List of Publications Of Prof. A.K. Raychaudhuri

(Up dated May 2017)

(a). Refereed Journals only

1980

1.A.K.Raychaudhuri and R.Hasegawa
(1980) "Phonon Scattering in non-crystalline alloys" Phys.Rev. **B 21**, 479

2.A.K.Raychaudhuri and R.O.Pohl
(1980) "Connection between the low temperature anomaly in glasses and the glass transition temperature" Solid State Comm. **37,** 105

1981

3.R.E.Stahlbush, C.M.Bastuscheck, A.K.Raychaudhuri and J.C.Scott
(1981) "**Studies of polymeric chromium phosphinate**" Phys. Rev. **B 23**, 33935.
4.T.Klitsner, A.K.Raychaudhuri and R.O.Pohl
(1981) "Connection between the low temperature thermal conductivity of glasses and the glass transition temperature" J. Phys (Paris) **42,** C6 –66

1982

5.A.K.Raychaudhuri and R.O.Pohl
(1982) "Specific heat of glasses at low temperatures" Phys. Rev. **B25,** 1310

6.A.K.Raychaudhuri and R.O.Pohl
(1982) "Thermal conductivity of neutron irradiated silica" Solid State Comm. **44**, 711

7. A.K.Raychaudhuri and S.Hunklinger
(1982) "Low frequency elastic properties of glasses at low temperatures"
J. Phys (Paris) **43,** C9 – 485

1983

8. A.K.Raychaudhuri and S.Hunklinger
(1983) "Low temperature elastic properties of a superconducting disordered metal"
Solid State Comm. **45,** 103

1984

9. A.K.Raychaudhuri and S.Hunklinger
(1984) "Low frequency elastic properties of glasses at low temperatures – implication on the tunneling model" Z. Phys. **B57**, 113

1985

10. S.B.Ray, A.K.Majumdar and A.K.Raychaudhuri
(1985) "A.C.Susceptibility and electrical resistivity in $Fe_{80-x}Ni_xCr_{20}$ alloys"
Phys. Rev. **B31**, 7458

1986

11.J.F.Berret, J.Pelous, R.Vacher, A.K.Raychaudhuri and M.Schmidt

(1986) "Acoustic properties and relationship with the low frequency light scattering in an optical glass" J. of Non Crystalline Solids. **87**, 70

12.P.K.Mukhopadhyay and A.K.Raychaudhuri
(1986) "Easy to build four terminal a.c. bridge" J.Phys E: Sci. Instr. **19,** 792

13. Madhu Prasad, Radhika Rani Rao and A.K.Raychaudhuri
(1986) "A versatile A.C. Mutual inductance bridge" J.Phys E: Sci. Instr. **19**, 1013

14.A.K.Raychaudhuri
(1986) "Low temperature properties of glasses –Unsolved problems" Proc. Indian Acad. Sciences (Chem. Sci Ed.) **96**, 559

1987

15. P.K.Mukhopadhyay and A.K.Raychaudhuri
(1987) "A Simple vibrating reed apparatus" J.Phys E: Sci. Instr. **20,** 507

16. P.Ganguly, K.Sreedhar, A.K.Raychaudhuri and C.N.R. Rao
(1987) "High temperature superconductivity in the 100K region in perovskite related oxides of Ln-Ba-Cu-O (Ln= Y or Ba) system" Pramana – J.Phys.(Letters). **21,** L 229

17. C.N.R.Rao, P.Ganguly, A.K.Raychaudhuri and R.A.Mohanram,
(1987) "Identification of the phase responsible for high temperature superconductivity in Y-Ba-Cu Oxides" Nature. **326,** 856

18.R.A.Mohanram, K.Sreedhar, A.K.Raychaudhuri, P Ganguly and C.N.R Rao
(1987) "High temperature superconductivity in perovskite oxides of Y-Ba-Cu-O systems" Phil.Mag. Letters. **55,** 257

19. A.K.Raychaudhuri, K.Sreedhar, K.P.Rajeev, R.A.Mohanram, P.Ganguly and C.N.R Rao
(1987) "High temperature superconductivity in La and Lu substituted Yba Cu O and related oxides" Phil.Mag. Letters. **56,** 29

20.K.Sreedhar, R.A.Mohanram, A.K.Raychaudhuri, P.Ganguly and C.N.R.Rao
(1987) "High temperature superconductivity in the Y-Ba-Cu-O system"
Phase Transition, **10,** 3

