Dvorak, Y.U. Idzerda, D.A. Arena and V.G. Harris, "X-ray Magnetic Circular Dichroism in  $\text{Co}_2\text{M}_n\text{S}_i$  Thin Films", 49<sup>th</sup> Annual Conf. on Magnetism and Magnetic Materials, Jacksonville, Florida Nov. 7-11 (2004).
157. Khan, M.U., I. Dubenko, S. Stadler and N. Ali, "The Structural and Magnetic Properties of  $\text{Ni}_2\text{Mn}_{1-x}\text{Ga}$  ( $\text{M}=\text{Co,Cu}$ )", 49<sup>th</sup> Annual Conf. on Magn. and Magn. Materials, Jacksonville, Florida, Nov. 7-11 (2004).
158. Anomalous magnetic properties of mechanically milled  $\text{CoO}$ , J. Losby, S.R. Mishra, I. Dubenko, N. Ali, and K. Ghosh, American Physical Society, March Meeting 2004.
159. Magnetic properties of mechanically milled nanoxidized  $\text{Co-SiO}_2$  nanocomposite, J. Losby, S.R.Mishra, I. Dubenko, N. Ali, and K. Marasinghe, SESAPS, ORNL, November, 2004.

160. Magnetic properties of mechanically milled nanosized CoO, J. Losby, S.R. Mishra, I. Dubenko, N. Ali, and K. Marasinghe, SESAPS, ORNL, November., 2004.
161. Magnetic properties of mechanically milled ferromagnetic-antiferromagnetic FeNi- CoO nanocomposite, S.R. Mishra, J. Losby, I. Dubenko, N. Ali and K. Marasinghe, International Conference on Sciences, Hawaii, January, 2004.
162. Magnetic properties of mechanically milled FeNi-CoO Ferromagnetic – anti-ferromagnetic composite, S.R. Mishra, J. Losby, I. Dubenko, N. Ali and K. Marasinghe, MMM-Intermag, Anehiem CA, January, 2004.
163. Intermartensitic Transformations in  $Ni_2Mn_{1-x}Co_xGa$  Heusler Alloys. M.U. Khan, S. Stadler, and N. Ali., 50<sup>th</sup> Annual Conference on Magnetism and Magnetic Materials (Session EQ-10), San Jose, CA, October 30<sup>th</sup>-November 3<sup>rd</sup> (2005).
164. Magnetocaloric effect of  $Ni_2Mn_{1-x}MxGa$   $M=(Cu,Co)$ , A.M. Gomes, M. Khan, S. Stadler, N. Ali, I. Dubenko, A. Takeuchi, and A.P. Guimaraes, 50<sup>th</sup> Annual Conference on Magnetism and Magnetic Materials (Session FP-14), San Jose, CA, October 30<sup>th</sup>-November 3<sup>rd</sup> (2005).
165. Magnetic properties of soft nanocomposite Co-SiO<sub>2</sub> prepared via Mechanical Milling, S. R. Mishra, I. Dubenko, J. Losby, K. Marasinghe, N. Ali, and M. Ali, INTERMAG-2005, Nagoya, Japan, April 3-8.
166. Khan, M., Stadler, S., and Ali, N., *The overlap of first and second order phase transitions and related magnetic entropy changes in  $Ni_2Mn_{1-x}Cu_xGa$  Heusler alloys*, IEEE Trans. Mag. **42** (10), 3108 (2006).
167. Stadler, S., Khan, M., Mitchell, J., Ali, N., Gomes, A. M., Dubenko, I., Takeuchi, A. Y., and Guimarães, A. P., *Magnetocaloric properties of  $Ni_2Mn_{1-x}Cu_xGa$* , Applied Physics Letters **88**, 192511 (2006).
168. Khan, M., Stadler, S., and Ali, N., *Intermartensitic transformations in  $Ni_2Mn_{1-x}Co_xGa$  Heusler alloys*, J. Appl. Phys. **99**, 08M705 (2006).
169. Gomes, A. M., Khan, M., Stadler, S., Ali, N., Dubenko, I., Takeuchi, A. Y., and Guimarães, A. P., *Magnetocaloric properties of the  $Ni_2Mn_{1-x}(Cu,Co)_xGa$  Heusler alloys*, J. Appl. Phys. **99**, 08Q106 (2006).
170. Exchange Coupled FeNi-X (X= CuO, NiO, and CoO) Nanocomposites Prepared via Ball Milling, Sanjay Mishra and Igor Dubenk and Mahmud Khan and Tim Young and H Ganegoa and Nausad Ali and Kanishka Marasinghe, IEEE-Trans Magnet. **42**, 808.(2006)
171. Giant Magnetocaloric Effects in Mn-Based Heusler Alloys, S. Stadler, M. Khan, A. Pathak, I. Dubenko, and N. Ali, 53<sup>rd</sup> Midwest Solid State Conference (Session D4), Kansas City, MO October 7-8 (2006).
172. The overlap of first and second order phase transitions and related magnetic entropy

