Publications of David Jiles

November 2015

Publications

1. Rare Earths Conference, Birmingham, England, April 17-18, 1978. "The magnetic phase diagram of terbium", S.B. Palmer and D.C. Jiles.

2. "Ultrasonic study of the magnetic structure of rare earth metals", S.B. Palmer, C. Isci and D.C. Jiles, Journal de Physique 40-C5, 33, 1979.

3. Institute of Physics Magnetism Conference on Bloch Wall Dynamics, London, England, April 1979. "The magnetic phase diagrams of gadolinium and terbium", D.C. Jiles and S.B. Palmer.

4. International Conference on Magnetism (ICM), Munich, West Germany, September 3-7, 1979. "The magnetic phase diagram of gadolinium", D.C. Jiles and S.B. Palmer.

5. Australia & New Zealand Institutes of Physics Solid State Physics Conference, Auckland, New Zealand, February 1980. "Magnetoelastic effects in some heavy rare earths", D.C. Jiles and S.B. Palmer.

6. "Magnetoelastic effects in gadolinium", D.C. Jiles and S.B. Palmer, J. Phys. F (Metal Physics) 10, 2857, 1980.

7. "Magnetoelastic effects in erbium", D.C. Jiles and S.B. Palmer, J. Phys. F (Metal Physics) 11, 45, 1981.

8. "Magnetoelastic effects in terbium", D.C. Jiles, G.N. Blackie and S.B. Palmer, Journal of Magnetism and Magnetic Materials 24, 75, 1981.

9. Australia & New Zealand Institutes of Physics Solid State Physics Conference, Wagga, NSW, Australia, February 1981. "Third order elastic constants of erbium", (**Invited Paper**), D.C. Jiles and S.B. Palmer.

10. "Third order elastic constants of erbium", D.C. Jiles and S.B. Palmer, Journal of Applied Physics 52, 1113, 1981.

11. "Hydrostatic pressure derivatives of the elastic moduli of terbium, dysprosium and erbium", D.C. Jiles and S.B. Palmer, Phil. Mag. 44, 447, 1981.

12. Rare Earths Conference, Birmingham, England, April 1981. "Domain magnetisation interpretation of magnetoelastic effects in gadolinium", D.J Martin, S.B. Palmer and D.C. Jiles.

13. "Interpretation of anomalies in the magnetoelastic properties of gadolinium by domain phase theory", D.J. Martin, S.B. Palmer and D.C. Jiles, Journal of Magnetism and Magnetic Materials 29, 87, 1982.

14. "Hydrostatic pressure derivatives of the elastic constants of dysprosium over the range 0-100 MPa.", D.C. Jiles, S.B. Palmer and G.A. Saunders, Phys. Letts. 87A, 297, 1982.

15. Canadian Association of Physicists Conference, Kingston, Ontario, Canada, June 1982. "A mean field model of the hysteresis mechanism in ferromagnetic materials", D.C. Jiles and D.L. Atherton.

16. "Performance studies of a high speed ultrasonic sing around system", D.C. Jiles, S.B. Palmer and D.G. Whitehead, IEEE Transactions on Instrumentation & Measurement IM-31, 280, 1982.

17. "Ferromagnetic hysteresis", D.C. Jiles and D.L. Atherton, IEEE Transactions on Magnetics, MAG-19, 2183, 1983.

18. "Effects of stress on the magnetisation of steel", D.C. Jiles and D.L. Atherton, IEEE Transactions on Magnetics, MAG-19, 2021, 1983.

19. International Conference on Pipeline Inspection Methods, Edmonton, Canada, June 1983. "The development of an above-ground stress measurement method for pipelines", D.L. Atherton, D.C. Jiles, A. Teitsma and H. French.

20. "Stress-induced magnetisation changes in steel pipes (1) - laboratory tests", D.L. Atherton, L.W. Coathup, D.C. Jiles, L. Longo, C. Welbourn and A. Teitsma, IEEE Transactions on Magnetics MAG-19, 1564, 1983.

21. "Piezo optic properties of aluminium", D.C. Jiles and M.P. Staines, Solid State Communications 47, (1), 37, 1983.

22. "Optical properties of the heavy rare earths: piezoreflectance of gadolinium, dysprosium and erbium", D.C. Jiles and M.P. Staines, Physical Review B, 28, 5746, 1983.

23. "Theory of ferromagnetic hysteresis", (**Invited Paper**), D.C. Jiles and D.L. Atherton, Journal of Applied Physics 55, 2115, 1984.

24. "Piezo optic properties of nickel and platinum", D.C. Jiles and M.P. Staines, J. Phys. Chem. Sol. 45, 151, 1984.

25. "Effects of alloying on the band structure of gold: piezoreflectance measurements on some AuCo and AuV alloys", D.C.Jiles, P.W.Gilberd, M.P.Staines and A.Bittar, J. Phys. Chem. Sol. 45, 595, 1984.

26. Third Conference on Properties and Applications of Magnetic Materials, Chicago, U.S.A. May, 1984. "Ferromagnetic hysteresis and the effects of stress on magnetisation", (**Invited Paper**), D.C. Jiles.

27. "Ferromagnetic hysteresis and the effects of stress on magnetisation", D.C. Jiles, Review of Progress in Quantitative Nondestructive Evaluation" 4, 1141, 1984.

28. "Pseudopotential coefficients for the electron band structure of aluminum and their deformation potentials from piezoreflectance measurements", D.C.Jiles, Solid State Comms. 51, 327, 1984.

29. "Theory of the magnetisation process in ferromagnets and its application to the magnetomechanical effect", D.C. Jiles and D.L. Atherton, J. Phys. D (Applied Phys) 17, 1265, 1984.

30. "A microcomputer based system for control of applied uniaxial stress and magnetic field", D.C. Jiles, D.L. Atherton, H.E. Lassen, D. Noble and T.Astle, Review of Scientific Instruments, 55, 1843, 1984.

31. Conference on Non Destructive Inspection of Ferromagnetic Materials, Houston, Texas, March 1984. "Application of hysteresis modelling to the non destructive inspection of stress", (**Invited Paper**), D.C. Jiles, S. Habermehl and D.L. Atherton.

32. "Magnetoelastic properties of high-purity single crystal terbium", D.C. Jiles, S.B. Palmer, D.W. Jones, S.P. Farrant and K.A. Gschneidner Jr., J. Phys. F (Metal Physics), 14, 3061, 1984.

33. "Stress induced magnetization changes in steel pipes (2)", D.L.Atherton, C.Welbourn, D.C.Jiles, L.Reynolds and J.Scott Thomas, IEEE Transactions on Magnetics, 20, 2129, 1984.

34. Fifth Canadian Conference on Non Destructive Testing, Toronto, Canada, October 1984. "The influence of stress on the inspection of steel with particular reference to gas pipelines", D.L.Atherton, C.Welbourn and D.C.Jiles.

35. "Dependence of the anhysteretic magnetisation on stress in steel", L.G. Dobranski, D.C. Jiles and D.L. Atherton, Journal of Applied Physics 57, 4229, 1985.

36. "Influence of chemical composition and heat treatment on the magnetic properties of steel", S.Habermehl, D.C.Jiles and C.M.Teller. IEEE Transactions on Magnetics, MAG-21, 1909, 1985.

37. Fourth Conference on the Properties and Applications of Magnetic Materials, Chicago, May 1985. "Magnetomechanical effects in steel and the influence of microstructure", D.L. Atherton, D.C. Jiles and C. Welbourn.

38. "An automated control and data logging system for the determination of magnetic properties of materials for non destructive evaluation", S.Habermehl and D.C.Jiles, Review of Progress in Quantitative NDE, 5, 843, 1986.

39. International Conference on Magnetism (ICM), San Francisco, U.S.A., August 1985. "Piezo-optic properties of gadolinium", D.C. Jiles and M.P. Staines.

40. International Conference on Magnetism (ICM), San Francisco, U.S.A., August 1985. "Effects of stress on the magnetic properties of ferromagnetic materials: a study of the magnetomechanical effect in steel", D.C. Jiles and D.L. Atherton.

41. International Conference on Magnetism (ICM), San Francisco, California, August 1985. "Microstructural dependence of the magnetic properties of the iron carbon system", S. Habermehl, D.C. Jiles, J.D. Verhoeven and H. Downing.

42. Conference on Advanced Methods in Non Destructive Evaluation, Kingston, Canada, October 1985. "Magnetic methods for non destructive evaluation", (**Invited Paper**), D.C.Jiles.

43. "Effects of stress on magnetization", D.L.Atherton and D.C.Jiles, NDT International, 19, 15, 1986.

44. "Theory of ferromagnetic hysteresis", D.C.Jiles and D.L.Atherton, Journal of Magnetism and Magnetic Materials, 61, 48, 1986.

45. Conference on Non Destructive Inspection of Ferromagnetic Materials, Houston, U.S.A., March 1986. "Evaluation of the properties and treatment of ferromagnetic steels using magnetic measurements", D.C. Jiles.

46. "Magnetoacoustic emission, magnetisation and Barkhausen effect in decarburised steel", R. Ranjan, D.C. Jiles and P.K. Rastogi, IEEE Transactions on Magnetics, MAG-22, 511, 1986.

47. Fifth Conference on Properties and Applications of Magnetic Materials, Chicago, U.S.A., May 1986. "Magnetic methods for characterisation of materials properties", D.C. Jiles.

48. "Magnetic properties of decarburised steels: an investigation of the effects of grain size and carbon content", R. Ranjan, D.C. Jiles and P.K. Rastogi, IEEE Trans. Mag. MAG-23, 1869, 1987.

49. "Investigation of the microstructural dependence of the magnetic properties of 4130 alloy steels for NDE", D.C. Jiles and J.D. Verhoeven, Review of Progresss in Quantitative Nondestructive Evaluation" 6, 1681, 1987.

50. "NDE methods for determination of thermal history and mechanical properties of Al-Li alloys", D.J. Bracci D.C. Jiles and O. Buck, in Review of Progress in Quantitative Nondestructive Evaluation, 6, 1395, 1987.

51. "A model for the effect of tensile & compressive stress on ferromagnetic hysteresis", M.J. Sablik, H. Kwun, G.L. Burkhardt and D.C. Jiles, Journal of Applied Physics, 61, 3799, 1987.

52. "Grain size measurements using magnetic & acoustic Barkhausen noise" R. Ranjan, D.C. Jiles, O. Buck and R.B. Thompson, Journal of Applied Physics, 61, 3199, 1987.

53. "Search for NDE methods to characterise the thermal history and mechanical properties of Al-Li alloys", D.J. Bracci, P. Garikepati, D.C. Jiles and O. Buck, Review of Progress in Quantitative Nondestructive Evaluation, 7, 1255, 1988

54. "Strain dependence of the magnetic properties of AISI 4130 and 4140 alloy steels", D.C. Jiles and D. Utrata, Review of Progress in Quantitative Nondestructive Evaluation, 7, 1455, 1988.

55. "Recent developments in the Ames magnetic testing facility", D.C. Jiles, Review of Progress in Quantitative Nondestructive Evaluation 7, 1715, 1988.

56. "Review of magnetic methods for nondestructive evaluation", D.C. Jiles. NDT International, 21, 311, 1988.

57. "Magnetic properties and microstructure of AISI 1000 series carbon steels", D.C. Jiles, J. Phys. D (Applied Physics), 21, 1186, 1988.

58. "The effect of compressive plastic deformation on the magnetic properties of AISI 4130 steels with various microstructures", D.C. Jiles, J. Phys. D (Applied Physics), 21, 1196, 1988.

59. "Magnetic properties of porous iron compacts", D.C. Jiles, C.V. Owen and W.A. Spitzig, Journal of NDE, 6, 119, 1988.

60. "Effects of tensile plastic deformation on the magnetic properties of AISI 4140 steel", D.C. Jiles and D. Utrata, Journal of NDE. 6, 129, 1988.

61. "The influence size and morphology of eutectoid carbides on the magnetic properties of carbon steels", D.C.Jiles, Journal of Applied Physics, 63, 2980, 1988.

62. "Integrated on-line instrumentation for simultaneous automated measurement of magnetic field, induction, Barkhausen effect, magnetoacoustic emission and magnetostriction", D.C. Jiles, Journal of Applied Physics, 63, 3946, 1988.

63. "A model for the effect of stress on the low frequency harmonic content of the magnetic induction in ferromagnetic materials", M.J. Sablik, G.L. Burkhardt, H. Kwun and D.C. Jiles, Journal of Applied Physics, 63, 3930, 1988.

64. "Variation of the magnetic properties of AISI 4140 steels with plastic strain", D.C. Jiles, Physica Status Solidi, 108, 417, 1988.

65. "The stress dependence of the magnetic properties of some Ni-Cu and Ni-Co alloys", D.C.Jiles, R.Ranjan and D.R.Hougen, Journal of Applied Physics, 64, 3620, 1988.

66. SQUID NDE Workshop, Harper's Ferry, Virginia, April 13-15, 1988. "Non destructive evaluation of stress in ferromagnetic materials from maximum differential permeability", D.C.Jiles. (**Invited paper**)

67. "Stress dependence of the magnetic properties of Ni-Cu and Ni-Co alloys. D.C.Jiles, T.T.Chang, D.R.Hougen and R.Ranjan, J. de Physique 49-C8, 1937, 1988.

68. "Magneto acoustic emission and discontinuous magnetostriction in Dy-Tb-Fe", D.C.Jiles, J.E.Ostenson and C.V.Owen, J. de Physique 49-C8, 1939, 1988.

69. "Barkhausen effect and discontinuous magnetostriction in Terfenol-D", D.C.Jiles, J.E.Ostenson and C.V.Owen, Journal of Applied Physics 64, 5417, 1988.

70. "A model for hysteresis in magnetostriction", M.J.Sablik and D.C.Jiles, Journal of Applied Physics, 64, 5402, 1988.

71. "Theory of ferromagnetic hysteresis: evaluation of stress from hysteresis curves", P. Garikepati, T.T.Chang and D.C.Jiles, IEEE Trans. Mag. 24, 2922, 1988.

72. "A pressure cell for magnetostrictive measurements", J.E.Ostenson, D.C.Jiles and D.K.Finnemore, Review of Scientific Instruments 60, 278, 1988.

73. Workshop on NDE measurement technology to assess material properties and property cahanges related to aging, Gaithersburg, Maryland, October 27-28th, 1988. "Advance indications of incipient failure modes using magnetic inspection", D.C.Jiles.

74. "Ultrasonic and magnetic analysis of porosity in iron compacts", W.A.Spitzig, R.B.Thompson and D.C.Jiles, Metallurgical Transactions 20A, 571, 1989.

75. "Electrical and mechanical properties of precipitation hardened Al-Li alloys", D.J.Bracci, L.J.H.Brasche, O.Buck, and D.C.Jiles, Mat. Sci. & Eng., A119, 7, 1989.

76. "Determination of selected mechanical properties of aged Al-Li alloys using NDE methods", L.J.H.Brasche, D.J.Bracci, O.Buck, D.C.Jiles and J.Snodgrass. Review of Progress in Quantitative NDE, 8B, 1717, 1989.

77. "Detection of expended fatigue life of AISI 4140 steels from magnetic measurements". P.Garikepati, D.C.Jiles, J.B.Thoelke and D.Utrata. Review of Progress in Quantitative NDE, 8B, 2061, 1989.

78. "Evaluation of residual stress in 300M and AISI 4140 steels using hysteresis loss and differential permeability measurements". D.C.Jiles, P.Garikepati, and D.D.Palmer. Review of progress in Quantitative NDE, 8B, 2081, 1989.

79. "Detection stress in steels from maximum differential susceptibility" (**Invited paper**), D.C.Jiles, P.Garikepati, in "Non Destructive Characterization of Materials", Ed. P.Holler, p.524, (Springer-Verlag) 1989.

80. "A multiparameter magnetic inspection system for NDE of ferromagnetic materials" (**Invited paper**), D.C.Jiles, in "Non Destructive Characterization of Materials", Ed. P.Holler, p.715, (Springer-Verlag) 1989.

81. "Non destructive detection of the T1 phase in Al-Li alloys." O.Buck, L.J.H.Brasche, J.E.Shield, D.J.Bracci, D.C.Jiles and L.S.Chumbley, Scripta Metallurgica, 23, 183, 1989.

82. TMS Annual Spring Meeting, Las Vegas, March 1989. "NDE methods for the determination of thermal history and mechanical properties of aluminum-lithium alloys", O.Buck, D.J.Bracci, L.J.H.Brasche and D.C.Jiles.

83. "Theory of ferromagnetic hysteresis: determination of model parameters from experimental hysteresis loops", D.C.Jiles and J.B.Thoelke, IEEE Trans. Mag. 25, 3928, 1989.

84. "The effects of stress on magnetic Barkhausen activity in ferromagnetic steels", D.C.Jiles, IEEE Trans. Mag. 25, 3455, 1989.

85. American Physical Society, Solid State Physics Meeting, St. Louis, March 20-24, 1989."First principles calculation of the hysteretic magnetostriction as a function of stress", M.J.Sablik and D.C.Jiles.

86. "A model for magabsorption as an NDE tool for stress measurement", M.J.Sablik, W.L.Rollwitz and D.C.Jiles. In "Proceedings of the 17th Symposium on NDE", p.212. Published by Southwest Research Institute, San Antonio, Texas, 1990.

87. "Fatigue induced changes in the magnetic properties of ferritic rail steel", D.C.Jiles and D.Utrata. In "Proceedings of the 17th Symposium on NDE", p313. Published by Southwest Research Institute, San Antonio, Texas, 1990.

88. Symposium on non linear ferromagnetic hysteresis, Rosenheim, West Germany, 23rd-24th May, 1989. "Theory of ferromagnetic hysteresis and its applications to modelling of components for circuit simulation (**Invited paper**)", D.C.Jiles.

89. "Review of Magnetic Methods for Nondestructive Evaluation (Part 2 : Flux Leakage and related Methods)", D.C. Jiles, NDT International 23, 83, 1990.

90. "Microstructure and stress dependence of the magnetic properties of steel", D.C.Jiles, Review of Progress in Quantitative NDE, 9B, 1821, 1990.

91. "Nondestructive methods for the determination of mechanical properties of materials", L.J.H.Brasche, D.C.Jiles and O.Buck, Review of Progress in Quantitative NDE, 9B, 1581, 1990.

92. 34th Annual Conference on Magnetism and Magnetic Magnetic Materials, Boston, Massachusetts, November 1989. "Pulse height spectrum analysis of Barkhausen emissions in the frequency range 15kHz-250kHz", D.C.Jiles and S.Hariharan, Journal of Applied Physics 67, 5475, 1990. (Abstract only).

93. 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Mass., November 1989, "First principles approach to magnetostrictive hysteresis", M.J.Sablik, L.Barghout and D.C.Jiles, Journal of Applied Physics 67, 5019, 1990. (Abstract only).

94. "Interpretation of the magnetisation mechanism in Terfenol-D using Barkhausen pulse height analysis and irreversible magnetostriction", D.C.Jiles and S.Hariharan, Journal of Applied Physics 67, 5013, 1990.

95. "Development and characterization of the highly magnetostrictive alloy Terfenol-D for use in sensors and actuators", D.C.Jiles, in "New Materials and their Applications", p.365, edited by D.Holland, Institute of Physics, London, 1990.

96. International Magnetics Conference, Brighton, England, April 17-20th 1990. "Domain magnetisation distribution calculation in stressed and unstressed Terfenol-D", D.C.Jiles and J.B.Thoelke.

97. "Magnescope : A portable magnetic inspection system for evaluation of steel structures and components", D.C.Jiles, S.Hariharan and M.K.Devine, IEEE Transaction on Magnetics, 26, 2577, 1990.

98. "The effects of temper embrittlement on the magnetic and mechanical properties of nickel chromium steels", D.C.Jiles, J.B.Thoelke, W.G.Clark and R.DeNale. Nondestructive Testing and Evaluation, 6, 75, 1991.

99. "Development of magnetic inspection techniques for evaluation of fatigue damage and stress in low alloy steels", M.K.Devine, S.Hariharan and D.C.Jiles, Review of Progress in Quantitative NDE 10, 2021, 1991.

100. "Detection of temper embrittlement in steels using magnetic inspection methods", D.C.Jiles, J.B.Thoelke, W.G.Clark, J.N.Iyer and R.DeNale, Review of Progress in Quantitative NDE 10, 2015, 1991.

101. ASM Materials Week Conference, Detroit, Michigan, October 8th-11th, 1990."Evaluation of materials properties using magnetic measurements and computer modelling", D.C.Jiles, (**Invited paper**).