1988

21. M.Rajeswari, Sheela K Ramshesha and A.K.Raychaudhuri
(1988) "Continuous-cooling method of specific heat measurement in the temperature range 100-300 K" J.Phys.E: Sci. Instr. **21**, 1017

22.P.K.Mukhopadhyay and A.K.Raychaudhuri
(1988) "The elastic manifestation of a spin glass transition: a low frequency study"
J.Phys.C:Solid State Phys. **21,** L 385

23. K.P.Rajeev, N.Y.Vasanthacharya, A.K.Raychaudhuri, P.Ganguly and C.N.R.Rao
(1988) "**Electrical transport in the perovskite solid solution $LaNi_{1-x}Co_xO_3$ "**
Physica **C 153-155,** 1331

1989

24.M.Rajeswari and A.K.Raychaudhuri
(1989)"Heat release from a supercooled liquid near glass transition"
Europhysics Letters. **10,** 153

25. K.B.R.Varma and A.K.Raychaudhuri
(1989) "Pyroelectric and dielectric properties of potassium hydrogen phthalate single crystals"
J phys D:Appl. Phys. **22,** 809

26.N.Y.Vasanthacharya, A.K.Raychaudhuri, P.Ganguly and C.N.R Rao
(1989)"Spin glass behaviour in the $LaNi_x Mn_{1-x} O_3$ system "
J. of Mag.and Magnetic Mater. **81**, 133

27. A.K.Raychaudhuri
(1989) "Origin of plateau in the low temperature thermal conductivity of silica"
Phys.Rev. **B 39**, 1927

1990

28.S.Banerjee, M.K.Gunasekaran and A.K.Raychaudhuri
(1990) "A phase-sensitive superheterodyne ultrasonic spectrometer"
Measurement. Sci. and Tech. **1,** 505

29. P.K.Mukhopadhyay and A.K.Raychaudhuri
(1990) "Elastic properties of reentrant spin glass" J. Appl. Phys. **67,** 5235

30. G.V.Shivashankar and A.K.Raychaudhuri
(1990) "Possible observation of coulomb blockade at room temperature"
Pramana-J.Phys.(Letters) **35**, L 503

1991

31. H Srikanth, M.Rajeswari and A.K.Raychaudhuri
(1991) "Point contact tunneling studies on ceramic YBCO with STM tips"
Pramana-J.Phys. **36,** 207

32. H.Srikanth and A.K.Raychaudhuri
(1991) "A versatile system for point contact conductance spectroscopy"
Cryogenics. **31,** 421

33. A.K.Raychaudhuri and R.O.Pohl
(1991) "Low temperature internal friction of glass ceramics"
Phys.Rev. **B 44**, 12 233 (1991-II)

34 .H.Srikanth and A.K.Raychaudhuri
(1991) "A comparison of barrier type tunnel junction and point- contact tunnel junction formed on the same high T_c material" Pramana-J.Phys. **36,** 621

35. K.P.Rajeev, G.V. Shivashankar and A.K.Raychaudhuri
(1991) "Low temperature electronic properties of a normal conducting perovskite oxide ($LaNiO_3$)" Solid State Comm. **79,** 591

36. R.Karunanithi, A.K.Raychaudhuri, Z.Szucs, G.V.Shivashankar
(1991) "Behaviour of power MOSFETs at Cryogenics temperatures" Cryogenics **31,** 1065

37.A.K.Raychaudhuri
(1991) "Low temperature conductivity of Ta compensated sodium bronze near the metal-insulator transition" Phys.Rev. **B 44,** 8572 (1991-II)

38. H.Srikanth and A.K.Raychaudhuri
(1991) "Microshort to tunneling transition in Au-$Yba_2Cu_3O_{7-\delta}$ (single crystal) point contacts" Phys.Rev. **B 45,** 383 (1991-II)

39. H.Srikanth, P.K.Mukhopadhyay and A.K.Raychaudhuri
(1991)"Superconducting gap in Nb seen by point contact spectroscopy"
Bulletin of materials science **14,** 759

40. H.Srikanth and A.K.Raychaudhuri
(1991) "Effect of Surface on the conductance characteristics of Au- Bi_2Sr_2 Ca $Cu_2O_{8-\delta}$ (single crystal) point contact junctions" J. of Appl. Physics **70,** 7478