- changes in  $\text{Ni}_2\text{Mn}_{1-x}\text{Cu}_x\text{Ga}$  Heusler alloys, Khan, M., Stadler, S., and Ali, N., IEEE International Magnetism Conference, San Diego, CA, May 2006.
173. Magnetic properties of exchanged biased nanocomposites FeNi-X(X=CuO, NiO, and CoO) prepared via ball milling”, S. R. Mishra, I. Dubenko, M. Khan, N. Ali, T. Young, M. Hasistha, and K. Marasinghe, IEEE-Trans Magnetic May, GV-12, San Diego, 2006.
  174. Magnetic Properties of ball milled Mn, J. Griffis, S. R. Mishra, N. Ali, and M. Khan, Mid South SPS Chapter, Oxford, April 2006.
  175. Magnetic Nanocomposites, S. R. Mishra, N. Ali, and M. Khan, "Invited Home Coming Talk", The University of Missouri-Rolla, Oct, 2006
  176. *Exchange Bias in Bulk Ni-Mn-In Based Heusler Alloys*, A. K. Pathak, M. Khan, B. R. Guatam, S. Stadler, I. Dubenko, and N. Ali, 1<sup>st</sup> International Conference on Spintronic Materials and Technology (WUN-SPIN07), York, United Kingdom, August 7-10 (2007).
  177. *Phase transitions and magnetoresistance in  $\text{Ni}_{50}\text{Mn}_{50-x}\text{In}_x$  Heusler alloys*, A. K. Pathak, B. R. Gautam, I. Dubenko, M. Khan, S. Stadler, and N. Ali, 52<sup>nd</sup> Annual Conference on Magnetism and Magnetic Materials, Session **AU-12**, Tampa, F, November 5-9 (2007).
  178. *Intermartensitic Transformations in Fe Doped Ni-Mn-Cu-Ga Based Heusler Alloys*, M. Khan, G. Bhoj, A. Pathak, I. Dubenko, S. Stadler, and N. Ali, Session **HG-14**, 52<sup>nd</sup> Annual Conference on Magnetism and Magnetic Materials, Session **AU-12**, Tampa, F, November 5-9 (2007).
  179. *Effect of Mn Loss on the Magnetic Properties of  $\text{Ni}_2\text{Mn}_{0.75-\beta}\text{Cu}_{0.25}\text{Ga}$  Heusler Alloys*, B. R. Gautam, I. Dubenko, A. Pathak, M. Khan, S. Stadler, and N. Ali, Session **DP-12**, 52<sup>nd</sup> Annual Conference on Magnetism and Magnetic Materials, Session **AU-12**, Tampa, F, November 5-9 (2007).
  180. "Magnetocaloric effects in Ni-Mn-X based Heusler alloys with X=Ga, Sb, and In", Igor Dubenko, Mahmud Khan, Arjun K. Pathak, Bhoj R. Gautam, Shane Stadler, and Naushad Ali, **Moscow International Symposium on Magnetism** (invited talk), Abst. p. 574 June 20-25 Moscow, Russia (2008);
  - 181 "Direct Measurements of Adiabatic Temperature Change in  $\text{Ni}_2\text{Mn}_{0.75}\text{Cu}_{0.25}\text{Ga}$  Heusler Alloy" V. Khovaylo, V. Kolelov, V. Shavrov, D. Karpenkov, Yu. Koshkid'ko, K. Skokov, I. Dubenko, M. Khan, S. Stadler, and N. Ali, **Moscow International Symposium on Magnetism**, Abst. p.815 June 20-25 Moscow, Russia (2008);
  - 182 "Magnetic and electrical properties of  $\text{Ni}_{50}\text{Mn}_{35}\text{In}_{15-x}\text{Si}_x$  Heusler alloys", Arjun K. Pathak, Igor Dubenko, Shane Stadler, and Naushad Ali, **53<sup>rd</sup> Annual Conference on Magnetism and Magnetic Materials**, Abst. p.170, November 10-14 Austin, TX (2008).
  - 183 "Magnetic Properties of Bulk and Thin Film  $\text{Co}_2\text{MnSb}_x\text{Sn}_{1-x}$ ."M.R. Paudel, C. Wolfe, H. Anthony, I. Dubenko, N. Ali, Y. Li, D.L. Ederer, T.A. Callocot, J.W. Freeland, S. Stadler, **53<sup>rd</sup> Annual Conference on Magnetism and Magnetic Materials**, Abst. p.216, November 10-14 Austin, TX (2008).
  - 184 "Copper Induced Electronic Structure Changes in Giant Magnetocaloric Compound  $\text{Ni}_2\text{Mn}_{0.75}\text{Cu}_{0.25}\text{Ga}$ " S. Roy, E. Blackburn, S.M. Valvidares, M.R. Fitzimmons, S.C. Vogel, J.B. Kortright, S.K. Sinha, M. Khan, I. Dubenko, N. Ali, **53<sup>rd</sup> Annual Conference on Magnetism and Magnetic Materials**, Abst. p.229, November 10-14 Austin, TX (2008).

#### PUBLICATIONS IN REFEREED JOURNALS

1. M. J. Clouter, H. Kieft and Naushad Ali, "Anomalous Behavior in the Raman Spectrum

- of Oxygen Under Near Critical Conditions," *Phys. Rev. Lett.* **40**, 1170 (1978).
2. Naushad Ali and S. B. Woods, "Low Temperature Electrical Resistance of Single Crystal  $\text{NdB}_6$  and  $\text{PrB}_6$  and Critical Scattering Near Their Neel Temperature," *J. Appl. Phys.* **53**, 7905 (1982).
  3. Naushad Ali and S. B. Woods, "Spin-glass Behavior of  $(\text{La,Gd})\text{B}_6$  and  $(\text{La,Dy})\text{B}_6$  Alloys," *Solid State Commun.* **45**, 471 (1983).
  4. Naushad Ali and S. B. Woods, "Low Temperature Thermoelectric Power of  $\text{LaB}_6$ ,  $\text{PrB}_6$  and  $\text{NdB}_6$ ," *Solid State Commun.* **46**, 33 (1983).
  5. Naushad Ali and S. B. Woods, "Transport Properties of Yttrium Alloys with Dilute Rare-earth Solutes," *Solid State Commun.* **49**, 241 (1984).
  6. Naushad Ali and S. B. Woods, "Transport Properties of  $\text{GdB}_6$  and  $\text{DyB}_6$ ," *J. Low Temp. Phys.* **56**, 575 (1984).
  7. Naushad Ali and S. B. Woods, "Low Temperature Electrical Resistivities of Rare-earth Hexaborides," *Phys. Lett.* **104A**, 212 (1984).
  8. Naushad Ali, S. B. Woods, and G. Kozlowski, "Magnetoresistance of  $\text{GdRh}_{1.07}\text{Sn}_{4.21}$ ," *J. Phys. F* **15**, 155 (1985).
  9. Naushad Ali and S. B. Woods, "Transport Properties of Kondo Lattice  $\text{CeB}_6$ ," *J. Appl. Phys.* **57** 3182 (1985).
  10. Naushad Ali, S. B. Woods, G. Kozlowski and A. Rojek, "Resistivity and Magnetoresistance of Superconducting  $\text{YbRh}_{1.4}\text{Sn}_{4.6}$ ," *J. Phys. F* **15**, 1547 (1985).
  11. Naushad Ali and S. B. Woods, "Magnetoresistance of Yttrium Rare-earth Alloys," *Phys. Rev. B* **31**, 6076 (1985).
  12. G. Kozlowski, Naushad Ali, S. B. Woods and A. Rojek, "Magnetoresistance of Antiferromagnet with Uniaxial Anisotropy," *Sol. State Comm.* **54**, 249 (1985).
  13. W. R. Datars, K. Kadowaki, Naushad Ali and S. B. Woods, "Hall Effect of  $\text{UPt}_3$ ," *J. Phys. F* **16**, L63 (1986).
  14. Naushad Ali and W. R. Datars, "Resistivity and Hall Effect of Magnetic Superconductor  $\text{Y}_9\text{Co}_7$ ," *J. Phys. F* **17**, 143 (1987).
  15. Naushad Ali and W. R. Datars, "Superconductivity and Magnetism in  $\text{LuRh}_{1.2}\text{Sn}_{4.0}$ ," *J. Less Comm. Met.* **127**, 49 (1987).
  16. J. E. Greedan, Xu-Yan, M. Sato, Naushad Ali and W. R. Datars, "Electrical Properties of Pyrochlore Compounds  $\text{F}_2\text{Mo}_2\text{O}_7$  ( $\text{R}=\text{Nd-Tb,Y}$ )," *J. Solid State Chem.* **68**, 300 (1987).
  17. Naushad Ali and S. B. Woods, "Magnetoresistance of Antiferromagnetic Metals with Localized Magnetic Moments," *J. Appl. Phys.* **61**, 4393 (1987).
  18. Naushad Ali, "Anomalous Electrical And Magnetic Properties of Gadolinium Hexaboride," *J. Appl. Phys.* **63**, 3583 (1988).
  19. Naushad Ali, Mojtaba Kahrizi and M. O. Steinitz, "First and Second Order Phase Transitions in Rare-earth Hexaborides," *Solid State Comm.* **65**, 183 (1988).
  20. Xuesong Zhang\*, Sunil Labroo\*, Peggy Hill\*, Naushad Ali, E. Funk and J. R. Gains Jr., "Effect of Fe Substitution in Y-Ba-Cu-O Superconductors," *Phys Lett. A*, **130** 311 (1988).
  21. Sunil Labroo\*, Xuesong Zhang\*, Peggy Hill\* and Naushad Ali, "Electrical and Magnetic Properties of Antiferromagnetic Rare Earth Disilicides," *J. Less Comm. Metals* **149**, 337 (1989).
  22. Naushad Ali, Xuesong Zhang\*, Peggy Hill\* and Sunil Labroo\*, "Effect of Fe and Ni Substitution in High- $T_c$  Y-Ba-Cu-O Superconductors," *J. Less Common Metals*, **149**, 435