102. 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, October 31st-November 3rd, 1990. "A three dimensional anisotropic rotation model for magnetization and magnetostriction in Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke.

103. Materials Technology Conference, San Francisco, February 5th-7th, 1991. "Estimation of remaining lifetime in ferritic steels using magnetic methods", D.C.Jiles, (**Invited paper**).

104. "Determination of theoretical parameters for modelling bulk magnetic hysteresis properties using the theory of ferromagnetic hysteresis", D.C.Jiles, J.B.Thoelke and M.K.Devine. IEEE Trans.Mag. 28, 27, 1992.

105. 5th Joint Intermag/MMM Conference, Pittsburgh, Pennsylvania, June 18th-21st, 1991. "A magnetostrictive diode laser magnetometer", R.Chung, R.Weber and D.C.Jiles, IEEE Transactions on Magnetics, 27, 5358, 1991.

106. 5th Joint Intermag/MMM Conference, Pittsburgh, Pennsylvania, June 18th-21st, 1991. "Modelling of the combined effects of stress and magnetic field on the magnetostriction of Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke, IEEE Transactions on Magnetics, 27, 5352, 1991.

107. "Micromagnetic surface studies of materials for NDE", L.B.Sipahi and D.C.Jiles. Review of Progress in Quantitative NDE, 11, 1791, 1992.

108. "Magnetic NDE techniques for detecting mechanical changes in materials", M.K.Devine, D.C.Jiles, D.A.Kaminski and D.Chandler, Review of Progress in Quantitative NDE, 11, 1771, 1992.

109. "Effects of irradiation, aging and prestraining on the magnetic properties of ASTM-533B steels", D.C.Jiles, M.K.Devine, J.Apostol and P.K.Liaw. Review of Progress in Quantitative NDE, 11, 1777, 1992.

110. Third Fossil Plant Inspection Conference, Baltimore, Maryland, August 13th-15th, 1991. "Detection of incipient failure of steels from magnetic property measurements (**Invited paper**)", D.C.Jiles.

111. International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991. "Angular dependence of the magnetic properties of polycrystalline iron under the action of uniaxial stress", D.A.Kaminski, D.C.Jiles and M.J.Sablik, Journal of Magnetism & Magnetic Materials, 104, 382, 1992.

112. International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991. "Interpretation of the frequency dependence of Barkhausen emissions for investigating the depth dependence of magnetic properties", L.B.Sipahi and D.C.Jiles, Journal of Magnetism & Magnetic Materials, 104, 385, 1992.

113. International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991. "Model calculation for determining local energy minima in the orientation of magnetic domains in terbium-dysprosium-iron single grystals", J.B.Thoelke and D.C.Jiles, Journal of Magnetism & Magnetic Materials, 104, 1453, 1992.

114. International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991. "In situ determination of the magnetic properties of soft magnetic materials using an automated magnetic measuring system", A.R.Eichmann, D.C.Jiles and M.K.Devine, Journal of Magnetism & Magnetic Materials, 104, 375, 1992.

115. International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991. "Highly magnetostrictive rare earth iron intermetallic for a magnetostrictive magnetometer", R.Chung, R.Weber and D.C.Jiles, Journal of Magnetism & Magnetic Materials, 104, 1455, 1992.

116. International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991. "Effects of cyclic stress on the magnetic hysteresis parameters of polycrystalline iron", M.K.Devine, D.C.Jiles and S.Hariharan, Journal of Magnetism & Magnetic Materials, 104, 377, 1992.

117. "Detection of fatigue in structural steels by magnetic property measurements", M.K.Devine, D.A.Kaminski, L.B.Sipahi and D.C.Jiles, J. Mater. Eng. & Perf., 1, 249, 1992.

118. Gordon Research Coference on NDE, Oxnard, California, January 20-24th, 1992. "Magnetic inspection techniques for NDE", D.C.Jiles.

119. International Magnetics Conference, St.Louis, Missouri, April 13-16th 1992, "Modelling coercivity as a function of stress in steel", M.J.Sablik, S.W.Rubin, D.A.Kaminski, D.C.Jiles and I.J.Garshelis.

120. "Micromagnetic Barkhausen emission analysis of Tb-Dy-Fe under the action of an alternating field excitation", L.B.Sipahi, M.P.Schulze, D.C.Jiles and R.D.Greenough, IEEE Trans. Mag. 28, 3153, 1992.

121. "Variation of strain amplitude and phase in a cylindrical specimen of Tb-Dy-Fe in an ac magnetic field", M.P.Schulze, R.Chung, J,Greenough, R.Greenough, D.C.Jiles and R.Weber, IEEE Trans. Mag., 28, 3162, 1992.

122. "Effects of high temperature creep on the magnetic properties of steels", M.K.Devine and D.C.Jiles, IEEE Trans. Mag., 28, 2465, 1992.

123. "New procedures for in situ measurement of the magnetic properties of materials: applications of the Magnescope", A.R.Eichmann, M.K.Devine and D.C.Jiles, IEEE Trans. Mag., 28, 2462, 1992.

124. "A self consistent generalized model for the calculation of minor loop excursions in the theory of hysteresis", D.C.Jiles, IEEE Trans. Mag., 28, 2603, 1992.

125. American Physical Society Meeting, Indianapolis, 16-20th March, 1992. "The effect of stress on hysteresis loss", M.J.Sablik, D.A.Kaminski, D.C.Jiles and S.B.Biner.

126. "An investigation of various procedures for analysis of micromagnetic Barkhausen signals for nondestructive evaluation of steels", L.B.Sipahi and D.C.Jiles, Nondestructive Testing & Evaluation, 10, 183, 1992.

127. International Conference on Monitoring and Predictive Maintenance of Plants and Structures, Florence, Italy, May 17-20th, 1992. "Nondestructive evaluation research at Iowa State University", D.C.Jiles.

128. "Magnetic property changes in various steel structures due to irradiation", M.K.Devine, D.C.Jiles, P.K.Liaw, R.D.Rishel and D.S.Drinon. Review of Progress in Quantitative NDE, 12, 1815, 1993.

129. "Stress detection in steels through variation in magnetic properties", D.A.Kaminski, D.C.Jiles, S.B.Biner and M.J.Sablik. Review of Progress in Quantitative NDE, 12, 1831, 1993.

130. "Evaluation of fatigue damage in steel structural components by a new magnetic measurement technique", M.R.Govindaraju, A.Strom, D.C.Jiles and S.B.Biner. Review of Progress in Quantitative NDE, 12, 1839, 1993.

131. "Barkhausen emission technique for evaluating shot peening quality in high strength steels", L.B.Sipahi, M.K.Devine, D.C.Jiles and D.D.Palmer. Review of Progress in Quantitative NDE, 12, 1847, 1993.

132. "Angular dependence of the magnetic properties of steels under the action of uniaxial stress", D.A.Kaminski, D.C.Jiles, S.B.Biner and M.J.Sablik. Materials Research Society Fall Meeting, Boston, Massachusetts, November, 1992.

133. "Life prediction and nondestructive evaluation of materials properties in the power plant industry", P.K.Liaw, W.G.Clark Jr., R.Rishel, D.Drinon, M.K.Devine and D.C.Jiles, Proceeding of the First International Conference on microstructures and mechanical properties of aging materials, Chicago, November 1992, p.345. Edited by P.K.Liaw, R.Viswanathan, K.L.Murty, D.Frear and E.P.Simonen.

134. "Enhanced differential magnetostrictive response in annealed Terfenol-D", N.Galloway, R.D.Greenough, M.Schulze, D.C.Jiles, J.D.Verhoeven and P.Pulvirenti. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992.

135. "Evaluation of fatigue in steel structural components by magnetoelastic Barkhausen noise technique", M.R.Govindaraju, D.C.Jiles, A.Strom and S.B.Biner. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 6165, 1993.

136. "Physical interpretation of the hysteresis parameters in the theory of hysteresis", D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 5854, 1993. (Abstract only).

137. "The magnetostrictive laser diode magnetometer for personal magnetic field dosimetry", R.Chung, R.Weber and D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 5638, 1993. (Abstract only).

138. "Analytic model calculation of magnetic fields in a magnetic half space due to surface magnetic charge", Z.J.Chen M.R.Govindaraju, D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, 1992. Journal of Applied Physics, 73, 6858, 1993.

139. "Magnescope: applications in nondestructive evaluation", D.C.Jiles, A.R.Eichmann and M.K.Devine. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 5617, 1993.

140. "A model for hysteretic behavior in ferromagnets subject to non collinear applied stress and field", M.J.Sablik, S.W.Rubin, D.A.Kaminski, D.C.Jiles and S.B.Biner. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 6178, 1993. (Abstract only).

141. "Comprehensive analysis of Barkhausen emission spectra using pulse height analysis, frequency spectrum and pulse waveform analysis", L.B.Sipahi, D.Chandler and D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 5623, 1993.

142. "Modelling of micromagnetic Barkhausen activity using a stochastic process extension to the theory of hysteresis", L.B.Sipahi, D.C.Jiles and G.Williams. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 5830, 1993.

143. "Measurements of magnetic circuit characteristics for comprehension of intrinsic magnetic properties of materials from surface inspection", Z.J.Chen, M.K.Devine and D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, November 1992. Journal of Applied Physics, 73, 5620, 1993.

144. "Evaluation of surface modifications in high strength steels", D.C.Jiles, R.Kern and W.A.Theiner. Nondestructive Testing & Evaluation, 10, 317, 1993.

145. "Coupled magnetoelastic theory of magnetic and magnetostrictive hysteresis", M.J.Sablik and D.C.Jiles, IEEE Trans. Mag., 29, 2113, 1993.

146. "Frequency dependence of hysteresis curves in non conducting magnetic materials", D.C.Jiles. International Magnetics Conference, Stockholm, Sweden, April 13-16th, 1993. IEEE Trans. Mag. 29, 3490, 1993.

147. "Micromagnetic surface measurements for evaluation of surface modifications due to cyclic stress", Z.J.Chen, A.Strom and D.C.Jiles. International Magnetics Conference, Stockholm, Sweden, April 13-16th, 1993. IEEE Trans. Mag. 29, 3031, 1993.

148. "Modelling of reversible domain wall motion under the action of magnetic field and localized defects", Z.J.Chen and D.C.Jiles. International Magnetics Conference, Stockholm, Sweden, April 13-16th, 1993. IEEE Trans. Mag. 29, 2554, 1993.

149. "A model for hysteretic magnetic properties under the application of non-coaxial stress and field", M.J.Sablik, S.W.Rubin, L.A.Riley, D.C.Jiles, D.A.Kaminski and S.B.Biner. Journal of Applied Physics, 74, 480, 1993.

150. "Enhanced differential magnetostrictive response in annealed Terfenol-D", N.Galloway, M.P.Schulze, R.D.Greenough and D.C.Jiles. Applied Physics Letters, 63, 842, 1993.

151. "Theoretical modelling of the effects of anisotropy and stress on the magnetization and magnetostriction of Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke. Journal of Magnetism & Magnetic Materials, 134, 143, 1994.

152. "Modelling of magnetization using the theory of hysteresis", D.C.Jiles. Proceedings of the Workshop on Computational Techniques in Power Engineering, p.40-56, Royal Institute of Technology, Stockholm, Sweden, 17th April 1993.

153. "The development of highly magnetostrictive rare earth iron alloys", D.C.Jiles. Journal of Physics D (Applied Physics), 27, 1, 1994.

154. "Evaluation of steel bridges by magnetic hysteresis measurements", M.K.Devine, A.Strom, D.C.Jiles and D.Utrata. Review of Progress in Quantitative NDE, 13B, 1777, 1994.

155. "Magnetic Barkhausen effect studies in the evaluation of neutron irradiation degradation in nuclear pressure vessel steels", L.B.Sipahi, M.R.Govindaraju, D.C.Jiles, P.K.Liaw and D.S.Drinon. Review of Progress in Quantitative NDE, 13B, 1801, 1994.

156. "Neural network prediction of creep damage based on magnetic properties in power plant piping", M.Negley, M.R.Govindaraju and D.C.Jiles. Review of Progress in Quantitative NDE, 13B, 1817, 1994.

157. "Modelling of the frequency dependence of major and minor hysteresis loops in magnetic materials using a self consistent approach", D.C.Jiles. ASM Materials Week Conference, Pittsburgh, 18th-21st October 1993.

158. "Nondestructive evaluation of radiation degradation in nuclear pressure vessel steels using magnetic Barkhausen signal analysis", M.R.Govindaraju, L.B.Sipahi, D.C.Jiles P.K.Liaw and D.S.Drinon. TMS Materials Week Conference, Pittsburgh, 18th-21st October, 1993. Published in "Nondestructive evaluation and materials properties II", p.121. Edited by P.K.Liaw, O.Buck, R.J.Arsenault and R.E.Green Jr., The Metallurgical Society, Warrendale, Pennsylvania, 1994.

159. "SEM investigation of fatigue induced microstructural changes and the resulting effect on magnetic properties of structural steels", M.R.Govindaraju, Z.J.Chen, A.Strom and D.C.Jiles. TMS Materials Week Conference, Pittsburgh, 18th-21st October, 1993. Published in "Nondestructive evaluation and materials properties II", p.133, edited by P.K.Liaw, O.Buck, R.J.Arsenault and R.E.Green Jr., The Metallurgical Society, Warrendale, Pennsylvania, 1994.

160. "Applications of micromagnetic Barkhausen emissions as noninvasive material characterization technique", L.B.Sipahi and D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993.

161. "Frequency dependence of hysteresis curves in conducting magnetic materials", D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993. Journal of Applied Physics 75, 5511, 1994. (Abstract only). Full paper in Journal of Applied Physics 76, 5849, 1994.

162. "Modelling of the effects of stress on magnetization in ferromagnetic materials", D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993. Journal of Applied Physics 75, 5676, 1994. (Abstract only).

163. "Measurements of intrinsic magnetic properties of materials from surface inspection", Z.J.Chen and D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993. Journal of Applied Physics 75, 5922, 1994. (Abstract only).

164. "Estimation of fatigue exposure from magnetic hysteresis parameters", Z.J.Chen, J.Kameda and D.C.Jiles, Journal of Applied Physics 75, 6975, 1994.

165. "Monitoring neutron embrittlement in nuclear pressure vessel steels using micromagnetic Barkhausen emissions", L.B.Sipahi, M.R.Govindaraju and D.C.Jiles, Journal of Applied Physics 75, 6981, 1994.

166. "Improving the energy efficiency characteristics of magnetic metallic glasses through excimer laser treatment", S.Patri, P.Molian, A.Ray, P.Ilavarasan, A.Parakka, D.C.Jiles and M.R.Govindaraju. Proceedings of the ICALEO Conference, Orlando, Florida, October 1993.

167. "Stochastic process theory for modelling micromagnetic effects in materials", Institute of Physics, Condensed Matter and Materials Physics Conference, Leeds, United Kingdom, December 20-22, 1993.

168. "Detection of creep damage using magnetic Barkhausen technique", L.B.Sipahi, D.A.Kaminski, S.B.Biner and D.C.Jiles. Materials Research Society, Spring Meeting, San Francisco, April 4-8th, 1994.

169. "Modelling the effects of eddy current losses on frequency dependent hysteresis in electrically conducting media", D.C.Jiles. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994. IEEE Trans. Mag. 30, 4326, 1994.

170. "Recent developments in modelling of the stress derivative of magnetization in ferromagnetic materials", D.C.Jiles and M.K.Devine. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994. J.Appl.Phys. 76, 7015, 1994.

171. "Effects of surface stress on computer simulation of Barkhausen effect emissions: model predictions and comparison with X ray diffraction studies", D.C.Jiles and L.Suominen. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994. IEEE Trans. Mag. 30, 4924, 1994.

172. "Magneprobe: a portable system for detection and characterization of Barkhausen signals for in situ nondestructive testing of ferromagnetic materials", A.Parakka and D.C.Jiles. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994.

173. "Improvements in the energy efficiency characteristics of metallic glass ribbons by a laser scribing process", M.R.Govindaraju, A.Parakka, D.C.Jiles and P.Molian. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994.

174. "Assessment of creep damage in ferromagnetic materials using magnetic inspection", Z.J.Chen, M.R.Govindaraju, D.C.Jiles, S.B.Biner and M.J.Sablik. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994. IEEE Trans. Mag. 30, 4596, 1994.

175. "Imaging surface conditions of ferromagnetic steel using Barkhausen techniques", M.A.Negley and D.C.Jiles. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994. IEEE Trans. Mag. 30, 4509, 1994.

176. "Variation of coercivity of ferromagnetic material during cyclic stressing", Z.Gao, Z.J.Chen, D.C.Jiles and S.B.Biner. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994. IEEE Trans. Mag. 30, 4593, 1994.

177. "Magneprobe: a computerized portable system for nondestructive evaluation of surface condition in ferritic components", A.P.Parakka and D.C.Jiles. Review of Progess in Quantitative NDE, 14, 2325, 1995.

178. "Magnetic property evaluation of creep damaged Cr-Mo steel components used in fossil power plants", A.Mitra, Z.J.Chen and D.C.Jiles. Review of Progess in Quantitative NDE, 14, 1733, 1995.

179. "Detection of creep damage in Cr-Mo steel by magnetic hysteresis measurement", Z.J.Chen, A.Mitra, J.Kameda, S.B.Biner and D.C.Jiles. Review of Progess in Quantitative NDE, 14, 1701, 1995.

180. "Magnetic Barkhausen noise studies in the evaluation of hydrogen embrittlement in steels", L.B.Sipahi and D.C.Jiles. Presented at the Review of Progess in Quantitative NDE, Aspen, Colorado, August 1-5, 1994.

181. "Effects of magnetoelastic anisotropy on hysteresis and Barkhausen emissions in amorphous metals", A.Mitra, L.B.Sipahi, M.R.Govindaraju and D.C.Jiles. Presented at the International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994.

182. "Effect of structural inhomogeneities induced by cyclic stress on the magnetic properties of iron based alloys", Z.J.Chen and D.C.Jiles. Presented at the International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994.

183. "The law of approach as a means of modelling the effect of time dependent stress on magnetization in hysteretic systems", D.C.Jiles and M.K.Devine. International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994. Journal of Magnetism and Magnetic Materials, 140-144, 1881, 1995.

184. "Magneprobe: a portable system for detection and characterization of Barkhausen signals for nondestructive testing of ferromagnetic materials", A.P.Parakka and D.C.Jiles. International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994. Journal of Magnetism and Magnetic Materials, 140-144, 1841, 1995.

185. "Magnetization and magnetostriction in Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke. Physica Status Solidi, 147, 535, 1995.

186. "Nondestructive magnetic measurements in weld and base metal of service exposed Cr-Mo steel", A.Mitra, Z.J.Chen and D.C.Jiles. NDT International, 28, 29, 1995.

187. "Effects of tensile stress on magnetic Barkhausen emissions in amorphous Fe-Si-B alloy", A.Mitra, L.B.Sipahi, M.R.Govindaraju and D.C.Jiles, Journal of Magnetism & Magnetic Materials 153, 231, 1995.

188. "A magnetic coupling gel for improvement of magnetic interface coupling for nondestructive evaluation", Z.J.Chen, M.Negley and D.C.Jiles, IEEE Trans.Mag., 31, 4029, 1995.

189. "Influence of microstructure on micromagnetic Barkhausen emissions in AISI 4140 steel", A.Mitra, M.R.Govindaraju and D.C.Jiles, IEEE Trans.Mag., 31, 4053, 1995.

190. "Effects of tensile stress on magnetic Barkhausen parameters in 2605CO amorphous alloys", A.Mitra and D.C.Jiles, IEEE Trans. Mag., 31, 4020, 1995.

191. "Theory of frequency dependent hysteresis in electrically conducting magnetic materials", D.C.Jiles. Institute of Physics, Condensed Matter and Materials Physics Conference, University of Warwick, United Kingdom, December 19-21, 1994.

192. "Theory of the magnetomechanical effect", D.C.Jiles. Journal of Physics D (Applied Physics), 28, 1537, 1995.

193. "Theory and modelling of permeability changes in ordered magnetic materials subjected to time dependent magnetic fields", D.C.Jiles. American Physical Society March Meeting, San Jose, California, March 20-24, 1995.

194. "Magnetic nondestructive evaluation techniques for inspection of railroad bridges", M.R.Govindaraju, M.K.Devine, S.B.Biner and D.C.Jiles. Proceedings of the Research-into-Practice Conference, p. 177-186, 1995.

195. "Estimation of grinding burn damage using Barkhausen and X-ray measurements", A.P.Parakka, D.C.Jiles and H.Gupta, Review of Progress in Quantitative NDE, 15, 1547, 1996.