41.S.Banerjee, M.R.Srinivasan, A.K.Raychaudhuri and H.L.Bhatt
(1991) "Ultrasonic velocity and attenuation in Ferroelectric TAAP"
J.Phys :Condensed Matter (letters) **3,** L225

1992

42. P.K.Mukhopadhyay and A.K.Raychaudhuri
(1992) "Freezing of magnetic domain motion in a reentrant spin glass as seen by elastic measurements" Solid State Communication. **83** , 829

43. Radhika Rani Rao and A.K. Raychaudhuri
(1992) "Magnetic studies of a mixed antiferromagnetic system Fe_{1-x} Ni_x PS_3 "
J.Phys. and Chem. Solids **53,** 577

44.Radhika Rani Rao and A.K.Raychaudhuri
(1992) "Structural and Vibrational Studies of the layered structure solid Fe_{1-x} Ni_x PS_3 "
J. Phys. and Chem. Solids **53,** 949

45.K.P.Rajeev and A.K.Raychaudhuri
(1992) "Quantum corrections to conductivity in a perovskite oxide : A low temperature study of La Ni_{1-x} Co_x O_3" Phys. Rev. **B 46**, 1309

46.H.Srikanth and A.K.Raychaudhuri
(1992) "Modelling Tunneling data of Normal Metal-Oxide Superconductor point contact junctions" Physica **C190,** 229

47. H.Srikanth, K.P.Rajeev, G.V.Shivashankar and A.K.Raychaudhuri
(1992) "Normal State Tunneling conductance of perovskite oxides : Implication on high T_c superconductors" Physica **C 195,** 87

48.H.Srikanth and A.K.Raychaudhuri
(1992) "Transition from metallic to Tunneling type conductance in metal-metal (N-N) and normal metal- superconductor (N-S) point contacts." Phys. Rev **B 46,** 14 713

49. S.Bannerjee , M.W.J. Prins, K.P.Rajeev and A.K.Raychaudhuri
(1992) "An automated thermal relaxation calorimeter" Pramana- J.Phys. **39,** 391

50. S.Banerjee and A.K. Raychaudhuri

(1992) "Resistivity minima and electron-electron interactions in crystalline alloys of transition metals" Solid State Commn. **83,** 1047

51. A.K.Raychaudhuri and R.O.Pohl
(1992) "Low temperature internal friction and sound velocity in Zener Alloys"
Phys. Rev **B 46,** 10 657

52. H.Srikanth, A.K.Raychaudhuri, C.R.Rao, P.Ramaswamy, H.N. Aiyar, C.N.R. Rao
(1992) "Tunneling studies on single crystals of superconducting $Bi_2Ca_{1-x}Y_xSr_2Cu_2O_{8+\delta}$"
Physica **C 200**, 273

1993

53. M.Rajeswari and A.K.Raychaudhuri
(1993) "Specific heat measurements during cooling through the glass transition region"
Phys.Rev. **B 47,** 3036

54. R.Goswami, S.Bannerjee, K.Chattopadhyay and A.K.Raychaudhuri,
(1993) "Superconductivity in rapidly quenched metallic systems with nanoscale structure"
J. of Appl. Physics **73 ,** 2934

55. H.Srikanth and A.K.Raychaudhuri
(1993) "Tunneling studies on 5agnet tungsten bronzes near the metal – insulator transition "
J. Phys. : Condens. Matter **5,** L551

56. M.Rajeswari and A.K.Raychaudhuri
(1993) "A model for the analysis of heat release from a supercooled liquid at the glass transitiom temperature". Pramana –J. Phys. **41,** 401

57. S.Banerjee and A.K.Raychaudhuri
(1993) "Magnetoresistance of $Fe_xNi_{80-x}Cr_{20}$ ($50 < x < 66$) and $Fe_{25}Cr_{75}$ alloys "
J. Phys (Letters): Condens. Matter **5,** L 295

58. H.Srikanth , A.K.Raychaudhuri, J.L.Peng and R.L.Greene
(1993) "Point contact tunneling studies on $(Y_{1-x}Pr_x)Ba_2Cu_3O_{7-\delta}$ single crystals".
Physica **C 218,** 245