(1989).

23. Sunil Labroo\*, Peggy Hill\*, Xuesong Zhang\* and Naushad Ali, "Study of Valence Fluctuation in  $\text{YbSi}_2$ ," *J. Less Common Metals*, 149, 331 (1989).
24. Peggy Hill\*, S. Labroo\*, Xuesong Zhang\* and Naushad Ali, "Electrical and Magnetic Properties of  $\text{R}_2\text{Mo}_2\text{O}_7$  Pyrochlores," *J. Less Comm. Metals*, 149, 327 (1989).
25. M. O. Steinitz, M. Kahrizi, D. A. Tindall and Naushad Ali, "New Magnetic Phases of Holmium in a Magnetic Field," *Phys. Rev. B* 40, 763 (1989).
26. Naushad Ali and Sunil Labroo\*, "Localized Magnetism in  $\text{YMn}_2$  Below Neel Temperature," *J. Low Temp. Phys.* 77, 449 (1989).
27. Naushad Ali, M. P. Hill\*, Sunil Labroo\* and J. E. Greedan, "Magnetic and Electrical Properties of  $\text{R}_2\text{Mo}_2\text{O}_7$  Pyrochlore Compounds," *J. Solid State Chem.* 83, 178 (1989).
28. Naushad Ali, Frank Willis\*, M. O. Steinitz, M. Kahrizi and D. A. Tindall, "Observation of Transitions to Spin-Slip Structures in Single-crystal Holmium," *Phys. Rev. B* 40, 11414, (1989).
29. Arthur Chin\*, J. T. Masden and Naushad Ali, "Effects of Localization on the Magnetic Transition of Thin Gadolinium Wires," *J. Appl. Phys.* 67, 5664 (1990).
30. Sunil Labroo\*, Naushad Ali and Paul Robinson, "Magnetic Properties of  $\text{RMn}_2$  Compounds ( $\text{R} = \text{Heavy Rare Earths}$ )," *J. Appl. Phys.* 67, 5292 (1990).
31. Sunil Labroo\* and Naushad Ali, "Magnetism of Rare Earth Disilicides," *J. Appl. Phys.* 67, 4811 (1990).
32. Frank Willis\*, Naushad Ali, M. O. Steinitz, M. Kahrizi and D. A. Tindall, "Observation of Spin-Slip Structures and Splitting of the Néel Temperature of Holmium in Magnetic Fields," *J. Appl. Phys.* 67, 5277 (1990).
33. Sunil Labroo\*, Frank Willis\* and Naushad Ali, "Influence of Mn Moments on the Properties of  $\text{RMn}_2$  Compounds ( $\text{R} = \text{Y}$  and Light Rare Earths)," *J. Appl. Phys.* 67, 5295 (1990).
34. D. R. Noakes, D. A. Tindall, M. O. Steinitz and N. Ali, "Observation of a Commensurate Temperature Plateau Induced by c-axis Applied Magnetic Field in Holmium," *J. Appl. Phys.* 67, 5274 (1990).
35. Naushad Ali and Frank Willis\*, "Magnetization of Single-Crystal Erbium," *Phys. Rev. B* 42, 6820 (1990).
36. Frank Willis\* and Naushad Ali, "Experimental Evidence of c-axis Moment in Single Crystal Dysprosium," *J. Phys.: Cond. Matter* 2, 8205 (1990).
37. Frank Willis\* and Naushad Ali, "Magnetization and Thermal Expansion of Single Crystal Er and Tm," *J. Appl. Phys.* 69, 5697 (1991).
38. D. A. Tindall, M. O. Steinitz, M. Kahrizi, D. R. Noakes and N. Ali, "Investigation of the Helimagnetic Phases of Holmium in a c-axis Magnetic Field," *J. Appl. Phys.* 69, 5691 (1991).
39. John Eynon\* and Naushad Ali, "Magnetic and Electrical Properties of Re-entrant  $\text{Ce}(\text{Fe}_{1-x}\text{Al}_x)_2$ ," *J. Appl. Phys.* 69, 5063 (1991).
40. Naushad Ali, Frank Willis\*, J. Holzer, X. Zhang\* and K. Kelton, "Magnetic Properties of Icosahedral Phase of Ti Transition Metal Alloys," *J. Appl. Phys.* 69, 5136 (1991).
41. Frank Willis\* and Naushad Ali, "Evidence of c-axis Moment in Dy," *J. Appl. Phys.* 69, 5694 (1991).
42. A. Weston, Naushad Ali and S. Lalvani, "Electrodeposition of High- $T_c$  Superconductor," *J. Mater. Sci.: Materials in Electronics* 2, 129 (1991).