196. "Imaging of creep damaged CrMo steel piping using magnetic parameter variations", M.Negley and D.C.Jiles, Review of Progress in Quantitative NDE, 15, 925, 1996.

197. "Modelling of hysteresis in magnetic materials (**Invited paper**)", D.C.Jiles and Z.Gao, Sixth European Magnetic Materials and Applications Conference, Vienna, Austria, September 4-8, 1995.

198. "Modelling the magnetic properties of materials for circuit simulator applications (**Invited paper**)", D.C.Jiles and Z.Gao, "Non-linear electromagnetic systems", p.365-373, edited by A.J.Moses and A.Basak, IOS Press, Amsterdam, The Netherlands, 1996.

199. "Application of Barkhausen effect measurements for detection of near surface stress", D.A.Kaminski and D.C.Jiles. 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995. Journal of Applied Physics 79, 4749, 1996. (Abstract only).

200. "The magnetomechanical effect in electrolytic iron", M.K.Devine and D.C.Jiles. Journal of Applied Physics 79, 5493, 1996.

201. "Enhancement of the piezomagnetic response of highly magnetostrictive rare earth - iron alloys at KHz frequencies", P.Pulvirenti, D.C.Jiles, R.D.Greenough and I.M.Reed, Journal of Applied Physics 79, 6219, 1996.

202. "Hydrogen charging in metals and its effect on magnetic properties", A.Ramesh, M.R.Govindaraju, D.C.Jiles and S.B.Biner, Journal of Applied Physics 79, 5453, 1996.

203. "Effects of surface condition on Barkhausen emissions in steel", A.Parakka, D.C.Jiles, H.Gupta and S.Jalics, Journal of Applied Physics 79, 6045, 1996.

204. "The dependence of energy dissipation on annealing temperature of melt spun NdFeB permanent magnet materials", Z.Gao, D.C.Jiles, D.J.Branagan and R.W.McCallum, Journal of Applied Physics 79, 5510, 1996.

205. "Modelling of permanent magnets: interpretation of parameters from the Jiles-Atherton hysteresis model", L. Henderson Lewis, D.O.Welch, Z.Gao and D.C.Jiles, Journal of Applied Physics 79, 6470, 1996.

206. "Magnetostriction and magnetic Gruneisen parameters in pseudo-binary rare earth transition metal alloys", P.P.Pulvirenti and D.C.Jiles. IEEE Transactions on Magnetics, 32, 4785, 1996.

207. "Magnetic property variations in nickel caused by non-magnetic inclusions", A.Ramesh, M.R.Govindaraju, D.C.Jiles and S.B.Biner. IEEE Transactions on Magnetics, 32, 4836, 1996.

208. "A model of anisotropic anhysteretic magnetization", A.Ramesh, D.C.Jiles and J.Roderick. IEEE Transactions on Magnetics, 32, 4234, 1996.

209. "Composition dependence between magnetomechanical effect and magnetostriction", M.K.Devine and D.C.Jiles. IEEE Transactions on Magnetics, 32, 4740, 1996.

210. "Magnetic measurements for in situ monitoring of component of nuclear systems", D.A.Kaminski, Y.Bi, M.R.Govindaraju and D.C.Jiles. International Magnetics Conference, Seattle, Washington, May 1996.

211. "Finite element simulation of magnetic detection of creep damage at seam welds", M.J.Sablik, S.W.Rubin, D.C.Jiles, D.A.Kaminski and Y.Bi. IEEE Transactions on Magnetics, 32, 4290, 1996.

212. "Applications of magnetic materials", D.C.Jiles, NATO Advanced Study Institute on Magnetic Hysteresis in Novel Magnetic Materials, Mykonos, Greece, July 12, 1996.

213. "Nondestructive evaluation of creep damage in power plant steam generators and piping by a new magnetic inspection technique", M.R.Govindaraju, D.A.Kaminski, S.B.Biner and D.C.Jiles. Nondestructive Testing and Evaluation, 30, 11, 1997.

214. "Effects of stress on the magnetic properties of steels", D.C.Jiles, Review of Progress in Quantitative NDE, 16, 1739, 1997.

215. "Micromagnetic changes in steel due to surface modification", A.P.Parakka, D.C.Jiles, H.Gupta and M.Zhang, Review of Progress in Quantitative NDE, 16, 1459, 1997.

216. "Parametric imaging of surface hardness using Barkhausen technique", A.P.Parakka and D.C.Jiles, Review of Progress in Quantitative NDE, 16, 1517, 1997.

217. "Evaluation of shot peening in high strength steels", D.C.Jiles, R.Kern and W.A.Theiner, Proceedings of the Sixth Conference on Shot Peening, San Francisco, September 2-6, 1996.

218. "Magnetic nondestructive evaluation of nuclear pressure vessel steels for fatigue damage (**Invited paper**)", Y.Bi, M.R.Govindaraju, S.B.Biner and D.C.Jiles, in "Nondestructive evaluation and materials properties III", p. 115, Edited by P.K.Liaw, O.Buck, R.J.Arsenault and R.E.Green Jr., The Metallurgical Society, Warrendale, Pennsylvania, 1996.

219. "Magnetic Barkhausen emissions in as-quenched Fe-Si-B amorphous alloy", A.Mitra and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 168, 169, 1997.

220. "Micromagnetic Barkhausen emissions in 2.25Cr-1Mo steel subjected to creep", A.Mitra, Z.J.Chen, F.Laabs and D.C.Jiles. Philosophical Magazine, 75, 847, 1997.

221. "Magnetoelastic properties of Terfenol composites", K.Dennis, M.R.Govindaraju, D.C.Jiles, M.Linde and R.W.McCallum. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996. Journal of Applied Physics (abstract only), 81, 5423, 1997.

222. "Magnetomechanical effect in nickel and cobalt", M.K.Devine and D.C.Jiles. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996. Journal of Applied Physics, 81, 5603, 1997.

223. "Generalization of hysteresis modeling to anisotropic and textured materials", A.Ramesh and D.C.Jiles. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996. Journal of Applied Physics, 81, 5585, 1997.

224. "Barkhausen effect in steels and its dependence on surface condition", A.P.Parakka, D.C.Jiles and H.Gupta. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996. Journal of Applied Physics, 81, 5085, 1997.

225. "Magnetic measurement of creep damage: modeling and measurement", M.J.Sablik and D.C.Jiles. Conference on Nondestructive Evaluation of Utilities and Pipelines, Scottsdale, Arizona, December 4-5, 1996. Society of Photo-Optical Instrumentation Engineers, SPIE Proceedings No.2947, 166, 1996.

226. "A generalized three dimensional, anisotropic model for describing magnetic properties of materials", D.C.Jiles and A.Ramesh, Institute of Physics Condensed Matter and Materials Physics Conference, York, UK, December 17-19, 1996.

227. "Anisotropic three dimensional model for describing magnetization processes and magnetic properties of materials", D.C.Jiles, A.Ramesh and Y.M.Shi, American Physical Society, March Meeting, Kansas City, March 19, 1997.

228. "Application of the anisotropic extension of the theory of hysteresis to the magnetization curves of crystalline and textured magnetic materials", D.C.Jiles, A.Ramesh and Y.Shi, IEEE Transactions on Magnetics 33, 3961, 1997.

229. "The dependence of magnetic properties on fatigue behavior in A533B nuclear pressure vessel steels", Y.Bi, M.R.Govindaraju and D.C.Jiles, IEEE Transactions on Magnetics 33, 3928, 1997.

230. "Evaluation of creep in nickel and nickel alloys from magnetic measurements", X.Fang, M.Govindaraju, S.B.Biner and D.C.Jiles. International Magnetics Conference, New Orleans, April 1-4, 1997.

231. "Effect of surface mechanical changes on magnetic Barkhausen emissions", A.P.Parakka, J.Batey, D.C.Jiles, M.Zhang and H.Gupta. IEEE Transactions on Magnetics 33, 4026, 1997.

232. "Effect of stress and microstructural changes on magnetic properties of nickel-alumina composites", M.Govindaraju, X.Fang, S.B.Biner and D.C.Jiles. International Conference on Magnetism (ICM), Cairns, Australia, July 27-August 1, 1997, Journal of Magnetism and Magnetic Materials, 177, 207, 1998.

233. "Magnetic properties of ferrites under biaxial fields", Y.Bi, D.C.Jiles, A.P.Parakka. International Conference on Magnetism (ICM), Cairns, Australia, July 27-August 1, 1997.

234. "Finite element modeling of the effect of creep damage on a magnetic detector signal for seam welded steel pipes", M.J.Sablik, D.C.Jiles and M.R.Govindaraju, Review of Progress in Quantitative NDE, 17, 1493, 1998.

235. "Detection of fatigue crack propagation in steel using magnetic measurements", Y.Bi and D.C.Jiles, Review of Progress in Quantitative NDE, 17, 1509, 1998.

236. "Finite element simulation of creep damage effects on magnetic detector signal for a seam weld/HAZ region in steel pipe", M.J.Sablik, D.C.Jiles and M.R.Govindaraju. Presented at the EPRI Conference NDE for Damage Assessment, La Jolla, California, October 6-8, 1997.

237. "Effects of radiation damage on the magnetic properties of ferromagnetic structural materials (**Invited paper**)", D.C.Jiles, Special Invited Symposium on NDE of irradiation embrittlement of aging reactor components, MRS Fall Meeting, Boston, Massachusetts, December 1-5, 1997.

238. "Generalization of hysteresis modeling to anisotropic and textured materials", Y.M.Shi, D.C.Jiles and A.Ramesh. Journal of Magnetism and Magnetic Materials, 187, 75, 1998.

239. "Modeling of magnetic properties of NdFeB particulate composites with different compacting processes", X.Fang and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 187, 79, 1998.

240. "A general procedure for monitoring core loss improvements in laser scribed metallic glass ribbons", V.R.V.Ramanan, D.C.Jiles and M.J.Johnson. Proceedings of the 1998 NSF Design and Manufacturing Grantees Conference, Monterrey, Mexico, January 5-8, 1998.

241. "Domain wall motion in a random potential and hysteresis modelling", M.Pasquale, V.Basso, G.Bertotti, D.C.Jiles and Y.Bi. Journal of Applied Physics, 83, 6497, 1998.

242. "Finite Element analysis of the influence of fatigue cracks on magnetic properties of steels", Y.M.Shi and D.C.Jiles. Journal of Applied Physics, 83, 6353, 1998.

243. "Dependence of magnetic properties on crack size in steels", Y.Bi and D.C.Jiles, IEEE Trans. Mag., 34, 2021, 1998.

244. "Modeling of hysteresis in isotropic magnetic materials under orthogonal bias fields", Y.Bi and D.C.Jiles, 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998.

245. "Modeling of magnetic properties of heat treated Dy-doped NdFeB particles bonded in isotropic and anisotropic arrangements", X.Fang, D.C.Jiles and Y.Shi. IEEE Trans. Mag., 34, 1291, 1998.

246. "Finite element modelling of creep damage effects on a magnetic detector signal for a seam weld/HAZ-region in steel pipe", M.J.Sablik, D.C.Jiles and M.R.Govindaraju. IEEE Trans.Mag., 34, 2156, 1998.

247. "Modeling the effects of torsional stress on hysteretic magnetization", M.J.Sablik and D.C.Jiles, IEEE Transactions on Magnetics, 35, 498, 1999.

248. "Effect of matrix on magnetostriction of terfenol based composites", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, D.K.Falzgraf, R.W.McCallum and D.C.Jiles. American Physical Society, March Meeting, Los Angeles, March 16-20, 1998. Applied Physics Letters, 74, 1159, 1999.

249. "Composite Magnetostrictive Materials for Advanced Automotive Sensors", J. E. Snyder, Y. Chen, D. C. Jiles, R. W. McCallum, K. W. Dennis, C. Schwichtenberg, D. K. Falzgraf, 17th Annual Conference on Properties and Applications of Magnetic Materials, Chicago, May 1998.

250. "Evaluation of crack area of steels using magnetic measurements", Y.Bi and D.C.Jiles. Review of Progress in Quantitative NDE, Snowbird, Utah, July 1998.

251. "Nondestructive evaluation of fatigue damage using magnetic measurement techniques", C.C.H.Lo, F.Tang, Y.Shi, D.C.Jiles and S.B.Biner. Presented at the Review of Progress in Quantitative NDE, Snowbird, Utah, July 1998. RPQNDE, 18, 1787, 1999.

252. "Improved measurements of case depth by the application of signal processing algorithms to Barkhausen effect data", H.Cao, M.J.Johnson, S.Fung and D.C.Jiles. Review of Progress in Quantitative NDE, Snowbird, Utah, July 1998. RPQNDE, 18, 1725, 1999.

253. "Microstructure and magnetic properties of as-quenched and heat treated (NdDy)FeB powders produced by high pressure gas atomization", J.E.Snyder, C.C.H.Lo, X.Fang, B.Kriegermeier and D.C.Jiles. 43rd Annual

Conference on Magnetism and Magnetic Materials Conference, Miami, November 1998. J.Appl.Phys., 85, 5678, 1999.

254. "Core loss reduction in electrical steels through materials processing", B.Verbrugge and D.C.Jiles. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 1998. J.Appl.Phys., 85, 4895, 1999.

255. "Application of Preisach and Jiles-Atherton models to the simulation of hysteresis in soft magnetic alloys", M.Pasquale, G.Bertotti, D.C.Jiles and Y.Bi. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 1998. J.Appl.Phys., 85, 4373, 1999.

256. "Monitoring fatigue damage in materials using magnetic measurement techniques", C.C.H.Lo, F.Tang, Y.Shi, D.C.Jiles and S.B.Biner. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 1998. J.Appl.Phys., 85, 4595, 1999.

257. "Effect of creep on the structure and magnetic properties of nickel and nickel alloys", B.Kriegermeier, X.Fang, D.C.Jiles and S.B.Biner. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 1998.

258. "Measurement of magnetoelastic effects under strain in iron, nickel and cobalt", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, R.W.McCallum and D.C.Jiles. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 1998.

259. "Magnetoelastic generalization of the Landau-Lifschitz-Gilbert model", D.C.Jiles and R.Chen. American Physical Society, Centennial Meeting, Atlanta, Georgia, March 20-26, 1999.

260. "Low coercivity magnetostrictive material with giant piezomagnetic d33", J.E.Snyder, K.E.Dennis, Y.Chen, R.W.McCallum and D.C.Jiles. American Physical Society, Centennial Meeting, Atlanta, Georgia, March 20-26, 1999.

261. "Metal bonded Co- ferrite composites for magnetostrictive torque sensor applications", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, R.W.McCallum and D.C.Jiles. InterMag Conference, Seoul, Korea, May 1999. IEEE Trans. Mag. 35, 3652, 1999.

262. "Reducing core losses in amorphous Fe80B2Si8 ribbons by laser induced domain refinement", M.J.Johnson, R.Chen and D.C.Jiles. InterMag Conference, Seoul, Korea, May 1999. IEEE Trans. Mag. 35, 3865, 1999.

263. "Finite element modeling of an electrically variable inductor", Y.Bi and D.C.Jiles. InterMag Conference, Seoul, Korea, May 1999. IEEE Trans. Mag. 35, 3517, 1999.

264. "Measurements and modeling of hysteresis in magnetic materials under the action of an orthogonal bias field", Y.Bi and D.C.Jiles. InterMag Conference, Seoul, Korea, May 1999. IEEE Trans. Mag. 35, 3787, 1999.

265. "Evaluation of fatigue damage using a magnetic measurement technique", C.C.H.Lo, F.Tang, D.C.Jiles and S.B.Biner. InterMag Conference, Seoul, Korea, May 1999. IEEE Trans. Mag. 35, 3977, 1999.

266. "A new magnetoelastic torque sensor material for advanced automotive steering systems" J.E.Snyder, K.Dennis, Y.Chen, R.W.McCallum and D.C.Jiles. Eighteenth Conference on Properties and Applications of Magnetic Materials, Chicago, April 26-28, 1999.

267. "A modified Stoner Wohlfarth computational model for hysteretic magnetic properties of a ferromagnetic composite rod under torsion", M.J.Sablik and D.C.Jiles, J.Phys.D, 32, 1971, 1999.

268. "Determination of wear induced material loss from case hardened steel", M.J.Johnson, J.Zhou, B.Zhu, N.Nakagawa and D.C.Jiles, Review of Progress in Quantitative NDE, 19, 1465, 2000.

269. "Dynamical assessment of magnetic Barkhausen signals", V.Garcia, D.Clatterbuck, C.C.H.Lo, M.J.Johnson and D.C.Jiles, Review of Progress in Quantitative NDE, 19, 781, 2000.

270. "Modeling the magnetic Barkhausen effect", D.Clatterbuck, M.J.Johnson, D.C.Jiles and V.Garcia, Review of Progress in Quantitative NDE, 19, 1533, 2000.

271. "Modified law of approach for the magnetomechanical model", M.J.Sablik, Y.Chen and D.C.Jiles, Review of Progress in Quantitative NDE, 19, 1565, 2000.

272. "Structural characterization and magnetic properties of steels subjected to fatigue", F.Tang, C.C.H.Lo, D.C.Jiles and S.B.Biner, Review of Progress in Quantitative NDE, 19, 1597, 2000.

273. "Magnetoelastic effects in materials and their applications in nondestructive evaluation of stress", (**Invited paper**), D.C.Jiles. Proceedings of the Fifth International Workshop on Electromagnetic Nondestructive Evaluation, Des Moines, August 1-3, 1999.

274. "Nondestructive characterization of case hardened steel", M.J.Johnson, J.Zhou, N.Nakagawa, D.C.Jiles and B.Zhu. Proceedings of the Fifth International Workshop on Electromagnetic Nondestructive Evaluation, Des Moines, August 1-3, 1999. Published in "Electromagnetic Nondestructive Evaluation IV", p.127, IOS Press, Amsterdam, 2000.

275. "An extended model of the magnetic Barkhausen effect based on the ABBM model", D.Clatterbuck, V.Garcia, M.J.Johnson and D.C.Jiles. Journal of Applied Physics 87, 4771, 2000.

276. "Temperature dependence of the magneto-mechanical effect in metal bonded cobalt ferrite composites under torsional strain" Y.Chen, J.E.Snyder, K.Dennis, R.W.McCallum and D.C. Jiles. Journal of Applied Physics 87, 5798, 2000.

277. "Effects of fatigue induced changes in microstructure and stress on domain structure and magnetic properties", C.C. Lo, F.Tang, S.B.Biner and D.C. Jiles. Journal of Applied Physics 87, 6520, 2000.

278. "The Matteucci effect and the law of approach in cobalt ferrite composite magnets", Y.Chen and D.C.Jiles. Institute of Physics Condensed Matter and Materials Physics Conference, Leicester, UK, December 20-22, 1999.

279. "Dynamics of domain magnetization and the Barkhausen effect", D.C.Jiles. (**Invited review**), Czechoslovak Journal of Physics, 50, 893, 2000.

280. "Magnetic methods in nondestructive testing", D.C.Jiles, (**Invited paper**), Encyclopedia of Materials Science and Technology, p. 6021 Ed. K.H.J.Buschow et al., Elsevier Press, Oxford, September 2001.

281. "Influence of nitrogen on the magnetic properties and microstructure of sputtered FeSiAl(N) films", J.E.Snyder, C.C.H.Lo, R.Chen, B.Kriegermeier, J.Leib, S.J.Lee, M.J.Kramer, D.C.Jiles, M.T.Kief, American Physical Society March Meeting, Minneapolis, March 20-24, 2000.

282. "Theory and modeling of the Matteucci effect using the law of approach ", Y.Chen and D.C.Jiles, American Physical Society March Meeting, Minneapolis, March 20-24, 2000.

283. "A non-linear model for the Barkhausen effect", D.C.Jiles and S.J.Lee, American Physical Society March Meeting, Minneapolis, March 20-24, 2000.

284. "Modeling and simulation of a permanent magnet array in elliptical configurations" S.J.Lee and D.C.Jiles, p.668, Proceedings of the Third International Conference on Modeling and Simulation of Microsystems (MSM 2000), San Diego, March 27-29, 2000.

285. "The magnetomechanical effect under torsional stress and the law of approach in a Co ferrite composite" Y. Chen and D.C. Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000. IEEE Transactions on Magnetics, 37, 3069, 2001.

286. "Application of Preisach analysis to detection of fatigue damage" Y.Y.Melikhov, C.C.H.Lo, D.C.Jiles, I.Tomáš, J.Kadlecová, O.V.Perevertov. International Magnetics Conference, Toronto, Canada, April 9-13, 2000. IEEE Transactions on Magnetics, 36, 3211, 2000.