1994

59. J.E.Van Cleve , A.K.Raychaudhuri and R.O.Pohl
(1994) "Glass like elastic properties in the ω–β alloys" Z.Physik **B 93**, 479

60. A.K.Raychaudhuri, K.P.Rajeev, H.Srikanth and R.Mahendiran
(1994) "Low temperature studies on normal perovskite oxides: role of correlation an disorder"
Physica **B 197**, 124

61. S.Banerjee and A.K.Raychaudhuri
(1994) "Electrical resistivities of γ-phase $Fe_xNi_{80-x}Cr_{20}$ alloys" Phys Rev **B 50**, 8195

1995

62. S.Bannerjee R.Goswami, K.Chattopadhyay and A.K.Raychaudhuri,
(1995) "Structural and electrical transport properties of Al-Cu-Cr Quasicrystals "
Phys. Rev **B 52,** 3220

63. S.Banerjee and A.K.Raychaudhuri
(1995) "Low temperature magnetoresistance of γ– phase $Fe_x Ni_{80-x} Cr_{20}$ alloys near the critical composition of ferromagnetism" Phys. Rev **B 52** , 3453

64. A.K.Raychaudhuri, K.P.Rajeev , H.Srikanth and N. Gayathri
(1995) "Metal – Insulator Transition In perovskite oxides : Tunneling Experiments"
Phys. Rev **B 51**, 7421

65. R. Mahendiran, A.K. Raychaudhuri, A. Chainani and D.D. Sarama
(1995) "Large Magnetoresistance in $La_{1-x} Sr_x MnO_3$ and its dependence on magnetization"
Appl. Phys. Letts. **66,** 233

66. R. Mahendiran, A.K. Raychaudhuri, A. Chainani and D.D. Sarama
(1995) " Low temperature Linear Magnetic field sensor based on magnetoresistance of the perovskite oxide La-Sr-Co-O" Rev. Sci. Instrum. **66,** 3071

67. R. Mahesh, R. Mahendiran, A.K. Raychaudhuri and C.N.R Rao
(1995) " Giant Magnetoresistance in bulk samples of $La_{1-x} A_x MnO_3$ (A = Sr or Ca)"
J. Solid State Chem. **114,** 297

68. R. Mahendiran, R. Mahesh, A.K. Raychaudhuri and C.N.R Rao
(1995) "Composition dependence of giant magnetoresistance in $La_{1-x} Ca_x MnO_3$ "
Solid State Comm. **94,** 515

69. R. Mahendiran, R. Mahesh, A.K. Raychaudhuri and C.N.R Rao
(1995) "Room temperature giant magnetoresistance in $La_{1-x} Pb_x MnO_3$ "
J. of Physics D: Appl. Phys. **28,** 1743

70.R. Mahendiran, R. Mahesh, A.K. Raychaudhuri and C.N.R Rao
(1995) "Giant Magnetoresistance in Bulk samples of $LaMnO_3$ with varying Mn content".
Pramana – J.Phys. (letters) **44,** L393

71. R. Mahendiran, A.K. Raychaudhuri, A. Chainani and D.D. Sarama
(1995) "Large magnetoresistance of $La_{1-x} Sr_x CoO_3$ at low temperatures."
J. Phys. Condensed Matter (Letters) **7,** L 561

72. R. Mahesh, R. Mahendiran, A.K. Raychaudhuri and C.N.R Rao
(1995) "Effect of Internal Pressure due to the A-site cations on the giant magnetoresistance and related properties of doped rare earth manganates $Ln_{1-x} A_x MnO_3$ (Ln = La, Nd, Gd)"
J. Solid State Chem. **120,** 204

1996

73. M.Dominguez, S.E. Lofland, S.M.Bhagat, A.K.Raychaudhuri, H.L.Ju and R.L. Greene
(1996) " Are single phase manganite samples truly homogeneous ? A magnetic resonance study"
Solid state Comm. **97,** 193

74. R. Mahendiran, S.K. Tiwary, A.K. Raychaudhuri, T.V. Ramakrishnan, R. Mahesh, N. Rangavittal and C.N.R Rao
(1996) "Structure electron- transport properties and giant magnetoresistance of hole doped $LaMnO_3$ systems." Phys. Rev **B 53,** 3348