43. Frank Willis\* and Naushad Ali, "Magnetism in Single Crystal Dy Below 10K," *J. Appl. Phys.* 70, 6548 (1991).
44. A. Weston, S. Lalvani, Frank Willis\* and Naushad Ali, "Electrodeposition of YBaCuO and ErBaCuO Superconductor Precursor Films," *J. Alloys and Compounds*, 181, 233 (1992).
45. X. Xu, S. A. Shaheen, Peggy Hill\* and Naushad Ali, "Structural, Electrical, and Magnetic Properties of  $\text{La}_{1-x}\text{Ce}_x\text{Si}$ ," *J. Alloys and Compounds*, 181, 305 (1992).
46. Frank Willis\* and Naushad Ali, "Effect of Spin-slip Structures on the Resistivity of Erbium and Holmium," *J. Alloys and Compounds*, 181, 287 (1992).
47. Naushad Ali, P. Hill\*, X. Zhang\* and F. Willis\*, "Magnetization and Thermoremanent Magnetization of  $\text{Tb}_2\text{Mo}_2\text{O}_7$  and  $\text{Y}_2\text{Mo}_2\text{O}_7$  Glasses," *J. Alloys and Compounds*, 181, 281 (1992).
48. Naushad Ali and Xianfeng Zhang\*, "The Magnetic Phases of the Itinerant Magnetic System  $\text{Ce}(\text{Fe}_{1-x}\text{Co}_x)_2$ ," *J. Phys.: Condens. Matter* 4, L351 (1992).
49. P. Hill\*, Frank Willis\* and Naushad Ali, "Investigation of the Magnetic-non-magnetic Crossover Region in the Kondo Lattice System  $\text{CeSi}_x$ ," *J. Phys.: Condens. Matter* 4, 5015 (1992).
50. Naushad Ali, J. T. Masden, Peggy Hill\* and Arthur Chin\*, "Magnetic Transition in Quasi One Dimensional Wire and Thin Films of Gadolinium," *Int. J. Mod. Phys. B*, 7, 496(1993).
51. David T. Marx<sup>+</sup> and Naushad Ali, "Fabrication and Characterization of Superconducting (Bi,Pb)-Sr-Ca-Cu-O Thick Films on Sr-Ca-Cu-O Substrates," *Int. J. Mod. Phys. B*, 7, 147(1993).
52. Naushad Ali and Xianfeng Zhang\*, "Magnetic Phase Transitions in  $\text{Ce}(\text{Fe}_{1-x}\text{Co}_x)_2$  System," *Int. J. Mod. Phys. B*, 7, 822(1993).
53. Y. S. Yang, B. D. Gaulin, J. A. Fernandez-Baca, Naushad Ali and G. D. Wignall, "Small Angle Neutron Scattering Studies of  $\text{Ce}(\text{Fe}_{1-x}\text{Al}_x)_2$ ," *J. Appl. Phys.*, 73, 6066(1993).
54. P. Hill\* and Naushad Ali, "Investigation of the Transition From Ferromagnetic to Antiferromagnetic Order in the  $\text{CeMn}_2(\text{Ge}_x\text{Si}_{1-x})_2$  System," *J. Appl. Phys.*, 73, 5683(1993).
55. Xianfeng Zhang\* and Naushad Ali, "Investigation of the Role of Ce in  $\text{CeFe}_2$ ," *J. Alloys and Compounds* 207/208, 297 1994
56. Xianfeng Zhang\* and Naushad Ali, " Entropy Change at AM-AFM Transition in Intermetallic Compound  $\text{Ce}(\text{Fe}_{1-x}\text{Co}_x)_2$ ," *J. Alloys and Compounds* 207/208, 300 (1994)
57. Naushad Ali and Xianfeng Zhang\*, "Magnetization and Time Dependent Effects in  $\text{ErCo}_3\text{Ga}_2$  Compound", *J. Alloys and Compounds* 207/208, 294 (1994)
58. Xianfeng Zhang\* and Naushad Ali, "Effects of Co and Y Substitution on Magnetic Properties of  $\text{CeFe}_2$ ", *J. Applied Physics* 75(10), 7128 (1994).
59. D. T. Marx and Naushad Ali, "Magnetoresistance Studies of Spin-slip in Single Crystal Holium", *J. Alloys and Compounds* 207/208, 304 (1994)
60. Naushad Ali, A. Chin and J. T. Masden, " Magnetic Transition in Thin Wires of Rare Earth Metals", *J. Alloys and Compounds*, 207/208, 386 (1994)
61. P. Hill, Naushad Ali, A.J.A. de Oliveira, W. A. Ortiz, P.C. de Camargo and Eric Rawcett, "Local Moments in the paramagnetic phase of dilute CrV alloys," *J. Phys.: Condens. Matter*, 6 1761, (1994)
62. Y.S. Yang, B.D. Gaulin, Naushad Ali, "Small-angle neutron scattering studies of  $\text{Ce}(\text{Fe}_{1-x}\text{Al}_x)_2$  at high temperatures," *Physica B*, 213-214, 378 (1995)

63. Brian Watson and Naushad Ali, "Magnetic transitions in single-crystal erbium," *J. Phys. Cond. Matter*, 7, 4713 (1995)
64. Naushad Ali and Shibaji Saha, "Effects of Cr substitution on the magnetic properties of  $\text{SmMn}_2\text{Ge}_2$ ," *J. Alloys and Comp.*, 227, 49 (1995)
65. V.Yu. Galkin, P.D. deCamargo, Naushad Ali, J. Schaff and E. Fawcett, "A new type of spin glass in spin-density-wave CrMn and  $\text{DySiMn}$  alloys," *J. Phys. Cond. Matter*, 7, L649 (1995)
66. Brian Watson and Naushad Ali, "Splitting of the Longitudinal Neel Transition in Erbium in a C-axis magnetic field," *J. Phys. Cond. Matter*, 8, 361 (1996)
67. Brian Watson and Naushad Ali, "The b-axis magnetic phase diagram of erbium," *J. Phys. Cond. Matter*, 8, 1797 (1996)
68. Shibaji Saha and Naushad Ali, "Magnetic properties of the  $\text{SmMn}_2(\text{Ge}_{1-x}\text{Si}_x)_2$  system," *J. Appl. Phys.*, 79, 5233 (1996)
69. J.A. Fernandez-Baca, P. Hill, B.X. Chakoumakos and Naushad Ali, "Neutron diffraction study of the magnet structures of  $\text{CeMn}_2\text{Ge}_2$  and  $\text{CeMn}_2\text{Si}_2$ ," *J. Appl. Phys.* 79, 5398 (1996)
70. K. Lafdi, A. Chin and Naushad Ali, "Cobalt doped carbon nanotubes: Preparation, texture and magnetic properties," *J. Appl. Phys.* 79, 6007 (1996)
71. V. Yu. Galkin, P.C. de Camargo, N. Ali and E. Fawcett, "Magnetic behavior in the spin-density-wave phase of  $\text{Cr}_{1-x}\text{Mn}_x$  ( $X < 20\%$  Mn) alloys," *J. Phys. Cond. Matter* 8, 7925
72. V. Yu. Galkin, P.C. de Camargo, N. Ali, J. Schaff and E. Fawcett, "Magnetic behavior of spin-density-wave  $(\text{Cr}+2.7\%\text{Fe})_{1-x}(\text{Mn},\text{V})_x$  alloys," *J. Magn. Magn. Matter* 159, 1-2, 23 (1996)
73. V. Yu Galkin, P.D. Camargo, N. Ali and E. Fawcett, "Coexistence of spin glass and Curie-Weiss paramagnetism in SDW CrFeMn alloys," *Physica B*, 237-238, 443 (1997)
74. V. Yu Galkin, P.D. de Camargo, N. Ali and E. Fawcett, "Magnetic phase diagram of the spin-density-wave CrFe alloy system from susceptibility measurements," *J. Appl. Phys.* 81, 4207, (1997)
75. Shibaji Saha, and Naushad Ali, "Study of the antiferromagnetic phase in  $\text{SM}(\text{Mn}_{1-x}\text{Cr}_x)_2$ ," *J. Alloys and Compounds*, 250, 651, (1997)
76. J. R. Gebhardt, R. A. Baer, N. Ali, "Determination of magnetic phase transitions in holmium using magnetoresistance measurements," *J. Alloys and Compounds*, 250, 655, (1997).
77. M.T. Alkhafaji and N. Ali, "Magnetic phase diagram of dysprosium," *J. Alloys and Compounds*, 250, 662 (1997)
78. Brian Watson and N. Ali, "On the phase diagram of erbium," *J. Alloys and Compounds*, 250, 662 (1997)
79. Shibaji Saha and Naushad Ali "Magnetic Properties of the  $\text{Pr}_{1-x}\text{La}_x\text{MnGe}$  System," *J. Appl. Phys.*, 81, 4212 (1997)
80. Shibaji Saha and N. ali, "Magnetic Transitions in  $\text{Tb}_{0.7}\text{Nd}_{0.3}\text{Mn}_2\text{Ge}_2$  Compound," *J. Appl. Phys.*, 83, 6974-9676 (1998)
81. J.R. Gebhardt and N. Ali, "Magnetic Phase Diagrams of Holmium," *J. Appl. Phys.*, 83, 6299-6301 (1998)
82. V. Yu Galkin, N. Ali, E. Fawcett and P.C. de Camargo, "The Moment of Fe in a