287. "Modeling hysteretic magnetic properties with changing torsion and constant magnetic field in steel", M.J.Sablik and D.C.Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000. IEEE Transactions on Magnetics, 36, 3248, 2000.

288. "Magnetic measurement of material loss in case-hardened steel using a new Barkhausen effect system", B.Zhu, M.J.Johnson and D.C.Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000. IEEE Transactions on Magnetics, 36, 3602, 2000.

289. "Geometrical enhancements to permanent magnet flux sources: applications to energy efficient magnetocaloric refrigeration systems", S.J.Lee and D.C. Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000. IEEE Transactions on Magnetics, 36, 3105, 2000.

290. "Enhanced magnetic flux density from geometrical variations of permanent magnet arrays", S.J.Lee and D.C.Jiles. Presented at the Nineteenth Conference on Properties and Applications of Magnetic Materials, Chicago, May 22-24, 2000.

291. "Modeling of magnetic properties of polymer bonded NdFeB magnets with surface modifications", J.Xiao, J.U.Otaigbe and D.C.Jiles, Journal of Magnetism and Magnetic Materials, 218, 60, 2000.

292. "Superparamagnetic magnetization equation in two dimensions", D.C.Jiles, S.J.Lee J.Kenkel and K.Metlov. Applied Physics Letters, 77, 1029, 2000.

293. "Multi-function magnetic Barkhausen emission measurement system", B.Zhu, M.J.Johnson, C.C.Lo and D.C.Jiles. IEEE Transactions on Magnetics, 37, 1095, 2001.

294. "An extension of the ABBM model to non-stationary domain wall dynamics and Barkhausen effect", D.M.Clatterbuck, V.J.Garcia, M.J.Johnson and D.C.Jiles. Submitted to Journal of Applied Physics.

295. "The future of magnetoelectronic devices" (Invited), D.C.Jiles. Workshop on Preparation, Properties and Applications of Thin Ferromagnetic Films, Vienna, June 15-16, 2000.

296. "Preparation and properties of magnetic films with enhanced properties for ultra-thin magnetic shield layers", (Invited), J.E.Snyder, C.C.H.Lo, R.Chen, B.Kriegermeier, J.Leib, S.J.Lee, M.J.Kramer, D.C.Jiles and M.Kief. Workshop on Preparation, Properties and Applications of Thin Ferromagnetic Films, Vienna, June 15-16, 2000.

297. "Evaluation of fatigue damage in steels using Preisach model analysis of magnetic hysteresis measurements", C.C.H.Lo, Y.Y.Melikhov, I.Tomas and D.C.Jiles. Review of Progress in Quantitative NDE, 20B, 1451, 2001.

298. "Derivation of non-linear ABBM model for the Barkhausen effect", S.J.Lee, D.M.Clatterbuck, B.Zhu, C.C.H.Lo and D.C.Jiles. Review of Progress in Quantitative NDE, 20B, 1797, 2001.

299. "The effects of aging time, temperature and creep damage on the magnetic properties of nickel alloys", M.J.Johnson, B.Zhu, C.C.H.Lo, D.C.Jiles and R.E.Shannon. Review of Progress in Quantitative NDE, 20B, 1429, 2001.

300. "The Effect of Nitrogen on the Microstructure, Stress, and Magnetic Properties of RF-Sputtered Fe-Si-Al(-N) Thin Films", J.E.Snyder, C.C.H.Lo, R.Chen, B.Kriegermeier, J.Leib, S.J.Lee, M.J.Kramer and D.C.Jiles.

International Conference on Magnetism, Recife, Brazil, August 7-11, 2000. Journal of Magnetism and Magnetic Materials, 226-230, 1669, 2001.

301. "Magnetization reversal in sputtered FeSiAl(N) films with a stripe domain structure", C.C.H.Lo, J.E.Snyder, J.Leib, R.Chen, B.Kriegermeier, M.J.Kramer and D.C.Jiles. International Conference on Magnetism, Recife, Brazil, August 7-11, 2000.

302. "The Barkhausen effect in Fe-C and a non-linear model incorporating hysteresis loop", S.J.Lee, B.Zhu, C.C.H.Lo, D.M.Clatterbuck and D.C.Jiles. International Conference on Magnetism, Recife, Brazil, August 7-11, 2000.

303. "Hysteresis measurements and modeling of thin permalloy films with uniaxial anisotropy", H.Hauser, P.Fulmek, D.C.Jiles and B.Zhu. Proceedings of the 6th International Workshop on One and Two Dimensional Magnetic Measurements and Testing, Bad Gastein, p.220, September 20-21, 2000.

304. "Performance of hysteresis simulation for two dimensional particle assemblies", H.Hauser, P.Fulmek, P.Andrei, L.Stoleriu, D.C.Jiles and B.Zhu. Proceedings of the 6th International Workshop on One and Two Dimensional Magnetic Measurements and Testing, Bad Gastein, p.225, September 20-21, 2000.

305. "New magnetostrictive composite material for high performance automotive torque sensor applications (Invited)", D.C.Jiles, K.W.Dennis, R.W.McCallum, and J.E.Snyder. ASM Materials Conference, St.Louis, October 9-12, 2000.

306. "Magnetic force microscopy study of magnetization reversal in sputtered FeSiAl(N) films", C.C.H.Lo, J.E.Snyder, J.Leib, R.Chen, B.Sutton, M.J.Kramer, D.C.Jiles and M.T.Kief. Journal of Applied Physics, 89, 2868, 2001.

307. "Indication of Ferromagnetic Steel Fatigue by Preisach Analysis of Magnetization Processes", I. Tomáš, Ye. Melikhov, O. Perevertov, J. Kadlecová, C.C.H. Lo and D.C. Jiles. Presented at Japan-Central Europe Workshop, Brno, Czech Republic, November 2000.

308. "Magnetic measurements for NDE: background, implementation and applications", **(Invited paper)**, M.J.Johnson, C.C.H.Lo, B.Zhu, H.Cao and D.C.Jiles. Journal of Nondestructive Evaluation, 20, 11, 2000.

309. "Micromagnetic modeling of the magnetomechanical effect", B.Zhu, C.C.H.Lo, S.J.Lee and D.C.Jiles. Journal of Applied Physics, 89, 7009, 2001.

310. "Application of non-linear Barkhausen model incorporating anhysteretic susceptibility to annealed iron", S.J.Lee, B.Zhu, C.C.H.Lo, D.M.Clatterbuck and D.C.Jiles. IEEE Trans. Mag. 37, 2340, 2001.

311. "Magnetization reversal in CoFeHfO films", C.C.H.Lo, J.E.Snyder, J.Leib, D.Wang, Z.Qian, J.M.Daughton and D.C.Jiles. IEEE Trans. Mag. 37, 2337, 2001.

312. "Composite magnetostrictive materials for advanced automotive magnetomechanical sensors", R.W.McCallum, K.W.Dennis, D.C.Jiles, J.E.Snyder and Y.H.Chen. in "Modern trends in Magnetostriction: Study and Application", NATO Science Seies II, p.283, Edited by M.R.J.Gibbs, Kluwer, Amsterdam, 2000. also appeared in Low Temperature Physics (Translation of Fizika Nizkikh Temperatur (Kiev)) 27(4), 266-274. 2001.

313. "Magnetic response to cyclic fatigue of low carbon Fe-based samples", Y.Melikhov, C.C.H.Lo, O.Perevertov, J.Kadlekova, D.C.Jiles, I.Tomas. Journal of Physics D. (Applied Physics), 35, 413, 2002.

314. "Investigation of sensitivity of Preisach analysis for NDT", Y.Melikhov, D.C.Jiles, I.Tomas, C.C.H.Lo, O.Perevertov, J.Kadlekova, IEEE Trans. Mag. 37, 3907, 2001.

315. "Magnetomechanical effects under torsional strain in iron, cobalt and nickel", Y.Chen, B.K.Kriegermeier-Sutton, J.E.Snyder, K.W.Dennis, R.W.McCallum and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 236, 131, 2001.

316. "Observation of magneto mechanical phase transformation in $Gd_5(Si_xGe_{1-x})_4$ with magnetic force microscopy (MFM)", J.E.Snyder, P.Xi, J.Leib, C.C.Lo, S.J.Lee and D.C.Jiles. American Physical Society, March Meeting Seattle, March 12-16, 2001.

317. "Relationship between magnetomechanical effect, magnetostriction and anisotropy in magnetoelastic materials", D.C.Jiles, Y.Chen, B.K.Kriegermeier-Sutton, J.E.Snyder, K.W.Dennis and R.W.McCallum. American Physical Society, March Meeting Seattle, March 12-16, 2001.

318. "Stress determination and magnetization reversal detection in FeSiAl(N) films using magnetic force microscopy with in-plane magnetic field capability", J.E. Snyder, C.C.H. Lo, J. Leib, R. Chen, B. Kriegermeier, M.J. Kramer, D.C. Jiles and M.T. Kief" American Physical Society, March Meeting Seattle, March 12-16, 2001.

319. "Anhysteretic mean field superparamagnetic magnetization equation in two dimensions", S.J.Lee, D.C.Jiles, J.Kenkel and K. L. Metlov. American Physical Society, March Meeting Seattle, March 12-16, 2001.

320. "Modeling stress effects in magnetostrictive films", S.J.Lee, B.Zhu, C.C.H.Lo, J.E.Snyder and D.C.Jiles. Fourth International Conference on Modeling and Simulation of Microsystems, Hilton Head, South Carolina, March 19-21, 2001. Published in "Computational Nanoscience", Vol.1, p.149, 2001.

321. "Vertically integrated engineering design for combined research and curriculum development in materials engineering and nondestructive evaluation" D.C.Jiles, M.Akinc, S.B.Biner, K.Constant, J.N.Gray, M.Huba, S.W.Martin, L.W.Schmerr and R.B.Thompson. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. RPQNDE 21, 2035, 2002.

322. "Magnetic field gradient measurement on magnetic cards with magnetic force microscopy" C.C.H. Lo, J. Leib and D.C. Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. RPQNDE 21, 999, 2002.

323. "Studies on the effects of pulsed-magnetic field treatment on magnetic materials" M.J. Johnson, C.C.H. Lo, J.E. Snyder, J. Leib, S.J. Lee, M. Mina and D.C. Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. RPQNDE 21, 1569, 2002.

324. "Magnetic NDE measurements on 410 stainless steel: an on site and laboratory evaluation", M. J. Johnson, D.C.Jiles, C.C.H. Lo, P.Zombo and B. Zhu. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. RPQNDE 21, 1591, 2002

325. "Experimental and modeling studies of Barkhausen effect in steels and nickel", C.C.H.Lo, B. Zhu, L.C. Kerdus and D.C.Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. RPQNDE 21, 1577, 2002.

326. "Hysteresis models: non-linear magnetism on length scales from the atomistic to the macroscopic" **(Invited)**, Joint European Magnetic Symposia, Grenoble, France, August 28 – September 1, 2001. Journal of Magnetism and Magnetic Materials, 242-245, 116, 2002.

327. "Magnetic Force Microscopy Characterization of an Order-Disorder transition with hysteresis: the Magnetic-Martensitic Phase Transformation in $Gd_5(Si_xGe_{1-x})_4$", J.Leib, C.C.H. Lo, J.E. Snyder, J.A. Paulsen, P. Xi and D.C. Jiles. 46th Magnetism and Magnetic Materials Conference, Seattle, Washington, November 12-16, 2001. Journal of Applied Physics, 91, 8852, 2002.

328. "Permanent magnet array for the magnetic refrigerator", S J Lee, J Kenkel, V K Pecharsky, and D C Jiles. 46th Magnetism and Magnetic Materials Conference, Seattle, Washington, November 12-16, 2001. Journal of Applied Physics, 91, 8894, 2002.

329. "Examination of the relationship between the parameters of Barkhausen effect model and microstructure of magnetic materials", C. C. H. Lo, S.J. Lee, L.C. Kerdus and D. C. Jiles. 46th Magnetism and Magnetic Materials Conference, Seattle, Washington, November 12-16, 2001. Journal of Applied Physics, 91, 7651, 2002.

330. "Lorentz transmission electron microscopy and magnetic force microscopy characterization of NiFe / Al-oxide / Co films", A.C.C.Yu, C.C.H.Lo, A.K.Petford-Long, D.C.Jiles and T.Miyazaki, Journal of Applied Physics, 91, 780, 2002

331. "Matteucci effect in axially polarized nickel rods", D.C. Jiles, Y.P. Shen, C.C.H. Lo, A.P. Ring and J.E. Snyder. American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.

332. "Magnetocrystalline anisotropy in giant magnetocaloric $Gd(Si_xGe_{1-x})_4$ alloys", D.C. Jiles, J. Leib, C.C. H. Lo and J.E. Snyder, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.

333. "Effect of magnetic field applied along the a-axis on the thermal expansion and first-order transition temperature of single crystal $Gd_5(Si_2Ge_2)$" , M.G.Han, D.C. Jiles, J.A. Paulsen, J.E. Snyder and S.J.Lee, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.

334. "Magnetocaloric effect: permanent magnet array for generation of high magnetic fields", S.J. Lee, J.M. Kenkel, and D.C. Jiles, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.

335. "Recent investigations of non-linear magnetoelastic effects under variable stress, field and temperature: the limits of effective field theory", D.C. Jiles and L. Li, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.

336. "Modeling stress dependent experimental anhysteretic magnetization curves", J.M. Kenkel, S.J. Lee, C.C.H. Lo, D.C. Jiles, K.M. Koo, and D.H. Ng. International Magnetics Conference, Amsterdam, Netherlands, April 28 – May 2, 2002.

337. "Design of permanent magnet flux source for a rotary magnetic refrigerating system", S.J. Lee, J. Kenkel, and D.C. Jiles, IEEE Transactions in Magnetics 38, 2991, 2002.

338. "Magnetic force microscopy characterization of unusual magnetic coupling in an extraordinarily responsive magnetic material", J. Leib, C.C. H. Lo, J.E. Snyder and D.C. Jiles, IEEE Transactions in Magnetics 38, 2447, 2002.

339. "Thermal expansion of single crystal $Gd_5(Si_2Ge_2)$ showing unusual first-order phase transformation", M.Han, J.A. Paulsen, J.E. Snyder, D.C. Jiles. IEEE Transactions in Magnetics 38, 3252, 2002.

340. "Modeling of stress effects on magnetic hysteresis and Barkhausen emission using an integrated hysteretic-stochastic model" C.C.H. Lo, S.J. Lee, L. Li, L.C. Kerdus and D.C. Jiles, IEEE Transactions in Magnetics 38, 2418, 2002.

341. "Evaluation of the effects of pulsed magnetic field treatment on magnetic materials", C.C.H.Lo, D.C.Jiles, M.Mina, M.J.Johnson, L.C.Kerdus and J.Leib. Materials Evaluation 60 (8), 971, 2002.

342. "The role of new materials in the development of magnetic sensors and actuators **(Invited)**", D.C.Jiles and C.C.H.Lo, Plenary Lecture, European Magnetic Sensors and Actuators Conference, Athens, Greece, July 3-5, 2002. Sensors & Actuators: A. Physical Sensors, 106, 3, 2003.

343. "Recent progress in undergraduate vertically integrated engineering design projects in nondestructive evaluation", D.C.Jiles, M.Akinc, S.B.Biner, K.Constant, J.N.Gray, M.Huba, L.W.Schmerr and R.B.Thompson, Review of Progress in Quantitative NDE, Bellingham, Washington, July 14-19, 2002.

344. "Development of Modeling and Simulation for Magnetic Particle Inspection Using Finite Element Method", J. Y. Lee, S.J.Lee and D.C.Jiles. Review of Progress in Quantitative NDE, 22, 915, 2003.

345. "Development of a Magnetic NDE Imaging System Using Magnetoresistive Sensors", C. C. H. Lo, J.A.Paulsen and D.C.Jiles. Review of Progress in Quantitative NDE, 22, 931, 2003.

346. "A New Model Equation for Interpreting the Magnetomechanical Effect Using a Generalization of the Rayleigh Law by L. Li and D.C.Jiles. Review of Progress in Quantitative NDE, 22, 1539, 2003.

347. "Recent developments in rare earth based magnetostrictive materials and their applications **(Invited)**", D.C.Jiles, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. 27th Rare Earth Magnets Workshop, University of Delaware, Newark, Delaware, August 19-22, 2002

348. "The effects of stress on magnetic properties and the use of magnetic measurements for evaluation of materials **(Invited)**". D.C. Jiles, S.J. Lee and C.C.H. Lo, Conference on Resurgence of Metallic Materials, Institute of Engineers of India, Jamshedpur, October 25, 2002. Edited by D.Bhattacharya.

349. "Design of high-magnetic field gradient sources for magnetically-induced flow of ferrofluids", W. He, S. J Lee, and D. C. Jiles, D. H. Schmidt, M. D. Porter, and R. Shinar. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002. Journal of Applied Physics 93, 7459, 2003.

350. "Microelectromagnetic device for a ferrofluidic actuator", Y. Melikhov, S. J. Lee, D. C. Jiles, D. H. Schmidt, M. D. Porter and R. Shinar. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002. Journal of Applied Physics 93, 8438, 2003.

351. "In-situ applied field imaging of a magnetic tunnel junction using magnetic force microscopy", J. Leib, C.C.H. Lo, J.E. Snyder and D.C. Jiles. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002. Journal of Applied Physics 93, 8537, 2003.

352. "Thermal expansion studies on the unusual first order transition of $Gd_5Si_{2.09}Ge_{1.91}$ made from high purity and commercial Gd metals", M. Han, D.C. Jiles, J.E. Snyder, C.C.H. Lo and J.A. Paulsen. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002. Journal of Applied Physics 93, 8486, 2003.

353. "Theory of the magnetomechanical effect: application of the Rayleigh law to the stress domain", L.Li and D.C. Jiles. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002. Journal of Applied Physics 93, 8480, 2003.

354. "Modeling the interrelating effects of plastic deformation and stress on magnetic hysteresis and Barkhausen emission", C. C. H. Lo, E. Kinser and D. C. Jiles. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002. Journal of Applied Physics 93, 6626, 2003.

355. "Non-linear magnetism and hysteresis on length scales from the atomistic to the macroscopic", D.C. Jiles, APS Topical Group on Magnetism Newsletter, 11, 5, 2002.

356. "Extraordinary magnetomechanical coupling as a result of a combined magnetic/structural transition in a new class of rare earth compound **(Invited)**", D.C.Jiles, S.J.Lee, M.Han, C.C.H.Lo, J.E.Snyder, K.A.Gschneidner, V.K.Pecharsky, A.O.Pecharsky, T.Lograsso and D.Schlagel, Annual Conference of the Korean Magnetics Society, Yong Pyeong, Korea, December 11, 2002. Published in Journal of Magnetics, 8 (1), 1, 2003.

357. "Influence of nanostructure and nitrogen content on the optical and electrical properties of reactively sputtered FeAlSi(N) films", S.J.Lee, J.E.Snyder, C.C.H.Lo, K.M.Campos-Anderson, J.W.Andregg and D.C.Jiles. Journal of Applied Physics, 94, 2607, 2003.

358. "Curie Temperature of Silicon Doped Cobalt Ferrite for Use as a Stress Sensor", C. C. H. Lo, J. A. Paulsen, A. P. Ring, J. E. Snyder, and D. C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.

359. "Modeling Spin-Dependent Magnetic Junction Behavior", B.J. Baker, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.

360. "Optical properties of single crystalline $Gd_5Si_2Ge_2$", S.J. Lee, J.M. Park, J.E. Snyder, T.A. Lograsso, D.L. Schlagel, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003. Applied Physics Letters, 2003.

361. "Equivalent Magnetic Field due to Matteucci Effect in nickel", D.C. Jiles, Y. Shen, J.E. Snyder, A. Ring, and J.A. Paulsen. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.

362. "An Extension to the Theory of the Magnetomechanical Effect: Modified Law of Approach to the Stress Domain", D.C. Jiles, and L. Li. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.

363. "The Domain Structures of a Magnetic Tunnel Junction with in-situ Applied Field", J.S. Leib, B.J. Baker, Y. Shen, J.E. Snyder, T. Kawaguchi, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.

364. "Angular dependence of the unusual first order transition temperature in $Gd_5(Si_{0.5}Ge_{0.5})_4$", M. Han, D. C. Jiles, S. J. Lee, J. E. Snyder, T. A. Lograsso, and D. L. Schlagel. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.

365. "Magnetic Relaxation and Indirect Exchange in a Complex Rare Earth Magnetic Material", J.S. Leib, J.E. Snyder, T.A. Lograsso, D.L. Schlagel, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.