75. R. Mahendiran, R. Mahesh, A.K. Raychaudhuri and C.N.R Rao
(1996) "Effect of Y substitution in La-Ca-Mn-O perovskite showing giant

magnetoresistance" Phys. Rev. **B 53,** 12 160

76. R. Mahesh, R. Mahendiran, A.K. Raychaudhuri and C.N.R Rao
(1996) "Effect of particle size on the giant magnetoresistance of $La_{0.7}Ca_{0.3}MnO_3$"
Appl. Phys. Letts. **68,** 2291

77. R. Mahendiran, S.K. Tiwary and A.K. Raychaudhuri
(1996) "Thermopower of giant magnetoresistive system $La_{1-x}Ca_xMnO_3$ "
Solid state commn. **98,** 701

78. R.Mahendiran, R. Mahesh, A.K. Raychaudhuri and C.N.R Rao
(1996) "Resistivity, giant magnetoresistance and thermopower in $La_{0.7}Sr_{0.3}MnO_3$ showing a large difference in temperatures corresponding to the ferromagnetic transition and the insulator-metal transition." Solid state Comm. **99,** 149

79. R. Mahesh, R. Mahendiran, A.K Raychaudhuri and C.N.R Rao
(1996) "Effect of dimensionality on the giant magnetoresistance of the manganates : A study of $(La,Sr)_{n+1}Mn_nO_{3n+1}$ family". J. Solid State Chem. **122** , 448

80. M. Rajeswari, A. Goel, A.K. Raychaudhuri, C.Kown, T. Venkateswan and R.L. Greene
(1996) "Large Resistance fluctuation in epitaxial films thin films of GMR oxides "
Appl. Phys. Letts., **69 ,** 851 and Errata 1978

81.Geetha Ramaswamy and A.K. Raychaudhuri
(1996) "Nanostructure of giant magnetoresistive oxide film $Nd_{2/3}Sr_{1/3}MnO_3$"
J. Appl. Phys. **80,** 4519

82. R. Mahendiran and A.K. Raychaudhuri
(1996) "Magnetoresistance of the spin state transition compound $La_{1-x}Sr_xCoO_3$"
Phys. Rev **B 54,** 16 044

83. Amlan Biswas and A.K. Raychaudhuri
(1996) "Tunneling spectroscopy and the density of states in $La_{0.8}Ca_{0.2}MnO_3$ "
J. Phys : Condensed Matter (letters) **8,** L 739

84. R. Mahendiran, S.K. Tewary, A.K.Raychauduri, R.Mahesh and C.N.R Rao
(1996) "Thermopower and nature of the hole doped states in $LaMnO_3$ and related systems"
Phys. Rev. B (Rapid Commn) **54,** R 9604

85.. R. Mahendiran, R.Mahesh, A.K. Raychaudhuri and C.N.R Rao
(1996) "Unusual field dependence of the resistivity and magnetoresistance in $Nd_{0.5}Ca_{0.5}MnO_3$"
J. Phys :Condensed Matter (letters) **8,** L 455

86. A. Arularaja, R.Mahesh,G.N. Subanna, R.Mahendiran, A.K. Raychaudhuri and C.N.R Rao
(1996) "Insulator –Metal transition , Giant magnetoresistance and related aspects of the cation deficient $LaMnO_3$ compositions, $La_{1-\delta}MnO_3$ and $LaMn_{1-\delta}O_3$ " J. Solid State Chem. **127** , 87

87. J.J. Hamilton,E.L. Keatley, H.L. Ju. A.K. Raychaudhuri, V. Smolyanionova and R.L. Greene
(1996) "Low temperature specific heat of $La_{0.67}Ba_{0.33}MnO_3$ and $La_{0.8}Ca_{0.2}MnO_3$ "
Phys. . Rev.B, **54,** 14 926

88. T.Vogt, A.K. Cheetham, R.Mahendiran, A.K. Raychaudhuri , R.Mahesh and C.N.R Rao
(1996) "Structural changes and related effects due to charge ordering in $Nd_{0.5}Ca_{0.5}MnO_3$
Phys. Rev **B 54,** 15 303

1997

89. N. Gayathri, A.K. Raychaudhuri, S.K. Tiwary, R. Gundakaram, A. Arulraj and C.N.R Rao,
(1997) "Electrical transport, magnetism and magnetoresistance in ferromagnetic oxides with mixed magnetic exchange : a study of the $La_{0.7}Ca_{0.3}Mn_{1-x}Co_xO_3$ system"
Phys. Rev. B **56,** 1345