- (1988) Cr<sub>1-x</sub>V<sub>x</sub> Host: I. The Paramagnetic Phase," *J. Phys: Condensed Matter*, 10, ,
83. V. Yu Galkin, W.A. Ortiz, E.A. Ortiz, E. Fawcette, N. Ali and P.D. de Comargo, "The moment of Fe in Cr<sub>1-x</sub>B<sub>x</sub> Host: II Effect of Magnetic Field in the Spin-Density-Wave Phase," *J. Phys. Condensed Matter*, 10, (1998)
  84. J.R. Gebhardt and N. Ali, "Colossal Magnetoresistance in Ce doped Manganese Oxides," *J. Appl. Phys.*, 85, 5390-5392, (1999)
  85. B. H. Frazer, J.R. Frazer, J.R. Gebhardt and N. Ali, "Magnetic phase diagrams of erbium," *J. Appl. Phys.*, 85, 6100-6102 (1999)
  86. Michael Leonard, Shibaji Saha and N. Ali, "Magnetic properties of RTsb<sub>3</sub>," *J. Appl. Phys.*, 85, 4759-4761 (1999)
  87. C.Y. Tai, G. K. Marasinghe, O.A. Pringle, W. J. James, Mingxing Chen, W. B. Yellon, J. Gebhardt and N. Ali, "Magnetic and Crystallographic Properties of LaNi<sub>5-x</sub>Fe<sub>x</sub>," *IEEE Transactions on Magnetism*, 35, 3346-2248 (1999)
  88. M.L. Leonard, I. S. Dubenko and N. Ali, "Investigation of the ferromagnetism in RCrSb (R=La, Ce, Pr, Nd)", *J. Alloys and Compounds* 303-304, 265 (2000)
  89. I. Dubenko, I. Yu Gaidukova, A. S. Markosyan, M.S. Reis, M. Leonard and N. Ali, "Evolution of the magnetic behavior of the Co subsystem in YCo<sub>3</sub> caused by small variations in Stoichiometry and Al substitution," *J. Alloys and Compounds* 303-304, 285 (2000)
  90. N. Ali, I.S. Dubenko, I. Yu Gaidukova, A.S. Markosyan and V. E. Rodimin, "Temperature Induced Magnetic Instability in the itinerant Co Subsystem of the Er<sub>1-x</sub>Y<sub>x</sub>Co<sub>3</sub> Compounds," *Physica B* 281-282, 696-698 (2000)
  91. A. Yu. Ignatov, N. Ali, M. Tischer, A. V. Tsvyashchenko and L.N. Foricheva, "Local structure of YNi<sub>2</sub>B<sub>2</sub>C superconductor determined by x-ray absorption spectroscopy," *Phys. Rev. B* 61, 3274 (2000)
  92. C.Y Tai, G.K. Marasinghe, O.A. Pringle, W. J. James, M. Chen, Y.B. Yellon, I. Dubenko, N. Ali and Ph. I'Hexitier, "The crystal and magnetic structures of LaNi<sub>5-x</sub>Mn<sub>x</sub>," *J. Appl. Phys.* 87, 6731- 6733 (2000)
  93. J. Han, G.K. Marasingh, W. J. James, W.B. Yellon, I. Dubenko and N. Ali, "The atomic and magnetic structure of NdMn<sub>6-x</sub>FeGe<sub>6</sub> solid solutions," *J. Appl Phys.* 87, 5281-5283 (2000)
  94. A. Yu Galkin, E. Fawcett, N. Ali and W. A. Ortiz, "Anomalous behavior of Spin-glass CrMn alloys," *J. Mang. Magn. Materials*, 212, L1-L-4 (2000)
  95. I.S. Dubenko, I. Gaidukova, S. Granovsky, V. Rodimin, A.S. Markosyan, S. Roy and N. Ali, "Magnetic properties of the RNi<sub>4</sub>Mn (with R = Tm, Ho, Er, Dy, Tb and Y) intermetallics," *IEEE Transactions on Magnetism*, 36, 3336-3338 (2000)
  96. K. Marasinghe, J. Han, W. James, W. Yellon, Ph. I'Hexitier, I. Dubenko and N. Ali, "Magnetic and Crystallographic Properties of SmMn<sub>6-x</sub>Ge<sub>6</sub> Intermetallics," *IEEE Transactions on Magnetism*, 36, 3324-3326 (2000)
  97. S. Roy, I. Dubenko, A. Ignatov and N. Ali, "Study of Colossal magnetoresistance properties of the compound La<sub>1-x</sub>Sr<sub>x</sub>A<sub>y</sub>Mn<sub>1-y</sub>O<sub>3</sub> (A = Cr, Re)," *J. Phys. Cond. Mater* 12, 9465-9479 (2000).
  98. J. Han, W.B. Yelon, W. J. James, G.K. Marasinghe, I. Dubenko, N. Ali, "Magnetic interactions in Sm(Fe/Mn)(6)Sn-6 intermetallics" *International Journ. Of Modern Physics B*, 15 (24-25) 3223-3227, (2001)
  99. Y Galkin, W.A. Ortiz, N. Ali and E. Fawcett, "Ferromagnetic-like hysteresis and an exchange biasing effect in bulk spin-density-wave CrCoV alloys" *Journal of Magnetism and Magnetic Materials*, 226, 1083-1085, (2001)