366. "Simultaneous magnetic force microscopy and magnetoresistance characterization of a magnetic tunnel junction with in situ applied field ", J.S.Leib, B.J.Baker, Y.P.Shen, J.E.Snyder, T.Kawaguchi and D.C.Jiles. International Magnetics Conference, Boston, Massachusetts, March 30 - April 3 2003. IEEE Transactions on Magnetics, 39, 3456, 2003.

367. "A magnetic imaging system for evaluation of material conditions using magnetoresistive devices", C.C.H.Lo, J.A.Paulsen and D.C.Jiles. International Magnetics Conference, Boston, Massachusetts, March 30 - April 3 2003. IEEE Transactions on Magnetics, 39, 3453, 2003.

368. "Angular dependence of the unusual first order transition temperature in $Gd_5(Si_xGe_{1-x})_4$", M.Han D.C.Jiles, S.J.Lee, J.E.Snyder, T.A.Lograsso and D.L.Schlagel. International Magnetics Conference, Boston, Massachusetts, March 30 - April 3 2003. IEEE Transactions on Magnetics, 39, 3151, 2003.

369. "Study of Curie temperature of cobalt ferrite based composites for stress sensors applications" J.A.Paulsen, J.E.Snyder, A.P.Ring, J.S.Leib, C.C.H.Lo and D.C.Jiles. International Magnetics Conference, Boston, Massachusetts, March 30 - April 3 2003. IEEE Transactions on Magnetics, 39, 3316, 2003.

370. "Modified law of approach for the magnetomechanical model: application of the Rayleigh law to the stress domain", L.Li and D.C.Jiles. International Magnetics Conference, Boston, Massachusetts, March 30 - April 3 2003. IEEE Transactions on Magnetics, 39, 3037, 2003.

371. "Experimental and modeling studies of the effects of shear stress on magnetization in nickel", J.A.Paulsen, C.C.H. Lo, J.E.Snyder, A.Ring, Y.Shen and D.C.Jiles. International Magnetics Conference, Boston, Massachusetts, March 30 - April 3 2003. IEEE Transactions on Magnetics, 39, 3417, 2003.

372. "Sensitivity analysis of simulations for magnetic particle inspection using finite element method", J.Y.Lee, S.J.Lee, D.C.Jiles, M.Garton, R.Lopez and L.Brasche. International Magnetics Conference, Boston, Massachusetts, March 30 - April 3 2003. IEEE Transactions on Magnetics, 39, 3604, 2003.

373. "Development of new materials for magnetic sensors and actuators **(Invited)** ", C.C.H.Lo and D.C.Jiles. 22nd Conference on Properties and Applications of Magnetic Materials, Chicago, May 12-14, 2003.

374. "The Effect Of Magnetic Field On The First Order Curie Point Transition of $Gd_5(Si_xge_{1-X})_4$", M. Han, D. C. Jiles, J. E. Snyder. International Conference on Magnetism, Rome, Italy, July 28-August 1, 2003.

375. "Ampere's Circuital Law Analog For The Matteucci –Wiedemann Effect In Magnetoelastic Materials", J. A. Paulsen, C. C. H. Lo, J. E. Snyder, S.J. Lee and D. C. Jiles. International Conference on Magnetism, Rome, Italy, July 28-August 1, 2003.

376. **"**Magnetic Relaxation And Indirect Exchange Associated With The First Order Magnetic/Martensitic Curie Point Transition In $Gd_5(Ge_xSi_{1-X})_4$**" ,** J. Leib, J.E. Snyder, T.A. Lograsso, D. Schlagel, D.C. Jiles**.** International Conference on Magnetism, Rome, Italy, July 28-August 1, 2003.

377. "New Magnetostrictive Materials for Use as a Magnetic Stress Sensor for Non-destructive Evaluation", J.A. Paulsen, A.P. Ring, C.C.H. Lo, J. Snyder, D.C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

378. "A new approach to the magnetomechanical effect model", L. Li and D.C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

379. "Evaluation of stress distribution in magnetic materials using a magnetic imaging system", C. C. H. Lo, J.A. Paulsen and D. C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

380. "Magnetic nondestructive investigation of ferromagnetic alloys subjected to stress and fatigue", Y. Melikhov, C.C.H. Lo, D.C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

381. "BEM-FEM coupling method and small-flaw approximation in NDE", Y.Melikhov, S.J.Lee, J.Y.Lee, D.C.Jiles, M.Garton, L.Brasche, R.Lopez. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

382. "Incorporation of Hysteresis Effects into Finite Element Modeling", J. Y. Lee, S. J. Lee, Y. Melikhov, D. C. Jiles, M. Garton, R. Lopez, and L. Brasche. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

383. "Modeling of Magnetic Forces for Investigation of Magnetic Particles around a Defect ", J. Y. Lee, S. J. Lee, Y. Melikhov, D. C. Jiles, M. Garton, R. Lopez, and L. Brasche. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

384. "New highly magnetostrictive, soft magnetic, metal bonded cobalt ferrite composites for stress detection" **(Invited)**. D.C.Jiles, C.C.H.Lo, J.A.Paulsen, A.P.Ring and J.E.Snyder. Presented at the 16th Soft Magnetic Materials Conference, Dusseldorf, Germany, September 9-12, 2003.

385. "Recent advances and future directions in magnetic materials", **(Invited)**, D.C.Jiles. Acta Materiala 51, 5907, 2003.

386. "The role of new materials" **(Invited)**, D.C.Jiles and C.C.H.Lo. Magnetics Sensors Roadmap Workshop, NIST, Gaithersburg, November 7, 2003.

387. "Quantitative evaluation of stress distribution in magnetic materials by Barkhausen effect and magnetic hysteresis measurements", C.C.H.Lo, J.A.Paulsen, E.Kinser and D.C.Jiles. IEEE Transactions on Magnetics 40, 2173, 2004.

388. "A Model for Spin-Dependent Magnetic Junction Behavior", B.Baker, J.E.Snyder and D.C.Jiles. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.

389. "Giant Magnetostriction Behavior around the Curie Temperature of Single Crystal Gd5($Si_{0.5}Ge_{0.5}$)$_4$", M. Han, D. C. Jiles, J. E. Snyder, T. A. Lograsso, and D. L. Schlagel. Journal of Applied Physics, 95, 6945, 2004.

390. "Dynamics of the Magnetic Field-Induced First Order Magnetic-Structural Phase Transformation of Gd5(Si0.5Ge0.5)4", J.S.Leib, J.E.Snyder, D.C.Jiles, D.L.Schlagel and T.A.Lograsso. Journal of Applied Physics, 95, 6915, 2004.

391. "A new approach to modeling the magnetomechanical effect", L.Li and D.C.Jiles. Journal of Applied Physics, 95, 7058, 2004.

392. "Finite element method incorporating the hysteresis effect for modeling and simulation of magnetic particle inspection", S.J.Lee, J.Y.Lee, Y.Melikhov and D.C.Jiles. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.

393. "Reflectance anisotropy of $Gd_5Si_2Ge_2$ and $Tb_5Si_{2.2}Ge_{1.8}$", S.J.Lee, J.M.Park, J.E.Snyder, D.C.Jiles, D.L.Schlagel, T.A.Lograsso, A.O.Pecharsky and D.W.Lynch. Applied Physics Letters, 84, 1865, 2004.

394. "Ferromagnetic properties of deformation induced martensite transformation in AISI 304 stainless steel", A.Mitra, P.K.Srivastava, P.K.De, D.K.Bhattacharya and D.C. Jiles. Metallurgical Transactions 35A, 599, 2004.

395. "Curie Temperature and Magnetostriction of Manganese doped Cobalt Ferrite Magnetostrictive Material", J. A. Paulsen, A. P. Ring, C. C. H. Lo, J. E. Snyder and D. C. Jiles. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.

396. "Effects of anisotropy and stress on the non-linear magnetic susceptibility of ferromagnets", Y. Melikhov, H. Hauser, L. Li, D.C. Jiles and R.Grossinger. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.

397. "Giant magnetostriction and thermal expansion in the germanium rich range of $Gd_5(Si_xGe_{1-x})_4$", M. Han, D. C. Jiles, J. E. Snyder, A. O. Pecharsky. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.

398. "Thermal Expansion and Magnetostriction in $Pr_5Ni_{1.9}Si_3$", B. J. Baker, S.H.Song, J.A. Paulsen, J.E. Snyder, D.C. Jiles and A.O. Pecharsky. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.

399. "Nonlinear Hysteretic Model for the Magnetomechanical Effect", L. Li, D.C. Jiles and C.C.H. Lo. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.

400. "New Manganese substituted cobalt ferrite magnetostrictive materials for magnetic stress sensor applications", J.A.Paulsen, A.P.Ring, C.C.H.Lo, J.E.Snyder and D.C.Jiles. Journal of Applied Physics, 97, 44502, 2005.

401. "An approach to modeling the dependence of magnetization on magnetic field in the high field regime". H.Hauser, D.C.Jiles, Y.Melikhov, L.Li and R.Grossinger. Journal of Magnetism and Magnetic Materials, 300, 273, 2006.

402. "Examination of the equivalence of ferromagnetic hysteresis models describing the dependence of magnetization on magnetic field and stress". H.Hauser, Y.Melikhov and D.C. Jiles. IEEE Transactions on Magnetics, 45 1940, 2009.

403. "Including effects of microstructure and anisotropy in theoretical models describing hysteresis in ferromagnetic materials", H.Hauser, D.C.Jiles, Y.Melikhov. Applied Physics Letters, 91, 172512, 2007.

404. "Magnetic measurement techniques for nondestructive evaluation of materials (**Invited**)", UK Magnetics Society Workshop on "Magnetic Standards and Measurements", Cardiff University, UK, March 30, 2004

405. "Extraordinary magnetostriction and thermal expansion behavior in a new class of rare earth compound as a result of a first order combined magnetic/structural transition, D. C. Jiles, M. Han, J. E. Snyder, T. A. Lograsso, D. L. Schlagel. Condensed Matter and Materials Physics Conference, Warwick, UK, 4-7 April 2004.

406. "A new magnetoelastic material with selectable Curie temperature and magnetostrictive strain amplitude for use in sensors and actuators (**Invited**)", D.C.Jiles, UK Magnetics Society Workshop on "Novel Electromagnetic Sensors and Actuators", Defence Research Agency, Farnborough, June 9, 2004.

407. "Magnetic Measurement Techniques for Nondestructive Evaluation of Materials (**Invited Keynote Address**)", D.C.Jiles, Magnetic Measurements Conference, Prague, Czech Republic, June 28-30, 2004.

408. "Frequency dependence of magnetostriction for magnetic actuators", P.P.Thant, A.J.Moses and D.C.Jiles. Journal of Electrical Engineering, 55, 7, 2004.

409. "New Rare Earth Intermetallic Compound for Sensors and Actuators", D.C. Jiles, M. Han, C.C.H. Lo, J.E. Snyder, K.A. Gschneidner, V.K. Pecharsky, A.O. Pecharsky, T.A. Lograsso and D.L. Schlagel. European Magnetic Sensors and Actuators Conference, Cardiff, Wales, July 5-7, 2004.

410. "Manganese Doped Cobalt Ferrite Materials for Magnetostrictive Sensor Applications", J. A. Paulsen, A. P. Ring, C. C. H. Lo, J. E. Snyder and D. C. Jiles. European Magnetic Sensors and Actuators Conference, Cardiff, Wales, July 5-7, 2004.

411. "A New Adaptive Automated Feedback System for Barkhausen Signal Measurement", H.V. Patel, S. Zurek, T. Meydan, D.C. Jiles and L.Li. European Magnetic Sensors and Actuators Conference, Cardiff, Wales, July 5-7, 2004. Sensors & Actuators: A. Physical, A129, 112, 2006.

412. "Applications of various magnetic measurement techniques to the evaluation of residual stress **(Invited)**", D.C.Jiles and C.C.H.Lo. Review of progress in Quantitative NDE, Golden ,Colorado, July 25-30, 2004.

413. "An Improved model description of the effects of stress on ferromagnetic materials", L. Li, D.C. Jiles and C.C.H. Lo. Review of progress in Quantitative NDE, Golden ,Colorado, July 25-30, 2004.

414. "Analytical Approach to Simulation of Magnetic Particle Inspection of Defects with Various Shapes and Sizes", Y. Melikhov, S.J. Lee, D.C. Jiles, M. Garton, R. Lopez, and L. Brasche. Review of progress in Quantitative NDE, Golden, Colorado, July 25-30, 2004.

415. "Modeling and Simulation of the Effects of AC and DC Excitation Currents on Magnetic Particles Inspection Using an extended 3D Finite Element Model", S. J. Lee, Y. Melikhov, D. C. Jiles. Review of progress in Quantitative NDE, Golden ,Colorado, July 25-30, 2004.

416. "AC modulated magneto-optic sensor for remote investigation of surface deformation", S. J. Lee, S.H. Song, D. C. Jiles. Review of progress in Quantitative NDE, Golden ,Colorado, July 25-30, 2004.

417. "New Magnetostrictive Sensor Materials based on Manganese-doped Cobalt Ferrite for Nondestructive Evaluation Applications", J. A. Paulsen, C. C. H. Lo, J. E. Snyder, A. P. Ring and D. C. Jiles. Review of progress in Quantitative NDE, Golden ,Colorado, July 25-30, 2004.

418. "Magnetostriction, thermal expansion, and magnetization investigation of polycrystalline Gd5(Si3Ge1)", Han, M., Snyder, J. E., Pecharsky, A. O., Jiles, D. C. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.

419. "Anisotropy studies and magnetic transitions of single crystal Tb5(Si2.2Ge1.8)", Han, M., Snyder, J. E., Tang, W., Lograsso, T. A., Schlagel, D., Jiles, D. C. Journal of Applied Physics, 97, 10M313, 2005.

420. "Thermal Expansion and Gruneisen Parameters in Pr-Ni-Si Compounds", S. H. Song, A. O. Pecharsky, D. Wu, K. W. Dennis, V. K. Pecharsky, J. E. Snyder, D. C. Jiles, T. A. Lograsso and R. W. McCallum. Journal of Applied Physics, 97, 10M516, 2005.

421. "Magnetic and magnetomechanical properties of manganese-substituted cobalt ferrite materials for magnetostrictive stress sensor applications", C. C. H. Lo, J. E. Snyder, J. A. Paulsen, A. P. Ring, K. W. Dennis and D. C. Jiles. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.

422. "Application of magneto-optic sensor for the evaluation of non-magnetic and non-conducting surfaces", S.J. Lee, S.H. Song, D.C. Jiles, and H. Hauser. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.

423. "A model description of the stress effects on ferromagnetic materials", L. Li, D.C. Jiles and C.C.H. Lo. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.

424. "Thermal expansion and magnetostriction in Pr-Ni-Si compounds", D.C.Jiles, S.H.Song, J.E.Snyder, V.K.Pecharsky, T.A.Lograsso, D.Wu, A.O.Pecharsky, Y.Mudryk, K.W.Dennis and R.W.McCallum. Journal of Magnetism and Magnetic Materials, 299, 288, 2005.

425. "Spectroscopic ellipsometry study optical anisotropy in GdSiGe and its comparison with reflectance difference spectroscopy measurement", J.M.Park, S.J.Lee, J.E.Snyder, D.C.Jiles, D.L.Schlagel, T.A.Lograsso, A.O.Pecharsky and D.W.Lynch. Physical Review B, 73, 035110, 2006.

426. "Magneto-optic sensor for remote evaluation of surfaces", S.J. Lee, S.H. Song, D.C. Jiles, and H. Hauser, IEEE Transactions on Magnetics, 41, 2257, 2005.

427. "Anisotropy of Manganese-Substituted Cobalt Ferrite", Y. Melikhov, C.C. Lo, J.E. Snyder, D.C Jiles, J.A. Paulsen, A.P. Ring. APS March Meeting, Los Angeles, March 21-25, 2005.

428. "Improvements in magnetomechanical properties of highly magnetostrictive ferrites due to magnetic annealing", C. C. H. Lo, A. P. Ring, J. E. Snyder, D. C. Jiles. APS March Meeting, Los Angeles, March 21-25, 2005.

429. "Magnetic Properties and Phase Transitions In Single-Crystal $Tb_5Si_{22}Ge_{1.8}$", A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder, D. C. Jiles. APS March Meeting, Los Angeles, March 21-25, 2005.

430. "Thermal Expansion and Magnetostriction in $Pr_5Ni_2Si_3$ Single crystal", S.H. Song, J.E. Snyder, D. Wu, T. A. Lograsso, K. W. Dennis, R. W. McCallum, Y. Janssen, D.C. Jiles. APS March Meeting, Los Angeles, March 21-25, 2005.

431. "Spectroscopic ellipsometry study of optical anisotropy in $Gd_5Si_2Ge_2$ and comparison with reflectance difference spectra", S.J. Lee, J.M. Park, J.E. Snyder, D.C. Jiles, T. A. Lograsso, D.L. Schlagel, A. O. Pecharsky, and D. W. Lynch. APS March Meeting, Los Angeles, March 21-25, 2005.

432. "Improvement of magnetomechanical properties of cobalt ferrite by magnetic annealing", C.C.H.Lo, A.P.Ring, J.E.Snyder and D.C.Jiles. IEEE Transactions on Magnetics, 41, 3676, 2005.

433. "Analytical Approach For Fast Computation Of Magnetic Flux Leakage Due To Surface Defects", Y. Melikhov, S. J. Lee, D. C. Jiles, R. Lopez, and L. Brasche. Presented at the International Magnetics Conference, Nagoya, Japan, April 4-8, 2005.

434. "Thermal Expansion and Magnetostriction in $Pr_5Ni_2Si_3$ Compounds", S.H. Song, D.C. Jiles and J.E. Snyder. IEEE Transactions on Magnetics, 41, 3499, 2005.

435. "Modeling microstructural effects on Barkhausen effect signals in surface modified magnetic materials", C.C.H.Lo, A.J.Barsic, E.R.Kinser and D.C.Jiles. Presented at the International Magnetics Conference, Nagoya, Japan, April 4-8, 2005. IEEE Transactions on Magnetics, 41, 3292, 2005.

436. "Phase Transitions In Single-Crystal $Tb_5Si_{2.2}Ge_{1.8}$", A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder and D. C. Jiles. Presented at the International Magnetics Conference, Nagoya, Japan, April 4-8, 2005.

437. "Analysis of a New Magneto-Optic Angular Displacement Sensor using Jones Matrix Approach", Y. Melikhov, S. J. Lee, S. H. Song, H. Hauser, and D. C. Jiles. 28th International Spring Symposium on Electronics Technology, Wiener Neustadt, Austria, May 19-22, 2005.

438. "Magnetic Particle Inspection Improvements for Aerospace Applications", S.J. Lee, Y. Melikhov, D.C. Jiles, L.J.H.Brasche and R.Lopez. Review of Progress in Quantitative NDE, Brunswick, Maine, July 31 - August 5, 2005

439. "Improvement of Magnetomechanical Properties of Cobalt Ferrite for Stress Sensor Applications", C. C. H. Lo, J. E. Snyder, A. P. Ring, Y.Melikhov, P.Matlage and D.C. Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 31 - August 5, 2005

440. "Applications of Barkhausen Emission Measurements for Characterization of Surface-Modified Materials", D. C. Jiles, C.C.H. Lo, E.R. Kinser, A.J. Barsic and Y. Melikhov. Review of Progress in Quantitative NDE, Brunswick, Maine, July 31 - August 5, 2005

441. "Recent developments in highly magnetostrictive materials", D.C.Jiles, J.E.Snyder, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. 17th Conference on Soft Magnetic Materials, Bratislava, Slovakia, September 7-9, 2005.

442. "Improved modeling of the magnetooptic angular displacement sensor", Y.Melikhov, S.J.Lee, D.C.Jiles, C.M.Park and H.Hauser. International Symposium on Electromagnetics (ISEM), Bad Gastein, Austria, September 12-14, 2005.

443. "Magnetic measurement techniques for nondestructive evaluation of materials", D.C.Jiles, Universal Network for Magnetic Nondestructive Evaluation, Vienna, Austria, September 15-16, 2005.

444. "Temperature Dependence of Magnetic Anisotropy in Mn-Substituted Cobalt Ferrite", Y. Melikhov, C. C. H. Lo, J. E. Snyder, J. A. Paulsen, A. P. Ring, K. W. Dennis, and D. C. Jiles. Journal of Applied Physics 99, 08R102, 2006.

445. "Magneto-Optic Linear Displacement Sensor with High Spatial-Resolution and Low Noise", S. Lee, Y. Melikhov, D. C. Jiles, C. Park, H. Hauser. Journal of Applied Physics 99, 08B301, 2006.

446. "Theoretical Calculation of Magnetic Structure Variation in $Pr_5Ni_2Si_3$ Compounds", S. H. Song, J. E. Snyder and D. C. Jiles. Journal of Applied Physics 99, 08P304, 2006.

447. "Non-contact Magnetoelastic Stress Sensors Based on Substituted Cobalt Ferrite" , P. N. Matlage, C. C. Lo, J. E. Snyder, Y. Melikhov, A. Ring and D. C. Jiles. 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, California, October 31-November 3, 2005.

448. "Analysis of Barkhausen effect signals in surface-modified magnetic materials using a hysteretic-stochastic model", C. C. H. Lo, E. R. Kinser, A. J. Barsic and D. C. Jiles. Journal of Applied Physics 99, 08B705, 2006.

449. "Variation of Magnetostriction with Temperature in $Tb_5Si_{2.2}Ge_{1.8}$ Single Crystal", A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder, and D. C. Jiles. Journal of Applied Physics 99, 08R104, 2006.

450. "Modeling of hysteresis in magnetic materials" **(Invited)**, D.C.Jiles, X.Fang, W.Zhang in "Handbook of Advanced Magnetic Materials. Volume 2: Characterization and Simulation," p. 372-406, edited by Y. Liu, D.J.Sellmyer and D.Shindo, Springer Science Publishers, New York, (2006)

451. "Magnetic response of defects at an angle to a magnetic field", Y.Melikhov, S.J.Lee and D.C.Jiles. Submitted to Journal of Magnetism and Magnetic Materials, 2005.

452. "Exploitation of technical magnetization processes for nondestructive evaluation of materials", D.C.Jiles, Workshop on Electromagnetic NDE Methods for Materials Characterization, National Metallurgical Laboratory, Jamshedpur, India, January 10, 2006

453. "Magnetic Anisotropy of Cr-Substituted Cobalt Ferrite", Y. Melikhov, J.E Snyder, C.C.H. Lo, P. Matlage, S.H. Song, K. Dennis, and D.C. Jiles. American Physical Society, March Meeting, Baltimore, March 13-17, 2006.

454. "Reversible Magnetostriction with Temperature in $Tb_5Si_{2.2}Ge_{1.8}$ Single Crystal", A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder, D. C. Jiles. American Physical Society, March Meeting, Baltimore, March 13-17, 2006.

455. "Magnetic Domain Wall Motion for Sensor Application", S. J. Lee, Y. Melikhov, C. M. Park, H. Hauser, D.C. Jiles. American Physical Society, March Meeting, Baltimore, March 13-17, 2006.

456. "Magnetoelastic and Magnetic Properties of Chromium substituted Cobalt Ferrite", C. C. H. Lo, P. N. Matlage, Y. Melikhov, J. E. Snyder, S. H. Song, and D. C. Jiles. International Magnetics Conference, San Diego, May 8-12, 2006.

457. "The effect of chromium substitution on the magnetic anisotropy and its temperature dependence in Cr – substituted cobalt ferrite", Y. Melikhov, J. E. Snyder, C. C. H. Lo, P. N. Matlage, S. H. Song, K. W. Dennis and D. C. Jiles. IEEE Transactions on Magnetics, 42, 2861, 2006.

458. "Analysis of a Remote Magneto-Optic Linear Displacement Sensor using Jones Matrix Approach" S. J. Lee, Y. Melikhov, C. M. Park, H. Hauser, and D.C. Jiles. IEEE Transactions on Magnetics, 42, 3273, 2006.

459. "Evaluation of Deformation Behaviour of HSLA-100 Steel using Magnetic Hysteresis Techniques", A.K. Panda, S.K. Das, A. Mitra, D.C. Jiles and C.C.H. Lo. IEEE Transactions on Magnetics, 42, 3264, 2006.

460. "Measurement and modeling of B-H loops and losses in high silicon non-oriented steels", S.Zirka, Y.I.Moroz, P.Marketos, A.J.Moses and D.C.Jiles. IEEE Transactions on Magnetics, 42, 3177, 2006.

461. "Soft Magnetic Properties of a High Temperature CoFeSiBNb Nanocrystalline Alloy", A.K.Panda, O.Mohanta, A.Mitra, D.C.Jiles, C.C.H. Lo, Y.Melikhov. Journal of Magnetism and Magnetic Materials, 316, E886, 2007.

462. "Magnetoelastic properties of $R_5(Si_XGe_{1-X})_4$ alloys", A.P.Ring, J. E. Snyder and D. C. Jiles. International Conference on Magnetism, Kyoto, Japan, August 20-25, 2006.

463. "Magnetic structures in $Pr_6Ni_2Si_3$ and $Pr_5Ni_2Si_3$ homologous compounds using first principles calculations", S. H. Song, J. E. Snyder and D. C. Jiles. International Conference on Magnetism, Kyoto, Japan, August 20-25, 2006.

464. "Effect of plastic deformation on the magnetic properties of 304 stainless steel during tensile loading", A.Mitra, J.N.Mohapatra, A.Das, N.Narasaiah and D.C.Jiles. European Conference on Nondestructive Testing, Berlin, Germany, September 25-29, 2006.

465. "Challenges in incorporating nonlinear hysteretic behaviour into modelling of magnetic materials" D.C.Jiles, IET Symposium on Challenges in the Modelling and Measurement of Electromagnetic Materials, London, October 25-26, 2006.

466. "Magnetic structures in $Pr_6Ni_2Si_3$ and $Pr_5Ni_2Si_3$", D.C.Jiles and S.H.Song. Journal of Applied Physics, 101, 023918, 2007.

467. "Modelling of non-linear behavior and hysteresis in magnetic materials **(Invited)**", D.C.Jiles and Y.Melikhov, in Handbook of Magnetism and Advanced Magnetic Materials, Volume 2: Micromagnetism, p. 1059-1079, Editors H.Kronmuller and S.S.Parkin, John Wiley & Sons Scientific Publishers, Chichester, 2007.

468. "Magnetic and Magnetoelastic Properties of Ga-substituted Cobalt Ferrite", S. H. Song, C. C. H. Lo, S. J. Lee, S. T. Aldini, J.E.Snyder and D. C. Jiles. Journal of Applied Physics 101, 09C517, 2007.

469. "Magneto-optic Properties of $CoFe_{2-x}Ga_xO_4$", S. J. Lee, S. H. Song, C. C. H. Lo, S. T. Aldini and D. C. Jiles. Journal of Appled Physics, 101, 09C502, 2007.

470. "Irreversible Field–induced strain Magnetostriction at Temperatures above and below the Order-Disorder Transition in Single Crystal $Tb_5Si_{2.2}Ge_{1.8}$" ,, A. P. Ring, T. Lograsso, D. Schlagel, J. E. Snyder and D. C. Jiles. Journal of Applied Physics, 101, 09C527, 2007.

471. "Magnetic and Magnetoelastic Properties of Substituted Cobalt Ferrites", S. J. Lee, J.E.Snyder, Y.Melikhov and D.C. Jiles, APS March Meeting, Denver, Colorado, March 5-9, 2007.

472. "Magneto-optic Properties of $Co_{1+x}Ge_xFe_{2-2x}O_4$", S. J. Lee, S.H. Song, and D.C. Jiles, APS March Meeting, Denver, Colorado, March 5-9, 2007.

473. "Nondestructive Evaluation of Steels using Magnetic Methods **(Invited)**" , D.C.Jiles, International Symposium on Advances in Stainless Steel, Chennai, India, April 9-11, 2007. Published in "Advances in Stainless Steels", Editors Baldev Raj, K.Bhanu Sankara Rao, T.Jayakumar, P.V. Sivaprasad, Saroja Saibab and P.Shankar, Unversities Press, Hyderabad, India, 2010.

474. "Characterization of Case Depth in Surface-hardened Steel Components by Preisach model formalism", Y.Melikhov, D.C.Jiles, C.C.H.Lo and E.Kinser, 12th International Workshop on Electromagnetic Nondestructive Evaluation, Cardiff, UK 19-21 June 2007

475. "Magnetic Methods for Determination of Radiation Embrittlement, Creep and Fatigue in Ferrous Materials", D.C.Jiles, 12th International Workshop on Electromagnetic Nondestructive Evaluation, Cardiff, UK 19-21 June 2007

476. "Origin, measurement and application of the Barkhausen effect in magnetic steel", A.J. Moses and D.C. Jiles. Electromagnetic Nondestructive Evaluation, p.4-8, Editors S.Takahashi and H.Kikuchi, IOS Press 2007.

477. "Phase Transitions in Nanostructured Ternary Rare Earth Compounds $Gd_5(Si_xGe_{1-x})_4$ and $Pr_{(n+2)(n+1)}Ni_{n(n-1)+2}Si_{n(n+1)}$ (**Invited**)", D.C. Jiles, Y. Melikhov, J.E. Snyder and R.L. Hadimani. International Workshop on Amorphous and Nanostructured Magnetic Materials, Iasi, Romania, August 29-31, 2007.

478. "Magnetic and Magnetoelastic Properties of Cr-substituted Cobalt Ferrite" S. J. Lee, C. C. H. Lo, P. N. Matlage, S. H. Song, Y.Melikhov, J.E.Snyder and D.C.Jiles, Journal of Applied Physics 102, 073910, 2007.

479. "Generalization of the classical domain method for calculating dynamic hysteresis loops in grain oriented steels", S.E.Zirka, Y.I.Moroz, P.Marketos, A.J.Moses, D.C.Jiles and T.Matsuo. IEEE Transactions on Magnetics, 44, 2113, 2007.

480. "Lack of Magnetoacoustic Emissions in Iron with 6% Silicon", B. Augustyniak, M. Chmielewski, M. J. Sablik, F. J. G. Landgraf, D. C. Jiles and A. J. Moses. Journal of Magnetism and Magnetic Materials, 320, 2530, 2008.

481. "Determination of Curie Temperature by Arrott plot Technique in Gd5(SixGe1-x)4", R. Hadimani, D.C. Jiles, Y. Melikhov, J.E. Snyder. 18th Conference on Soft Magnetic Materials, Cardiff, Wales, UK, September 2-5, 2007. Journal of Magnetism and Magnetic Materials, 320, e696, 2008.

482. "Preisach Modelling of Magneto-Resistive Hysteresis Loops of Half-Metals" Y. Melikhov, V. N. Krivoruchko, Yu. F. Revenko, D. C. Jiles, V. N. Varyukhin. 18th Conference on Soft Magnetic Materials, Cardiff, Wales, UK, September 2-5, 2007.

483. "Temperature Dependence of Magnetic Properties of Gallium-Substituted Cobalt Ferrite", N. Ranvah, Y. Melikhov, J. E. Snyder, D. C. Jiles, A. J. Moses, P. I. Williams. 18th Conference on Soft Magnetic Materials, Cardiff, Wales, UK, September 2-5, 2007.

484. "Determination of the Projected Second Order Phase Transition Temperature of the Orthorhombic Phase of $Gd_5(Si_xGe_{1-x})_4$", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. Presented at the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 5-9, 2007.

485. "Preisach Modelling of Magnetoresistive Hysteresis of Half-Metallic Ferromagnets", Y. Melikhov, V.N. Krivoruchko, Yu.F. Revenko, V.N. Varyukhin and D.C. Jiles. Presented at the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 5-9, 2007.

486. "Temperature dependence of magnetic anisotropy of Ga-substituted cobalt ferrite", Y. Melikhov, N. Ranvah, S. H. Song, D. C. Jiles, J. E. Snyder, A. J. Moses and P.I.Williams. Journal of Applied Physics 103, 07E506, 2008.

487. "Variation of Magnetoelastic Properties of $CoGa_xFe_{2-x}O_4$ with Temperature", .S.H.Song, N.Ranvah, Y.Melikhov, J.E.Snyder and D.C.Jiles. Presented at the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 5-9, 2007.

488. "Relationship between Hysteretic Behaviour of Magnetisation and Magnetoresistance", V.N. Krivoruchko, Y. Melikhov, and D.C. Jiles, Physical Review B 77, 180406, 2008.

489. "Estimation of Second Order Phase Transition Temperature of the Orthorhombic Phase of $Gd_5(Si_xGe_{1-x})_4$ using Arrott plots", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles, Journal of Applied Physics 103, 033906, 2008.

490. "Magnetic and magnetoelastic properties of Ge-substituted cobalt ferrite", N.Ranvah, I.Nlebedim, Y.Melikhov, J.E.Snyder, D.C.Jiles, A.J.Moses and P.I.Williams. APS March Meeting, New Orleans, Louisiana, March 10-14, 2008.

491. "Magnetostriction close to the phase transition in $Gd_5(Si_xGe_{1-x})_4$", R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. APS March Meeting, New Orleans, Louisiana, March 10-14, 2008.

492. "Recent developments in nanostructured magnetoelastic and magnetocaloric materials", D.C. Jiles. International Meeting on Nanostructured Advanced Materials, Jamshedpur, India, March 27-29, 2008.

493. **"**Temperature dependence of magnetostriction of $Co_{1+x}Ge_xFe_{2-2x}O_4$ for magnetostrictive sensor and actuator applications", N. Ranvah, I.C. Nlebedim, S.H. Song, Y. Melikhov, J.E. Snyder, D.C. Jiles, A.J. Moses, P.I. Williams, and F.Anayi, IEEE Transactions on Magnetics, 44, 3013, 2008.

494. "Enhancement of magnetoelastic properties of highly magnetostrictive cobalt ferrite through control of sintering conditions I.C. Nlebedim, N. Ranvah, A.J. Moses, D.C. Jiles, P.I. Williams, Y. Melikhov, J.E. Snyder and F. Anayi, Presented at the International Magnetics Conference, Madrid, Spain, May 4-8, 2008.

495. "Viscous Behavior of Ferromagnets in the Voltage and Current Driven Regimes", S.E. Zirka, Y.I. Moroz, P. Marketos, A.J. Moses and D.C. Jiles, IEEE Transactions on Magnetics, 44, 3189, 2008.

496. "Temperature Induced Colossal Magnetostriction in Gd5(SixGe1-x)4 for Actuator Applications", R.L.Hadimani, P.A.Bartlett, Y.Melikhov, J.E.Snyder and D.C.Jiles. Presented at the European Magnetic Sensors and Actuators Conference, Caen, France, 30 June 2008.

497. "Field Induced Phase Transitions in $Gd_5(Si_xGe_{1-x})_4$ at High Magnetic Field Strengths", R.L.Hadimani, Y. Melikhov, J.E.Snyder, D.C.Jiles. 10th International Workshop on 1&2 Dimensional Magnetic Measurement and Testing, Cardiff, September 1-3, 2008.

498. "Development of a Model for Interpretation of Magnetostriction Measurements", N. Ranvah, A. Kumar, J. E. Snyder, A. J. Moses and D. C. Jiles. 10th International Workshop on 1&2 Dimensional Magnetic Measurements and Testing, Cardiff, September 1-3, 2008.

499. "Measurement and modelling of magnetic properties of electrical steels at high flux densities", A.E. Umenei, Y. Melikhov, S. Zurek, D.C. Jiles. 10th International Workshop on One and Two Dimensional Magnetic Measurements and Testing, Cardiff, September 1-3, 2008.

500. "Preisach modelling of magnetic and magneto-resistive hysteresis", Y. Melikhov, V. N. Krivoruchko, Y.F. Revenko and D. C. Jiles, Joint European Magnetics Symposium, Dublin, Ireland, September 14-19, 2008.

501. "Field induced structural phase transition at temperatures above the Curie point in Gd5(SixGe1-x)4", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. Journal of Applied Physics, 105, 07A927, 2009.

502. "Comparison of Alternative Techniques for Characterization of Magnetostriction and Inverse Magnetostriction in Magnetic Thin Films", A. Raghunathan, D. C. Jiles, and J. E. Snyder. IEEE Transactions on Magnetics, 45, 3269, 2009.

503. "Temperature dependence of magnetic anisotropy of germanium/cobalt co-substituted cobalt ferrite", N. Ranvah, I. Nlebedim, Y. Melikhov, D. C. Jiles, J. E. Snyder, A. J. Moses, P. I. Williams, F. Anayi. J. Appl. Phys. 105, 07A518, 2009.

504. "Modeling and analytic approximation of magnetic properties at high magnetic fields in electrical steel cores ", A.E. Umenei, Y. Melikhov, S. Zurek, D.C. Jiles. Presented at the 53rd Annual Magnetism and Magnetic Materials Conference, Austin, Texas, November 10-14, 2008.

505. "The Ferro I Phase and Gadolinium", J.F.Collingwood, S.B.Palmer, M.R.Lees, C.Edwards, J.A.Santos, J.B.Sousa and D.C.Jiles. Physical Review B, 79, 104401, 2009.

506. "Influence of Vacuum Sintering on Microstructure and Magnetic Properties of Magnetostrictive Cobalt Ferrite", I. C. Nlebedim, N. Ranvah, A. J. Moses, D. C. Jiles, P. I. Williams, Y. Melikhov, J. E. Snyder and F. Anayi. Journal of Magnetism and Magnetic Materials 321, 2528, 2009.

507. "Variation of magnetic H field in closed loop magnetic circuits: problems with the standard equation", A.E. Umenei, Y. Melikhov, D.C. Jiles. Presented at the American Physial Society March Meeting, Pittsburgh, March 16-20, 2009.

508. "Magnetic and magnetoelastic properties of Ge/Co co-substituted cobalt ferrite", N. Ranvah,Y. Melikhov, D. C. Jiles, J. E. Snyder. Presented at the American Physial Society March Meeting, Pittsburgh, March 16-20, 2009.

509. "Examination of the Coupled Magnetic-Structural Phase Transition in Gadolinium-Silicon-Germanium Magnetocaloric alloys at temperatures well above Tc", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. Presented at the American Physial Society March Meeting, Pittsburgh, March 16-20, 2009.

510. "Modeling the Temperature Dependence of Hysteresis based on Jiles-Atherton Theory", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. IEEE Transactions on Magnetics, 45, 3954, 2009

511. "Anomalous behaviour in electrical transport properties in single crystal $Gd_5Si_{1.8}Ge_{2.2}$ and polycrystalline $Gd_5Si_{2.09}Ge_{1.91}$", R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. IEEE Transactions on Magnetics, 45, 4368, 2009

512. "Temperature dependence of magnetic properties of $CoAl_xFe_{2-x}O_4$ for magnetostrictive sensor and actuator applications", N. Ranvah, I. Nlebedim, Y. Melikhov, J. E. Snyder, A. J. Moses, P. I. Williams, D. C. Jiles. IEEE Transactions on Magnetics, 45, 4261, 2009

513. "Magnetic and Magnetomechanical Properties of $CoAl_xFe_{2-x}O_4$ for Stress Sensor and Actuator Applications", I. Nlebedim, N. Ranvah, P.I. Williams, Y. Melikhov, J.E. Snyder, A.J. Moses and D.C. Jiles. IEEE Transactions on Magnetics, 45, 4120, 2009

514. "Design and Modeling of Improved Functionality of Switching Inductive Devices using Non-linear behavior of Core Materials", A.E. Umenei, Y. Melikhov, and D. C. Jiles. Presented at the International Magnetics Conference, Sacramento, California, May 4-8, 2009.

515. "Magnetic Materials and related Research at Cardiff University", **(Invited)**, D.C.Jiles. Presented at the Materials Network Wales, Symposium on Materials Research at Welsh Universities, Cwmbran, May 14th, 2009.

516. "A generalized form of anyhysteretic magnetization for Jiles Atherton theory of hysteresis", A.Raghunathan, Y.Melikhov, J.E.Snyder and D.C.Jiles. Applied Physics Letters, 95, 172510, 2009.

517. "Effect of Heat Treatment on Cation Distribution in Magnetostrictive CoFe2O4" , I. C Nlebedim, N. Ranvah, Y. Melikhov, P.I.Williams, J.E. Snyder, A. J. Moses and D.C. Jiles. Presented at the 8th Pacific Rim Conference on Ceramics and Glass Technology, American Ceramics Society, Vancouver , Canada, May 31- June 5, 2009.

518. "Development of Magnetic Stimulation Devices for Medical Applications", P.I.Williams, P.Marketos, E.Umenei, D.C.Jiles and J.Starzewski. International Society for Magnetic Resonance in Medicine, 15th Annual Meeting, Cardiff, Wales, 2-4, September, 2009.

519. "Irreversible resistivity response of half-metallic ferromagnets", Y. Melikhov, V.N. Krivoruchko, M.A.Marchenko and D.C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.