100. V.Y. Galkin, W. A. Ortiz, N. Ali, E. Fawcett, "Spin frustration in Cr alloys with magnetic impurities" *Journal of Magnetism and Magnetic Materials*, **226**, 1332-1334, (2001)
101. G.K. Marasinghe, W. Priyantha, K. Kamaraju, W. J. James, W. B. Yelon, I. Dubenko, P. Hill, N. Ali, M. Ellouze, P. l'Heritier, "Mixed rare-earth effects in (Sm/Gd)<sub>2</sub>(Fe/Si)<sub>17</sub> intermetallics" *IEEE Transactions on Magnetics*, **37**, (4): 2599-2602, (2001)
102. A. Y. Ignatov, N. Ali, S. Khalid, "MnK-edge XANES study of the La<sub>1-x</sub>Ca<sub>x</sub>MnO<sub>3</sub> colossal magnetoresistive manganites," article No. 014413, *Phys Rev B* **6401**(1): 4413-+ (2001)
103. V.Y Galkin, N. Ali, W.A. Ortiz, E. Fawcett, "Spin glass phase in spin-density-wave Cr-Co alloys" *Journal of Applied Physics*, **89**, (11): 7056-7058, (2001)
104. I.S. Dubenko, P. Hill and N Ali, "Magnetic properties of LaCr<sub>1-x</sub> M<sub>x</sub>Sb<sub>3</sub> (M=V, Mn, Fe, Cu, and Al)" *J Appl Phys* **89**(11): 7326-7328, (2001)
105. S. Roy and N. Ali, "Charge transport and colossal magnetoresistance phenomenon in La<sub>1-x</sub>Zr<sub>x</sub>MnO<sub>3</sub>" *J Appl Phys* **89**(11): 7425-7427, (2001)
106. B.H.Frazer, Y. Hirai, M.L.Schneider, S. Rast, M. Onellion, I. Nowik, I. Felner, S. Roy, N. Ali, A. Reginelli, L. Perfetti, D. Ariosa, G. Margaritondo, "Electronic and magnetic properties of ruthenocuprates" *European Physical Journal B*, **19**(2): 177-184, (2001)
107. M.S.Rao, I.S. Dubenko, S. Roy, N. Ali, B.C. Dave, "Matrix-assisted biomimetic assembly of ferritin core analogues in organosilica sol-gels," *Journal of the American Chemical Society*, **122** (7): 1511-1512, (2001)
108. A.Y. Ignatov, S.Khalid, S. Roy, N. Ali, "Theoretical study of Mn K-edge in La<sub>1-x</sub>Ca<sub>x</sub>MnO<sub>3</sub>" *Journal of Synchrotron Radiation* **8**, 898-900 (2001)
109. S. Roy, Y.Q. Guo, S. Vankatesh and N. Ali, "Interplay of structure and transport Properties of sodium doped lanthanum manganites" *J. Phys. Cond. Matter*, **13**, 9547-9559 (2001)
110. J.B. Yang, W. B. Yelon, W. J. James, Q. Cai, M. Kornecki, S. Roy, N. Ali and Ph l'Heriter, "Crystal Structure, magnetic properties and electronic structure of the MnBi intermetallic compound," *J. Phys: Condens Matter* **14** (2002), 6509.
111. Y.Q. Guo, S. Roy and N. Ali, "Magnetic field induced resistance transition in Y<sub>b</sub>xCa<sub>1-x</sub>MnO<sub>3</sub>," *J. Appl Phys* **91**, (2002)
112. J.B. Yang, W. B. Yelon, W. J. James, Q. Cai, S. Roy and N. Ali, "Structure and magnetic properties of the MnBi low temperature phase," *J. Appl. Phys.* **91** (2002)
113. S. Roy, M. Khan, Y.Q. Guo, J. Craig and N. Ali, "Observation of low, intermediate and high spin states in GdBaCo<sub>2</sub>O<sub>5.45</sub>," *Phys. Rev.* **B65**, (2002).
114. Y.Q. Guo, S. Roy and N. Ali, "Effect of nitrogen incorporation in La<sub>2/3</sub>Ca<sub>1/3</sub>MnO<sub>3</sub> manganite," *J. Phys: Condens Matter*, **14**, (2002) 181.
115. G. K. Marasinghe, J. Han, W. James, W. Yelon and N. Ali, "The relationship between magnetic interaction and near neighbor interatomic distances in the transition metal sublattice of R(Mn/Fe)<sub>6</sub>A<sub>6</sub> (R = Nd or Sm, A = Ge or Sn)," *J. Appl. Phys.* **91**(2002), 7863
116. Y. Guo, N. Ali and M. Sardela Jr., "Structure and magnetic properties of RFe<sub>6-x</sub>Ga<sub>6-x</sub> (R = rare earth)" *J. Appl. Phys.* **91**(2002) 7839
117. Sujoy Roy and Naushad Ali, "Photo-induced changes in magnetization of GdBaCo<sub>2</sub>O<sub>5+δ</sub>," *Solid State Column* **128** (2003), 91-95.
118. S.R. Mishra, A. Viano, S. Roy, N. Ali and J. Losby, "Magnetic properties of iron nitride-silica nanocomposite materials prepared by high-energy ball milling," *J. Nanoscience and Nanotech.* **3** (2003) 1-4.