520. "Generalized form of anhysteretic magnetization function for Jiles-Atherton theory of hysteresis", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.

521. "Investigation of the dependence of sensitivity of magnetostriction of cobalt ferrite to applied field on cation ratio and processing parameters", I. C. Nlebedim, N. Ranvah, P. I. Williams, Y. Melikhov, J. E. Snyder, A. J. Moses, D. C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.

522. "Modeling of improvement in impedance transfer for inductive switching devices, using high permeability soft materials", A. E. Umenei, Y. Melikhov, D.C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.

523. "Measurement of electrical steels with direct field determination", O. Stupakov, R. Wood, Y. Melikhov, D.C. Jiles. IEEE Transactions on Magnetics, 46, 298, 2010.

524. "Anomalous behaviour in electrical transport properties of single crystal $Gd_5Si_{1.8}Ge_{2.2}$", R. L. Hadimani and D.C.Jiles. European Congress and Exhibition on Advanced Materials and Processes, (EUROMAT), Glasgow, Scotland, September 7-10, 2009.

525. "Magnetic Barkhausen Effect Method for Nondestructive Evaluation of Surface Microstructure and Stress", **(Invited Plenary Address)**, D.C.Jiles, L. Mierczak and P.I. Williams. 14th International Symposium on Applied Electromagnetics and Mechanics (ISEM), Xian, China, September 20-24, 2009.

526. "Thermodynamic aspects of hysteresis for half metallic ferromagnets", V.N.Krivoruchko, Y.Melikhov and D.C.Jiles. Submitted to Physical Review B, 2009.

527. "Theory of Irrecoverable and Recoverable Resistivity in $Gd_5(Si_xGe_{1-x})_4$", R. L. Hadimani and D. C. Jiles, Magnetics Letters, 1, 6000104 , 2010.

528. "AC magnetic property measurements on cobalt ferrite for sensor applications", N. Ranvah, I. C. Nlebedim, Y. Melikhov, J. E. Snyder, A. J. Moses, P. I. Williams, ans D. C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.

529. "Detection of Damage in Ground Steel Components using Magnetic Barkhausen Noise", L. Mierczak, Y. Melikhov and D. C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.

530. "Improved Model for Inductive Switching Devices in Power Systems", A. Umenei, E. Melikhov and D.C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.

531. "Growth of Crystalline Cobalt ferrite Thin Films at Lower Temperatures using Pulsed-laser Deposition Technique", A. Raghunathan, I. C. Nlebedim, J. E. Snyder and D. C. Jiles. Journal of Applied Physics, 107, 09A516, 2010.

532. "Theoretical Model of Temperature Dependence of Hysteresis based on Mean Field Theory", A. Raghunathan, Y. Melikhov, J. E. Snyder and D. C. Jiles. IEEE Transactions on Magnetics, 46, 1507, 2010.

533. "Resistivity Recovery in $Gd_5(Si_xGe_{1-x})_4$", R. L. Hadimani and D. C. Jiles. Journal of Applied Physics, 107, 09C501, 2010.

534. "Effect of Temperature Variation on the Magnetostrictive Properties of $CoAl_xFe_{2-x}O_4$", I. Nlebedim, N. Ranvah, Y. Melikhov, P.I. Williams, J.E. Snyder, A.J. Moses and D.C. Jiles. Journal of Applied Physics, 107, 09A936, 2010.

535. "Magnetocrystalline anisotropy in single crystal $Gd_5Si_{2.7}Ge_{1.3}$". R.L.Hadimani and D.C.Jiles. APS March Meeting, Portland, Oregon, March 15-19, 2010.

536. "Deriving a functional form of anhysteretic magnetization function for Jiles-Atherton theory of hysteresis", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. APS March Meeting, Portland, Oregon, March 15-19, 2010.

537. "Pulsed-laser deposition of crystalline cobalt ferrite thin films at lower temperatures", A. Raghunathan, I. C. Nlebedim, D. C. Jiles, and J. E. Snyder. APS March Meeting, Portland, Oregon, March 15-19, 2010.

538. "Effect of Chemical substitution on magnetoelastic properties of cobalt ferrte" , D.C.Jiles, N.Ranvah, I.Nlebedim, Y.Melikhov, J.E.Snyder, A.J.Moses and P.I.Williams. APS March Meeting, Portland, Oregon, March 15-19, 2010.

539. "Effect of Heat Treatment on the Magnetic and Magnetoelastic Properties of Cobalt Ferrite", I. C. Nlebedim, N. Ranvah, A. J. Moses, D. C. Jiles, P. I. Williams, Y. Melikhov, J. E. Snyder and F. Anayi. Journal of Magnetism and Magnetic Materials, 322, 1929, 2010

540. "A New Method for Evaluation of Mechanical Stress Using the Reciprocal Amplitude of Magnetic Barkhausen Noise", L. Mierczak , D. C. Jiles and G. Fantoni, IEEE Transactions on Magnetics, 47, 459, 2011.

541. "Detection of Surface Condition in Ground Steel Components using Magnetic Barkhausen Measurements" **(Invited Keynote Address)**, D. C. Jiles, L. Mierczak and Y. Melikhov, 15th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 15), Szczecin, Poland, 13–16 June 2010.

542. "Development of Field Coils for Diagnostic Applications of Transcranial Magnetic Stimulation", D. C. Jiles, P.I. Williams, E. Umenei, P. Marketos, L. Crowther, J. Starzewski, A. Thomas and G.A.Thomas. 15th

International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 15), Szczecin, Poland, 13–16 June 2010.

543. "A new way of determining the depth dependence of residual stress using the magnetic Barkhausen effect", L.Mierczak and D.C.Jiles. Review of Progress in Quantitative NDE, San Diego, California, July 18-23, 2010.

544. "Thermodynamic aspects if hysteresis for half metallic ferromagnets", Y.Melikhov, V.N.Krivoruchko and D.C.Jiles. Presented at the Joint European Magnetics Symposia, Krakow, Poland, August 23 - 28, 2010.

545. "Modelling of two-phase magnetic materials based on J-A theory", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. Presented at the Joint European Magnetics Symposia, Krakow, Poland, August 23 - 28, 2010.

546. "Analytic solution for variation of magnetic fields around closed circuits: an examination of deviations from the 'standard' Ampere's law equation", A.E.Umenei, Y.Melikhov and D.C.Jiles. IEEE Transactions on Magnetics, 47, 734 , 2011.

547. "Models for extrapolation of magnetization data on magnetic cores to high fields", A.E.Umenei, Y.Melikhov and D.C.Jiles. IEEE Transactions on Magnetics, 47, 4707, 2011.

548. "Transcranial Magnetic Stimulation: improved coil design for deep brain investigation", L.J. Crowther, P.I. Williams, Y. Melikhov, D.C. Jiles. Journal of Applied Physics, 109, 07B314, 2011.

549. "Modeling ,Validation and Implementation of Non-Linear Magnetic Switching for Device Applications", A.E. Umenei, Y. Melikhov, D.C. Jiles. Presented at the Magnetism and Magnetic Materials Conference, Atlanta, Georgia, November 15 -18, 2010.

550. "Influence of Reactive Atmosphere on Properties of Cobalt ferrite Thin Films Prepared using Pulsed-laser Deposition", A. Raghunathan, J.E.Snyder and D.C. Jiles. Journal of Applied Physics, 109, 083922**,** 2011.

551. "Dependence of Magnetomechanical Performance of Ga-Substituted Cobalt Ferrite on Temperature Variation", I.C. Nlebedim, Y. Melikhov, J.E. Snyder, N.Ranvah, A.J, Moses and D.C. Jiles. Journal of Applied Physics, 109, 07A908, 2011.

552. "Reconstructing Residual Stress Depth Profiles using Magnetic Barkhausen Noise Method", L. Mierczak, Y Melikhov, D.C. Jiles. Presented at the Magnetism and Magnetic Materials Conference, Atlanta, Georgia, November 15 -18, 2010.

553. "Dependence of the magnetic and magnetoelatic properties of cobalt ferrite on processsing parameters", I.C.Nlebedim, J.E.Snyder, A.J.Moses and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 322, 3938, 2010.

554. "Magnetic NDE for damage assessment of structural materials", **(Invited paper),** D.C.Jiles. Workshop on Advanced Nondestructive Evaluation for Structural Integrity Assessment, December 7, 2010, Science City Convention Center, Kolkata, India.

555. "Modeling of Micromagnetic NDT", **(Invited paper)**, D.C.Jiles. Symposium on Signal Analysis, Simulation and Modeling, December 8, 2010, Science City Convention Center, Kolkata, India.

556. "NDE for Life Cycle Management in Power Generation", (Invited Keynote Address), D.C.Jiles. National Seminar on Non-Destructive Testing & Evaluation, Science City Auditorium, Kolkata, India, 9-11 December, 2010.

557. "Theoretical Modelling for Interpretation of Magnetic Nondestructive Evaluation Measurements" **(Invited)** D.C. Jiles. 16th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2011), Chennai, India, March 10-12, 2011.

558. "Deep Brain Stimulation using Magnetic Fields", D.C.Jiles, P.I.Williams and L.J.Crowther. Presented at the APS March Meeting, Dallas, Texas, March 21-25, 2011.

559. "Stress and Depth Dependence of Stochastic Processes in the Barkhausen Effect", L. Mierczak, Y. Melikhov, D.C. Jiles. Presented at the APS March Meeting, Dallas, Texas, March 21-25, 2011.

560. "Magnetic modelling - breaking through the materials barrier" (**Invited Keynote Address**) D.C.Jiles, Eighth International Conference on Computation in Electromagnetics, Wroclaw, Poland, 11-14 April 2011.

561. "Field and temperature induced colossal strain in $Gd_5(Si_xGe_{1-x})_4$", R.L. Hadimani, P.A. Bartlett, Y. Melikhov, J.E. Snyder, D.C. Jiles, J. Magn. Magn. Mater. 323, 532-534, 2011.

562. "Magnetic Annealing and Inverse Magnetostrictive Effects in Cobalt Ferrite Thin Films", A. Raghunathan, D. C. Jiles, and J. E. Snyder. Presented at the International Magnetics Conference, Taipei, Taiwan, April 25-29, 2011.

563. "Coil design optimization using structurally detailed head model for Transcranial Magnetic Stimulation", L.J. Crowther and D.C. Jiles. Presented at the International Magnetics Conference, Taipei, Taiwan, April 25-29, 2011.

564. "Applications of the Barkhausen effect", (**Invited Plenary Address**), D.C.Jiles. Workshop on Large Fluctuations and Collective Phenomena in Disordered Materials, University of Illinois, Urbana- Champaign, May 18, 2011.

565. "Improved Designs for Field Generation for Non Invasive Transcranial Magnetic Stimulation", L. Crowther and D. C. Jiles. Review of Progress in Quantitative NDE, Vermont, July 18-22, 2011.

566. "Depth profiling in prestressed load bearing components",L.Mierczak, O.Kypris, I .Nlebedim and D.C.Jiles, Review of Progress in Quantitative NDE, Vermont, July 18-22, 2011.

567. "Residual stress depth profiling using Magnetic Barkhausen Noise method ", L. Mierczak, Y. Melikhov, D. C. Jiles. Presented at the British Institute of Non-Destructive testing conference on Materials Testing, The International Centre, Telford, Shropshire, UK September 13-15, 2011.

568. "Effect of deviation from stoichiometric composition on structural and magnetic properties of cobalt ferrite, $Co_xFe_{3-x}O_4$ (x = 0.2 to 1.0)", I. C. Nlebedim, J. E. Snyder, A. J. Moses, and D. C. Jiles. Journal of Applied Physics, 111, 07D704, 2012.

569. "Description of Magnetic Two-phase Materials in the Theory of Hysteresis", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.

570. "A more robust method for parameter determination for Jiles-Atherton Theory of Hysteresis", A. Raghunathan, Y. Melikhov, and D. C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.

571. "Developments in Deep Brain Stimulation using Time Dependent Magnetic Fields", L. J. Crowther, I. C. Nlebedim and D. C. Jiles. J. Applied Physics. 111, 07B325, 2012.

572. "Depth Profiling of Stress for Non-Destructive Testing using Magnetic Barkhausen Noise Signals", O. Kypris, L. Mierczak, I. C. Nlebedim and D.C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.

573. "Depth dependence of mechanical properties from micromagentic emissions", L. Mierczak, Y. Melikhov, O.Kypris and D.C.Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.

574. "Frequency dependent magnetic measurements for depth profiling of properties in steels", D.C.Jiles, O.Kypris, L.Mierczak and Y.Melikhov, National Seminar on Nondestructive Testing & Evaluation, Indian Society for Nondestructive Testing, Chennai, India, December 8-10, 2011.

575. "Modelling of two-phase magnetic materials based on Jiles-Atherton theory of hysteresis", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. Journal of Magnetism and Magnetic Materials, 324, 20, 2012.

576. "New designs for deep brain transcranial magnetic stimulation", P.I.Williams, P.Marketos, L.J.Crowther and D.C.Jiles. IEEE Transactions on Magnetics, 48, 1171, 2012.

577. "Determination of Second Order Phase Transition Temperature of Monoclinic Phase of $Gd_5(Si_xGe_{1-x})_4$" R. Hadimani, D.C.Jiles and Y.Melikhov. American Physical Society March Meeting, Boston, Massachusetts, February 27 - March 2, 2012.

578. **"**The Origin of Secondary Hematite Phase in Non-stoichiometric Co-ferrite Samples Prepared by Ceramic Method", D.C.Jiles, I. Nlebedim and A..J. Moses. American Physical Society March Meeting, Boston, Massachusetts, February 27 – March 2, 2012.

579. "Calculation of Lorentz Forces on Coils for Transcranial Magnetic Stimulation", L. J. Crowther, R. L. Hadimani, D. C. Jiles. IEEE Transactions on Magnetics, 48, 4058, 2012

580. "Mapping Stress along Depth at the Surface of Steel Structures using a frequency dependent Magnetic Barkhausen Noise Technique", O. Kypris, I.C. Nlebedim and D.C. Jiles. IEEE Transactions on Magnetics 48, 4428, 2012.

581. "Study of the second order phase transition temperature of monoclinic phase in mixed phase region of $Gd_5(Si_xGe_{1-x})_4$", R. L. Hadimani, Y. Melikhov and D. C. Jiles. Presented at the International Magnetics Conference, Vancouver, Canada, May 7-11, 2012. IEEE Transactions on Magnetics 48, 4070, 2012.

582. "Magnetocrystalline anisotropy in single crystal $Gd_5Si_{2.7}Ge_{1.3}$", R. L. Hadimani, Y. Melikhov, M. Han and D. C. Jiles. IEEE Transactions on Magnetics 48, 3989, 2012.

583. "Anisotropy and Magnetostrictive Properties of Non-stoichiometric Co-Ferrite", I. C. Nlebedim, J. E. Snyder, A. J. Moses and D. C. Jiles. IEEE Transactions on Magnetics 48, 3084, 2012.

584. "Non-stoichiometric cobalt ferrite $Co_xFe_{3-x}O_4$ (x = 1.0-2.0): Structural, Magnetic and Magnetoelastic Properties", I.C. Nlebedim, J.E.Snyder, A.J. Moses and D.C. Jiles. Journal of Magnetism and Magnetic Materials, 343, 49, 2013.

585. "Fine structure observation near the critical temperature in $Gd_5Si_{1.95}Ge_{2.05}$ R. L. Hadimani, Y. Melikhov, J.E. Snyder, D.C. Jiles. IEEE Transactions on Magnetics, 49, 820, 2013.

586. "Growth and Characterization of Magnetocaloric $Gd_5(Si_xGe_{1-x})_4$ Thin Films", R. Hadimani, I. C. Nlebedim, Y. Melikhov and D.C. Jiles. Presented at the 12th Joint MMM/InterMag Conference, Chicago, Illinois, January 14-18, 2013. Journal of Applied Physics, 113, 17A935, 2013.

587. "Structural, Magnetic and Magnetoelastic Properties of Magnesium Substituted Cobalt Ferrite", I. C. Nlebedim, R Hadimani, R. Prozorov and D.C. Jiles. Presented at the 12th Joint MMM/InterMag Conference, Chicago, Illinois, January 14-18, 2013. Journal of Applied Physics 113, 17A928, 2013.

588. "Temperature Dependence of the Structural, Magnetic and Magnetostrictive Properties of Zinc-doped Cobalt Ferrite", I. C. Nlebedim, V. Monaji, P. J. Praveen, D. Das and D.C Jiles. Journal of Applied Physics, 113, 193904, 2013.

589. "Magnetic and Thermoelectric Properties of Cobalt Ferrite", I. C. Nlebedim, D.C. Jiles, Levin and Prozorov. Presented at the 12th Joint MMM/InterMag Conference, Chicago, Illinois, January 14-18, 2013. IEEE Transactions in Magnetics, 49, 4269, 2013.

590. "A new method for obtaining stress - depth calibration profiles for non-destructive evaluation using a frequency-dependent model of Barkhausen emissions", O.Kypris, I. C. Nlebedim and D.C.Jiles. Presented at the 12th Joint MMM/InterMag Conference, Chicago, Illinois, January 14-18, 2013. IEEE Transactions in Magnetics, 49, 3893, 2013.

591 "Experimental verification of the linear relationship between stress and the reciprocal of the peak Barkhausen voltage in ASTM A36 Steel", O.Kypris, I. C. Nlebedim and D.C.Jiles. Presented at the 12th Joint MMM/InterMag Conference, Chicago, Illinois, January 14-18, 2013. IEEE Transactions in Magnetics, 49, 4148, 2013.

592 "Realistically modeled TMS-coils for stress and Lorentz force calculations during MRI", L. Crowther, K. Porzig, R. Hadimani, H. Brauer and D.C. Jiles. Presented at the 12th Joint MMM/InterMag Conference, Chicago, Illinois, January 14-18, 2013. IEEE Transactions on Magnetics, 49, 3426, 2013.

593. "Determining Residual Stress Depth Profiles using Magnetic Barkhausen Effect", L. Mierczak, Y Melikhov, D.C. Jiles, IEEE Transactions on Magnetics, 50, 6200905, 2014.

594. "Magnetoelectric properties ofGaCoFeO/BaTiO3 composite", Y.Ni, I.C.Nlebedim, H.Xu and D.C.Jiles. Presented at 24th Annual Conference on Fundametal Physics of Ferroelectrics and Related Materials, Ames, Iowa, January 27-30, 2013.

595. "Magnetostrictive cation substituted cobalt ferrite for magnetoelectric applications", I.C.Nlebedim and D.C.Jiles. Presented at 24th Annual Conference on Fundametal Physics of Ferroelectrics and Related Materials, Ames, Iowa, January 27-30, 2013.

596. "Ferroelectric and ferromagnetic properties of Ga_x CoFe2-xO4 /BaTiO3", Y. Ni, C.Nlebedim and D.C.Jiles.. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

597. "How Magnesium Substitution Changes the Magnetostrictive Properties of Cobalt Ferrite", I.C.Nlebedim, and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

598. "The Effect of Variation of Permittivity and Conductivity on Induced Electric Field in the Brain during Transcranial Magnetic Stimulation" L.Crowther, R.LHadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

599. "First successful growth of thin films of meta-stable monoclinic phase of $Gd_5(Si_xGe_{1-x})_4$", R.L.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

600. "Anisotropy and Magnetostriction in Cobalt-Modified Magnetite: A Crystal Field Approach", I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

601. "Computation of the modified magnetostriction coefficient b' corresponding to different depth ranges in ferromagnetic specimens by using a frequency dependent model for magnetic Barkhausen emissions", O.Kypris, I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

602. "Verification of modified Jiles-Atherton model for determination of hysteresis behavior of materials with two magnetic phases", N. Prabhu Gaunkar and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

603. “Improved transcranial magnetic stimulation coil design with realistic head modeling”, L. J. Crowther, R. L. Hadimani, D. C. Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

604. “Effect of Transcranial Magnetic Stimulation on Neuronal Networks”, A. H. Unsal, R. L. Hadimani and D. C. Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.

605. “Realistically modeled TMS-coils for stress and Lorentz force calculations during MRI”, K. Porzig, L. J. Crowther, R. L. Hadimani, H. Brauer, J. Haueisen, H. Toepfer, D. C. Jiles, IEEE Transactions on Magnetics, 49, 3426, 2013. Presented at the 5th International Conference on Non-Invasive Brain Stimulation, Leipzig, Germany, 19-21 March ,2013.

606. “The Effect of Variation of Permittivity and Conductivity on Induced Electric Field in the Brain during Transcranial Magnetic Stimulation**”,** K. Porzig, R. L. Hadimani, L. J. Crowther, H. Brauer, J. Haueisen, H. Toepfer, D. C. Jiles**.** Presented at the 5th International Conference on Non-Invasive Brain Stimulation, Leipzig, Germany, 19-21 March, 2013.

607. "Theory and modeling of the Barkhausen effect", D.C.Jiles. Accepted for presentation at the Symposium on Crackling Noise and Intermittency in Condensed Matter, Göttingen, Germany, 22- 24 May, 2013.

608. "The Barkhausen effect: modeling and application to NDE of stress" (**Invited Plenary Address**), D.C.Jiles, International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.

609. “MBN Techniques for Quantitative Determination of Stress”, Y. Melikhov, L. Mierczak, D.C. Jiles. International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.

610. “Applicability of modified J-A model for improved interpretation of hysteresis measurements for evaluation of ferromagnetic materials and components”, N. Prabhu Gaunkar, I. C. Nlebedim and D.C. Jiles. International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.

611. “Calculation of a universal stress-depth calibration profile using a white noise approximation to the magnetic Barkhausen noise spectrum”, O.Kypris, I.C.Nlebedim and D.C.Jiles, International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.

612. “Development of Deep Brain and Focused Transcranial Magnetic Stimulation Coil for Mice”, R. L. Hadimani, S. D. March, S. McAtee, M. Senter, K. Spoth, D. R. Stiner, L. J. Crowther and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.

613. “Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models”, L. J. Crowther, R. L. Hadimani, A. G. Kanthasamy, D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17B303, 2014

614. “Growth and Characterization of Pt-protected Gd_5Si_4 thin films”, R. L. Hadimani, Y. Mudryk, T. E. Prost, V. K. Pecharsky, K. A. Gschneidner, and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17C113, 2014.

615. “Evolution of Griffiths Phase in $La_{0.4}Bi_{0.6}Mn_{1-x}Ti_x O_3$ Perovskite Oxide”, V. Dayal, K.V. Punith, R. L. Hadimani and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17E111, 2014.

616. "Dependence of the magnetostrictive properties of cobalt ferrite on the initial powder particle size distribution", I. C. Nlebedim and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17A928, 2014.

617. "Structural and magnetic properties of Ti4+/Co2+ co-substituted cobalt ferrite", I. C. Nlebedim, K. W. Dennis, R. W. McCallum and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17A519, 2014.

618. "Magnetocaloric effect in $GdCo_xAl_{2-x}$ system for $0.15 \leq x \leq 1$ compositions", H. Fu*; R. L. Hadimani; M. H. Wang; B. H. Teng; D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17A914, 2014.

619. "Optimization of sensor design for Barkhausen noise measurement using finite element analysis", N. Prabhu Gaunkar, O. Kypris, I.C.Nlebedim and D.C.Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17E512, 2014.

620. "Barkhausen spectroscopy: Non-destructive characterization of magnetic materials as a function of depth", O. Kypris, I.C. Nlebedim, D.C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17E305, 2014.

621. "A model for the Barkhausen frequency spectrum as a function of applied stress", O. Kypris, I.C. Nlebedim and D.C. Jiles, Journal of Applied Physics, 115, 083906, 2014.

622. "Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models", L. J. Crowther, R. L. Hadimani, A. Kanthasamy and D. C. Jiles. Submitted to IEEE Transaction son Biomedical Engineering.

623. "A Numerical Dosimetry Study for Pediatric Transcranial Magnetic Stimulation", L. J. Crowther, R. L. Hadimani, and D. C. Jiles. Presented at the 6th International IEEE EMBS Conference on Neural Engineering, San Diego, November 6-8, 2013.

624. "Focused and Deep Brain Magnetic Stimulation Using New Coil Design in Mice", S. D. March, S. Stark, M. Senter, K. Spoth, D. R. Stiner, L. J. Crowther, R. L. Hadimani, D. C. Jiles. Presented at the 6th International IEEE EMBS Conference on Neural Engineering, San Diego, November 6-8, 2013.

625. "New coil designs for deep brain Transcranial Magnetic Stimulation using Halo Coil Configurations", R. Kaul, B. N. Hogan, R. L. Hadimani, L. J. Crowther, D. C. Jiles. Presented at the 6th International IEEE EMBS Conference on Neural Engineering, San Diego, November 6-8, 2013.

628. "Temperature dependence of magnetic properties of heat treated cobalt ferrite". I.C. Nlebedim, Y. Melikhov and D.C. Jiles. Journal of Applied Physics, 115, 43903, 2014.

629. "Thin film of $R_5(Si,Ge)_4$ compound displaying magnetostructural transition: a pathway towards magnetic refrigeration and magnetostrictive devices at nanoscale", J. Araujo, R. Hadimani and D.C.Jiles. Submitted to Advance Functional Materials, 2014.

630. "Recent progress in magnetoelastic and magnetocaloric materials", D.C.Jiles, International Conference on Magnetic Materials and Applications, Guwahati, India, December 5-7, 2013

631. "Increased efficiency of a permanent magnet synchronous generator through optimization of NdFeB magnet arrays", H. Khazdozian, R.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

632. "Effect of titanium substitution on the structural and magnetic properties of cobalt ferrite", I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

633. "Design considerations for a high sensitivity Barkhausen noise sensor", N. Prabhu Gaunkar., O.Kypris, C. Nlebedim and D.C. Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

634. "Development of a new magnetic Barkhausen spectroscopy method for the nondestructive characterization of magnetic materials", O.Kypris, I.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

635. "Pulsed laser deposition of thin films of binary compounds of Gd and Si using a femto-second laser", R.L.Hadimani Y.Mudryk, T.Prost, V.Pecharsky, K.A.Gschneidner and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

636. "Treatment for traumatic brain injury in mice using transcranial magnetic stimulation : a preliminary study", A.Carr, G. Zenitsky, L.Crowther, R.Hadimani, V.Anantharam, A.Kanthasamy and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

637. "High frequency magnetic properties of FeCoSiB thin films", R.Hadimani, M.Han and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

638. "Enhanced surface state of topological insulators by optimal magnetic doping", Y.Ni, N.Meyer, X.Che, Z.Zhang, C.Nlebedim, R.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

639. "Effect of particle size distribution on the magnetostrictive properties of cobalt ferrite", I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

640. "Numerical dosimetry of transcranial magnetic stimulation coils", L.Crowther, R.Hadimanin and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

641. "Novel transcranial magnetic stimulation coil for mice", S. March, S.Stark, L.Crowther, R.Hadimanin and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

642. "Relating ferromagnetic hysteresis and Barkhausen noise in two-phase magnetic materials", N. Prabhu Gaunkar, I. C. Nlebedim, D. C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.

643. "Enhanced Surface State of Topological Insulators by Optimal Magnetic Doping", Z.Zhang, Y.Ni, X.Che, N.Meyer, C.Nlebedim, R.Hadimani, G.Tuttle and D.C.Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.

644. "Effect of brain development on induced electric field during transcranial magnetic stimulation", L. J. Crowther, R. L. Hadimani and D. C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.

645. "Estimation of sub-surface stresses using a new model for the Barkhausen frequency spectrum", O. Kypris, C.I. Nlebedim and D.C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.

646. "Suitability of Cation Substituted Cobalt Ferrite Materials for Magnetoelastic Sensor Applications", I. C. Nlebedim and D. C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.

647. "Thin film R5(Si,Ge)4 compound displaying magnetostructural transition: a pathway towards magnetic refrigeration and magnetostrictive devices at nanoscale", R. L. Hadimani, J. H. B. Silva, A. M. Pereira, D. L. Schlagel, T. A. Lograsso, Y. Ren, X. Zhang, D. C. Jiles, and J. P. Araujo. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.

648. "Magnetic stimulation of the brain", **(Invited)**, R.L.Hadimani, L.J.Crowther and D.C.Jiles, Magnetics Technology International, pp. 4-8, 2014.

649. "Thermal Effects on the Magnetic Properties of Titanium Modified Cobalt Ferrite". C.I. Nlebedim and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

650. " Fabrication and characterization of nanoparticles of Gd_5Si_4", R.L. Hadimani, S. Gupta, V.K. Pecharsky and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

651. "Second order phase transition temperature of single crystal samples of $Gd_5(Si_xGe_{1-x})_4$ in the mixed phase region of $0.3 \leq x \leq 0.41$", R.L. Hadimani, Y. Melikhov, D.L. Schlagel, T.A. Lograsso, K.W. Dennis, R.W. McCallum and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

652. "Enhanced Surface State of Topological Insulators by Optimal Magnetic Doping". Z. Zhang, Y. Ni, C.I. Nlebedim1, R.L. Hadimani, G. Tuttle and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

653. "Signal analysis and control of ringing in pulsed NMR circuits". N. Prabhu Gaunkar, N.Y. Bouda, I.C. Nlebedim, R.L. Hadimani, K. Ganesan, I. Bulu, Y. Song, R. Weber, M. Mina and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

654. "Influence of Ga-Concentration on the Electrical and Magnetic Properties of Magnetoelectric $BaTiO_3/CoGa_xFe_{2-x}O_4$ Composite". Y. Ni, C.I. Nlebedim, Z. Zhang and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

655. "Quantitative comparison between constant stress along depth and a stress-depth gradient using frequency domain Barkhausen noise statistics". O. Kypris, C.I. Nlebedim and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

656. "Tuning the magnetism in low-dimensional Ising Fe-doped $CoNb_2O_6$ with a strongly ferrimagnetic system". C.I. Nlebedim and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

657. "Effect of coil orientation and gyral folding pattern on induced electric fields during transcranial magnetic stimulation". L.J. Crowther, R.L. Hadimani and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

658. "Thermal and mechanical stability of adjustable 'Halo' coil for transcranial magnetic stimulation". Y. Meng, R.L. Hadimani, J. Qu, Z. Xu, L.J. Crowther and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

659. “Differential effect of magnetic field orientation on the proliferation rate of dopaminergic neurons during transcranial magneteic stimulation”, Y.Meng, R.L.Hadimani, V. Anantharam, A.Kanthasamy and D.C.Jiles. To be submitted to IEEE Transactions on Bioengineering, 2014.

660. “Study of Magnetic, Magnetotransport and Dielectric properties in $La_{0.4}Bi_{0.6}Mn_{1-x}Ti_xO_3$ Manganite", V. Punith Kumar, R. Hadimani, D.C. Jiles, R. Bhowmik and V. Dayal. Submitted to Journal of Physics C: Condensed Matter.

661. “Enhancement of magnetocaloric effect in the Gd_2Al phase by Co alloying”, Z.Y.Huang, H. Fu, R.L. Hadimani and D.C.Jiles, J. Appl. Phys., 116, 83908, 2014.

662. “Unusual Phase Transitions in Single Crystals of Gd5Si1.3Ge2.7and Gd5Si1.4Ge2.6”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

663 “Control of proliferation rate of N27 dopaminergic neurons using Transcranial Magnetic Stimulation orientation”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

664. “Strong effect of low-dimensional Fe-doped cobalt niobate on a strongly ferrimagnetic system”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

665. “Enhancement of Magnetoelectric Coupling in CoGaxFe2−xO4/BaTiO3 Composite”, American Physical Society March Meeting, San Antonio, Texas March 2-6, 2015.

666. “Changes in magnetic properties of cobalt-iron-titanium oxide due to temperature variations”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

667. “Size Reduction Techniques for Large Scale Permanent Magnet Generators in Wind Turbines”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

668. “Correlating valence state, site preference and co-substitution to the magnetoelastic properties of cobalt ferrite”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

669. “Growth and Characterization of Large Scale (Sb1−xBix)2Te3Thin Films on Mica”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

670. “Study of parameters for designing Barkhausen noise sensing elements using finite element analysis”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

671. “Application of Barkhausen noise and ferromagnetic hysteresis for magnetic non-destructive evaluation of multiphase composites and structures”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

672. “Critical Mechanism of Magnetic Doped CrxBi2−xTe3 Topological Insulator Thin Films”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

673. “Comparison of Coil Designs for Transcranial Magnetic Stimulation on Mice”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

674. “Determination of stimulation focality in heterogeneous head models during transcranial magnetic stimulation (TMS)”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

675. “First Successful Fabrication of Nanoparticles of magnetocaloric Gd5Si4”, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015.

676. “Investigation of Magnetic Contribution to Achievement of Torque in a 10MW Permanent Magnet Generator”, H. A. Khazdozian, R. L. Hadimani and D. C. Jiles. Submitted to Journal of Magnetism and Magnetic Materials, 2015.

677. “Barkhausen spectroscopy: Non destructive eevaluation of stress-depth gradients in ferromagnetic structures”, O. Kypris, C.I.Nlebedim, J.P.Basart and D.C.Jiles. Submitted to IEEE Transactions on Magnetics, 2015.

679. “Magnetic and electrical properties of Ti-substituted lanthanum bismuth manganites”, V.P. Kumar, V. Dayal, R.L. Hadimani and D.C.Jiles, Journal of Materials Science, 50 , 3562-3575, 2015.

680. “Gd-5(Si,Ge)(4) thin film displaying large magnetocaloric and strain effects due to magnetostructural transition”, R.L. Hadimani, J. H. B. Silva, A.M. Pereira and D.C.Jiles. Applied Physics Letters, 106, 032402, 2015.

681. “Enhancement of magnetocaloric effect in the Gd2Al phase by Co alloying”, Z.Y.Huang, H. Fu, R.L. Hadimani and D.C.Jiles, Journal of Applied Physics, 116, 183908, 2014

682. “Effect of Anatomical Brain Development on Induced Electric Fields During Transcranial Magnetic Stimulation”, L.J. Crowther, R.L. Hadimani and D.C. Jiles, IEEE Transactions on Magnetics 50, 5102304, 2014.

683. “Analysis of Barkhausen Noise Emissions and Magnetic Hysteresis in Multi-Phase Magnetic Materials”, N.P. Gaunkar, O. Kypris, C.I. Nlebedim and D.C.Jiles. IEEE Transactions on Magnetics, 50, 7301004, 2014.

684. “Thermal and Mechanical Analysis of Novel Transcranial Magnetic Stimulation Coil for Mice”, S.D. March, S.J. Stark, R.L. Hadimani and D.C.Jiles, .IEEE Transactions on Magnetics, 50, 5100805, 2014.

685. “Influence of Mn concentration on magnetic topological insulator MnxBi2-xTe3 thin film Hall effect sensor”. Y. Ni, Z. Zhang, C.I. Nlebedim, R.L. Hadimani and D.C.Jiles. International Conference on Magnetics, Beijing, China, May 11-15, 2015. IEEE TRANSACTIONS ON MAGNETICS Volume: 51 Issue: 11 Article Number: 4004704 Published: NOV 2015

686. “Examining the correlation between microstructure and Barkhausen noise activity for ferromagnetic materials”. N. Prabhu Gaunkar, C.I. Nlebedim and D.C. Jiles. International Conference on Magnetics, Beijing, China, May 11-15, 2015. IEEE TRANSACTIONS ON MAGNETICS Volume: 51 Issue: 11 Article Number: 7301904 Published: NOV 2015

687. “Femto Second Pulsed Laser Deposition of Nanoparticulate Thin Film of Gd5(SixGe1-x)4”, R.L. Hadimani, A.H. Shaw, D.L. Schlage, T.A. Lograsso, J.H. da Silva, A.M. Pereira, J.P. Araujo, E.A. Balfou, H. Fu and D.C. Jiles. International Conference on Magnetics, Beijing, China, May 11-15, 2015.

688. “Size Reduction of Permanent Magnet Generators for Wind Turbines using Halbach Cylinders”, H.A. Khazdozian, R.L. Hadimani and D.C Jiles. International Conference on Magnetics, Beijing, China, May 11-15, 2015.

689. “Room temperature ferromagnetic nanoparticles of Gd5Si4”, R.L. Hadimani, S.M. Harstad, S. Gupta,V.K. Pecharsky, E.A. Balfour, H. Fu and D.C. Jiles. International Conference on Magnetics, Beijing, China, May 11-15, 2015. IEEE TRANSACTIONS ON MAGNETICS Volume: 51 Issue: 11 Article Number: 2504104 Published: NOV 2015

690. “Magnetic interaction and electronic transport in La0.4Bi0.6Mn0.5Ti0.5O3 manganite”. V. Dayal, P.V. Kumar, R.L. Hadimani, E.A. Balfour, H. Fu and D.C. Jiles. International Conference on Magnetics, Beijing, China, May 11-15, 2015. IEEE TRANSACTIONS ON MAGNETICS Volume: 51 Issue: 11 Article Number: 1200104 Published: NOV 2015

691. "Transcranial Magnetic Stimulation for Noninvasive Treatment of Brain Disorders **(Invited)**", D.C. Jiles. International Conference on Magnetics, Beijing, China, May 11-15, 2015.

692. "Deep Transcranial Magnetic Stimulation for the Treatment of Neurological Disorders", (**Keynote address**), D. C. Jiles, R. L. Hadimani and P. Rastogi presented at the 4th International Conference on Biosensors and Bioelectronics, Atlanta, Georgia, September 28-30, 2015.

693. "Magnetocaloric Effect in Multiphase Gd28Ni24Al48 Alloy with Adjacent Curie Temperatures", Z. Ma, Y. Shang, H. Fu, E. Balfour, R. Hadimani, D.C. Jiles, B. Teng, l. Wang, Y. Luo and D.F. Wang. Submitted to J. Phys. D: Applied Physics, 2015.

694. "Approach for improving the Sensitivity of Barkhausen Noise Sensors with Applications to Magnetic Nondestructive Testing", N. Prabhu Gaunkar, I.C. Nlebedim and D.C. Jiles, Materials Evaluation, 7,3 (10), 1377, 2015.

695. "Ultrahigh Sensitivity of Anomalous Hall Effect Sensor Based on Cr-doped Bi_2Te_3 Topological Insulator Thin Films", Yan Ni; Zhen Zhang, Cajetan I. Nlebedim, Ravi L. Hadimani, David C. Jiles. To be presented at the 13th Joint MMM/InterMag Conference, San Diego, California, January 11-15, 2016.

696. "Investigation of Depth and Focality of Different Coil Designs During Transcranial Magnetic Stimulation in Mice", Priyam Rastogi, Ravi L. Hadimani, David C. Jiles. To be presented at the 13th Joint MMM/InterMag Conference, San Diego, California, January 11-15, 2016.

697. "Use of Non Rare Earth Permanent Magnets in Halbach Cylinder Rotor Permanent Magnet Generator", Helena A. Khazdozian, Ravi L. Hadimani, David C. Jiles. To be presented at the 13th Joint MMM/InterMag Conference, San Diego, California, January 11-15, 2016.

698. "Multifrequency analysis of ringing in inductive magnetic sensors for pulsed NMR applications", Neelam Prabhu Gaunkar, Cajetan I. Nlebedim, Irfan Bulu, Ravi L. Hadimani, Yiqiao Song, Mani Mina, David C. Jiles. To be presented at the 13th Joint MMM/InterMag Conference, San Diego, California, January 11-15, 2016.

699. "Development of Deep Brain TMS Coil: Triple Halo Coil", Priyam Rastogi, Ravi L. Hadimani, David C. Jiles. To be presented at the 13th Joint MMM/InterMag Conference, San Diego, California, January 11-15, 2016.

700. "Investigation of Effect of Brain Skull Distance on the Efficacy of Transcranial Magnetic Stimulation Treatment in Depression", Erik G. Lee, Walter Duffy, Ravi L. Hadimani, Zia Choudhry, Mohammed Waris, Faisal Islam, Mahesh Rajamani, Waquar Siddiqui, Ryan Nathan, David C. Jiles. To be presented at the 13th Joint MMM/InterMag Conference, San Diego, California, January 11-15, 2016.

701. "Magnetotransport Study of $(Sb_{1-x}Bi_x)_2Te_3$ Thin Films on Mica Substrate for Ideal Topological Insulator", Zhen Zhang, Yan Ni, Cajetan I. Nlebedim, Ravi L. Hadimani, David C. Jiles. To be presented at the 13th Joint MMM/InterMag Conference, San Diego, California, January 11-15, 2016.

702. "Transcranial magnetic stimulation treatment", P.Rastogi, R.L. Hadimani and D.C.Jiles, , Magnetics Technology International, pp. 42-45, 2016.

h-index and related citation measures

Google Scholar

Total number of articles in list:	631
Citations	11,694
h-index:	41
i-10 index	189

Web of Science

Total articles in publication list:	399
Sum of the Times Cited:	6284
Sum of Times Cited without self-citations:	5443
Citing Articles:	3719
Average Citations per Item:	15.75
h-index:	35

Updated: November 2015.