119. I. S. Dubenko, M. S. Rao, S. Roy, B. C. Dave and N. Ali, "Magnetic behavior of iron-oxoclusters prepared in an organosilica sol-gel matrix," *J. Appl. Physics*, **93** (10), (2003) 7816-7818
120. Yongquan Guo, Sujoy Roy, Naushad Ali, Xinhui Zhang and Roger Wappling, "Unusual electronic transport properties in  $\text{La}_{0.96-x}\text{Nd}_x\text{K}_{0.04}\text{MnO}_3$ ," *J. Appl. Physics*, **93** (10), (2003) 8089-8091.
121. I. S. Dubenko, I. Y. Gaidukova, S. A. Granovsky, K. Inoue, A. S. Markosyan, S. Roy and N. Ali, "Magnetic phase transitions in (Tb, Y)Mn<sub>2</sub>M<sub>2</sub> (M=Ge and Si) systems," *J. Appl. Physics*, **93** (10), (2003) 8185-8187.
122. Valdimir Yu. Galkin, Wilson A. Ortiz, and Naushad Ali, "Spin glass-like behavior in spin-density-wave CrCoMn alloys," *J. Magn. Magn. Mater.* 258-259 (2003) 413-415.
123. Junge Lu, Jinda Fan, R. Xu, S. Roy, Naushad Ali, and Yong Gao, "Synthesis of alkyl sulfonate/alcohol-protected  $\lambda$ - $\text{Fe}_2\text{O}_3$  nanocrystals with narrow size distributions," *J. of Colloid and Interface Sci.* **258** (2003) 427-431.
124. Khan, M., I. Dubenko, S. Stadler, N. Ali, (2004) Magnetic and structural transitions in heusler type alloys  $\text{Ni}_2\text{MnGa}_{1-x}\text{In}_x$ . *J.Phys.Condens.Matter* **16**,5259-5266
125. Roy,S., I. Dubenko., Edorh,D.D., and N. Ali, (2004) Size induced variations in the structural and magnetic properties of double exchange  $\text{La}_{0.8}\text{Sr}_{0.2}\text{MnO}_3$ -d nano-ferromagnet. *J.Appl. Physics*, **96**,1202-1208.
126. Han, J., G.K. Marasinghe, J.B. Yang, W.J. James, M. Chen, Y.B. Yelon, Ph. I'. Héritier, I. Dubenko, and N. Ali (2004). Magnetic and Crystallographic properties of  $\text{NdMn}_{6-x}\text{Fe}_x\text{Sn}_6$  intermetallics. *J. Phys: Condens. Matter*, **16**,5407-5417.
127. Mishra, S.R., J. Losby, I.Dubenko, S. Roy, N. Ali, and K. Marasinghe (2004). Magnetic properties of mechanically milled nanosized cupric oxide, *J. Magn. Magn. Materials*, **279**, 111,117.
128. Mishra, S.R., I. Dubenko, S. Roy, N. Ali, and K. Marasinghe, (2004). Magnetic Behavior of Mechanically Milled  $\text{FeNi-CoO}$  Nanocomposites. *IEEE Transactions on Magnetism*, **40**,2716-2720.
129. Stadler, S., Harley, D. L., Craig, J. P., Minott, D. H., Khan , M., Dubenko, I., Ali, N., Dvorak, J., Idzerda, Y. U. , Arena, D. A., and Harris, V. G., *X-ray magnetic circular dichroism of pulsed laser deposited  $\text{Co}_2\text{MnSi}$  thin films*, *J. Appl. Phys.* **97**, 10C302 (1-3) (2005)

130. Khan, M., Dubenko, I., Stadler, S., and Ali, N., *The structural and magnetic properties of  $Ni_2Mn_{1-x}M_xGa$  ( $M=Co, Cu$ )*, J. Appl. Phys. **97**, 10M304 (1-3) (2005).
131. Roy, I. S. Dubenko, M. Khan, E. M. Congdon, J. Craig, N. Ali, W. Liu, and B. S. Mitchell, *Magnetic properties of perovskite-derived air-synthesized  $RBaCo_2O_{5+d}$  ( $R=La-Ho$ ) compounds*, Phys. Rev. B **71**, 024419(1-8) (2005).
132. Anomalous Magnetic Properties of Mechanically Milled Cobalt Oxide Nano- particles. S.R. Mishra, I. Dubenko, J. Losby, K. Ghosh, M. Khan, and N. Ali, Journal of Nanoscience and Nanotechnology, 5, 2076-2011, 2005.
133. Magnetic Properties of Magnetically Soft Nanocomposite Co-SiO<sub>2</sub> Prepared via Mechanical Milling. S.R. Mishra, I. Dubenko, J. Losby, K. Marasinghe, Mehdi Ali and N. Ali, Journal of Nanoscience and Nanotechnology, 5, 2082-2087, 2005.
134. Khan, M., Stadler, S., and Ali, N., *The overlap of first and second order phase transitions and related magnetic entropy changes in  $Ni_2Mn_{1-x}Cu_xGa$  Heusler alloys*, IEEE Trans. Mag. **42** (10), 3108 (2006).
135. Stadler, S., Khan, M., Mitchell, J., Ali, N., Gomes, A. M., Dubenko, I., Takeuchi, A. Y., and Guimarães, A. P., *Magnetocaloric properties of  $Ni_2Mn_{1-x}Cu_xGa$* , Applied Physics Letters **88**, 192511 (2006).
136. Khan, M., Stadler, S., and Ali, N., *Intermartensitic transformations in  $Ni_2Mn_{1-x}Co_xGa$  Heusler alloys*, J. Appl. Phys. **99**, 08M705 (2006).
137. Gomes, A. M., Khan, M., Stadler, S., Ali, N., Dubenko, I., Takeuchi, A. Y., and Guimarães, A. P., *Magnetocaloric properties of the  $Ni_2Mn_{1-x}(Cu,Co)_xGa$  Heusler alloys*, J. Appl. Phys. **99**, 08Q106 (2006).
138. Exchange Coupled FeNi-X (X= CuO, NiO, and CoO) Nanocomposites Prepared via Ball Milling, Sanjay Mishra and Igor Dubenk and Mahmud Khan and Tim Young and H Ganegoa and Nausad Ali and Kanishka Marasinghe, IEEE-Trans Magnet. **42**, 808.(2006)
139. Khan, M., Dubenko, I., Stadler, S., and Ali, N. *Exchange bias behavior in Ni-Mn-Sb Heusler alloys*, Appl. Phys. Lett. **91**, 072510 (1-4) (2007).
140. Pathak, A. K., Khan, M., Dubenko, I., Stadler, S., and Ali, N., *Large magnetic entropy change in  $Ni_{50}Mn_{50-x}In_x$* , Appl. Phys. Lett. **90**, 262504 (1-3) (2007).
141. Khan, M., Stadler, S., and Ali, N., *Magnetocaloric properties of Fe and Ge doped  $Ni_2Mn_{1-x}Cu_xGa$* , J. Appl. Phys **101**, 09C515 (1-3) (2007).
142. Khan, M., Stadler, S., and Ali, N., *Inverse Magnetocaloric effect in ferromagnetic  $Ni_{50}Mn_{37-x}Sb_{13-x}$  Heusler alloys*, J. Appl. Phys. **101**, 053919 (1-3) (2007).
143. Khan, M., Dubenko, I., Stadler, S., and Ali, N., *Exchange bias behavior in Mn rich Ni-Mn-Sn Heusler alloys*, J. Appl. Phys **102**, 113914 (1-3) (2007).
144. Khan, M., Dubenko, I., Stadler, S., and Ali, N., *Phase transitions and corresponding magnetic entropy changes in  $Ni_2Mn_{0.75}Cu_{0.25-x}Co_xGa$* , J. Appl. Phys **102**, 023901 (1-3) (2007).

- 145 Khan, M., Pathak, A. K., Paudel, M. R., Dubenko, I., Stadler, S., and Ali, N.,  
*Magnetoresistance and field-induced structural phase transitions in Ni<sub>50</sub>Mn<sub>50-x</sub>Sn<sub>x</sub> Heusler alloys*,  
*J. Magn. Magn. Mater.* **320**, L21-L25 (2008). (Published online June 2007).
- 146 .. A.D.Lad, Ch.Rajesh, M.Khan, N.Ali, I.K.Gopalakrishnan, S.K.Kulshreshtra, and  
 S.Mahamuni., "Magnetic behavior of manganese-doped ZnSe quantum dots"  
*J.Appl.Physics*, 101,103906(1-5), (2007).
147. Igor Dubenko, Mahmud Khan, Arjun K. Pathak, Bhoj R. Gautam, Shane Stadler, and  
 Naushad Ali," Magnetocaloric effects in Ni-Mn-X based Heusler alloys with X=Ga, Sb, and  
 In," *J. Magn. Magn. Mat.*, Doi:10.1016/j.jmmm.2008.11.043 (1-4) (2008);
- 148.
- 148 Arjun Kumar Pathak, Igor Dubenko, Shane Stadler, and Naushad Ali, "The Effect of Partial  
 Substitution of In by Si on the Phase Transitions and Respective Magnetic Entropy Changes of  
 Ni<sub>50</sub>Mn<sub>35</sub>In<sub>15</sub> Heusler Alloys," *Jour. Phys D: Appl. Phys. (Fast track comm.)* **41**, 202004(1-6)  
 (2008);
149. Mahmud Khan, Gautam Bhoj, Arjun Pathak, Igor Dubenko, Shane Stadler, and Naushad  
 Ali, "Intermartensitic transformation in Fe doped Ni-Mn-Cu-Ga Heusler alloys," *J. Phys.:  
 Condens. Matter.* **20**, 505206(1-6) (2008);
150. Bhoj Raj Gautam, Igor Dubenko, Arjun Kumar Pathak, Shan Stadler and Naushad  
 Ali,"Effect of Isoelectronic Substitution on Magnetic Properties of Ni<sub>2</sub>Mn(Ga,B) Heusler  
 Alloys," *J. Phys.: Condens. Matter.* **20**, 465209(1-5) (2008);
151. Mahmud Khan, Igor Dubenko, Shane Stadler and Naushad Ali "Magnetostructural Phase  
 Transitions in Ni<sub>50</sub>Mn<sub>25+x</sub>Sb<sub>25-x</sub> Heusler alloy," *J. Phys.:Condens. Matter* **20**, 235204(1-8)  
 (2008);
152. Arjun Kumar Pathak, Mahmud Khan, Bhoj Raj Gautam, Shane Stadler, Igor Dubenko,"  
 Naushad Ali "Exchange bias in bulk Ni-Mn-In-based Heusler alloys," *J. Magn. Magn. Mat.*,  
<http://dx.doi.org/10.1016/j.jmmm.2008.03.008> (1-3) (2008);
153. Arjun Kumar Pathak, Gautam Bhoj Mahmud Khan, Igor Dubenko, Shane Stadler, and  
 Naushad Ali, "Phase transitions and magnetoresistance in Ni<sub>50</sub>Mn<sub>50-x</sub>In<sub>x</sub> Heusler alloys," *J.  
 Appl. Phys.* **103**, 07F315(1-11) (2008);
154. Mahmud Khan, Arjun K. Pathak, Moti R. Paudel, Igor Dubenko, Shane Stadler and  
 Naushad Ali, "Magnetoresistance and field-induced structural transitions in Ni<sub>50</sub>Mn<sub>50-x</sub>Sn<sub>x</sub>  
 Heusler alloys," *J. Magn. Magn. Mat. (letter to editor)* **320**, L21-L25 (2008).

\* - indicates graduate student  
 + - indicates postdoctoral fellow

## XII. REVIEW PAPERS AND OTHER PUBLICATIONS

1. Naushad Ali and Sunil Labroo, "Electrical, Magnetic and Thermal Properties of  
 RMn<sub>2</sub> Compounds (R = Y and Rare Earths)," *Proceedings of Recent Advances in  
 Materials Research*, MTC, SIUC, 169 - 184 (April 1989).
2. Alan Weston, Naushad Ali, M. Daneshdoost, and S. Lalvani "Y-Ba-Cu-O  
 Superconductor Films via an Electrodeposition Process," *Proc. Recent  
 Advances in Materials*, 125 - 134 (1990).
3. Naushad Ali, Arthur Chin, and J. T. Masden, "Electrical Properties of Quasi-One  
 Dimensional Wires of Magnetic Materials," *Proc. Recent Advances in Materials*,  
 219 - 239 (1990).



### XIII. INVITED TALKS

1. Dept. of Physics, St. Francis Xavier University, Antigonish, Nova Scotia, Canada, March 1986.
2. Dept. of Physics, Dalhousie University, Halifax, Nova Scotia, Canada, April 1986.
3. Dept. of Physics, University of Missouri at Kansas City, Kansas City, MO, June 1987.
4. Dept. of Physics, Iowa State University, Ames, IA, June 1988.
5. Dept. of Physics, University of Kentucky, Lexington, KY, June 1989.
6. Dept. of Physics, Washington University, St. Louis, MO, June 1990.
7. Dept. of Chemical Engineering, University of Idaho, Moscow, ID, June 1991.
8. Dept. of Physics, McMaster University, Canada, June 1992.
9. Dept. of Physics and High Field Magnet Lab, Florida State University, Tallahassee, FL, July 1992.
10. Dept. of Physics, Central Florida University, Orlando, FL, July 1992.

### XIV. RECENT INTRA-CAMPUS AND INTER-CAMPUS COLLABORATION (US)

1. Research collaboration with Prof. Bakul Dave of Dept. of Chemistry, SIUC on molecular magnets and nanotubes
2. Research collaboration on Permanent Magnets with
  - Dr. G. K. Marasinghe, University of Missouri, Rolla
  - Dr. W. J. James, University of Missouri, Rolla
  - Dr. O. A. Pringle, University of Missouri, Rolla
  - Dr. W. B. Yellon, University of Missouri, RollaThis collaboration is ongoing. In 1999, we had 3 research papers published and 4 papers presented at conferences from this collaboration.
3. Research collaboration in Dichroism and superconducting materials, with the research group of Prof. Marshall Onellion, University of Wisconsin, Madison. Our students go to University of Wisconsin-Madison to do experiments.
4. Research Collaboration on XAFS on CMR materials with Dr. S. Khalid of Brookhaven National Laboratory. This collaboration allows us to do XAFS studies at BNL.

### XV. RECENT INTERNATIONAL COLLABORATION

1. Dr. V. Yu. Galkin, Russia, Studies of Cr-alloys
2. Dr. Eric Fawcett, University of Toronto, Canada, studies of Cr-alloys
3. Dr. Wilson Ortiz, Brazil, studies of Cr-alloys
4. Dr. Alexander Granovsky, Moscow State University, Russia, CMR- and other Magnetic Materials
5. Dr. Ashot Markosian, Moscow State University, Russia, Magnetic Intermetallics