90 . G. Ramaswamy, A.K.Raychaudhuri, J. Goswami and S.A. Shivashankar
(1997) "Large deviation from Matheissen's rule in chemical vapor deposited copper films and its correlation to nanostructure" Journal of Physics D: (Appl. Physics) (Rapid Commn) L5-9, **30**

91. R. Gundakaram, A. Arulraj, P.V. Vanitha, C.N.R Rao , N. Gayathri and A.K. Raychaudhuri
(1997) " Effect of substitution of Cr^{3+} in place of Mn^{3+} in rare earth manganates on the magnetism and magnetoresistance : role of superexchange interaction and lattice distortion in $LnMn_{1-x}Cr_xO_3$
J. Solid state Chem. **127,** 354

92. S. Bannerjee, A.K. Raychaudhuri, R. Goswami and K. Chattopadhyay
(1997) "Low temperature resistivity and magnetoresistance of Icosahedral Quasi cryatals Al-Cu-Cr"
J. Phys : Condnsed Matter **9,** 6643

93. A. Biswas, A.K. Raychaudhuri, R. Mahendiran, R.Mahesh and C.N.R Rao
(1997)" Direct measurement of charge ordering gap in $Nd_{0.5}$ $Sr_{0.5}$ MnO_3 using vaccum tunneling" J. Phys : Condensed Matter (letters) **9,** L 355

94 G. Ramaswamy, A.K.Raychaudhuri, J. Goswami and S.A. Shivashankar
(1997) "Scanning tunneling microscope study of the morphology of chemical vapor deposited copper films and its correlations with its resistivity" J. Appl. Physics **82,** 3797

95.A.. Raju, H.N. Aiyer, R. Mahendiran , A.K. Raychaudhuri and C.N.R Rao
(1997) "Epitaxial films of La_{1-x} MnO_3 exhibiting CMR prepared using neublized spray pyrolysis"
J. Phys D (Appl Phys) (rapid commn)**30**, L1-L3

96.A.Ghosh, A.K. Raychaudhuri, R. Sreekala, M. Rajeswari and T. Venkatesan
(1997) "Dependence of the conductivity noise of metallic oxide interconnects on the oxygen stoichiometry : A study of $LaNiO_{3-\delta}$"
J. Phys D (Appl. Phys) (rapid commn) **30,** L 75

1998

97 A. Biswas, A.K. Raychaudhuri
(1998)"Temperature dependent vaccum tunneling spectroscopy of rare-earth namganates showing colossal magnetoresistance and charge ordering" Appl. Phys. A **66,** S1213

98. A. Arulraj, R. Gundakaran , A.Biswas, N Gayathri and A.K. Raychaudhuri and C.N.R Rao ,
(1998)"Charge ordered state in $Y_{0.5}Ca_{0.5}MnO_3$ with a very small average radius of the A-site cation"
J. Phys : Condensed Matter **10,** 4447

99. G.Ramaswamy, A.K. Raychaudhuri. K. Das Gupta and G. Sambandamurthy
(1998)"A study of spatial variation of electric field in highly resistive metal films by scanning tunneling potentiometry" Appl . Phys . A **66,** S 435

100. D.D. Sarma, A. Chainani, S.R. Krishnakumar, E. Vesco,C. Carbone and W. Eberhardt, G. Rader, Ch. Hellwig, W. Gudat, H.Srikanth and A.K. Raychaudhuri
(1998) " Disorder effects in electronic structure of substituted transition metal compounds"
Phys. Rev. Letts **80,** 4004

101. N. Gayathri, A.K. Raychaudhuri, X.Xu, J.L. Peng and R.L. Greene
(1998)"Electronic conduction in $LaNiO_{3-\delta}$: Dependence on oxygen stoichiometry"
J. Phys: Condens. Matter **10,** 1323

102, A. Arulraj, A. Biswas, A.K. Raychaudhuri , C.N.R Rao, P.M. Woodward, T.Vogt, D.E.Cox, A.K. Cheetham.
(1998)" Incipient charge order in a mangante with a critical average radius of the A-site cation "
Phys. Rev. (Rapid commn.) **57,** R 8115.

103..A.Ghosh, A.K. Raychaudhuri, R. Sreekala, M. Rajeswari and T. Venkatesan
(1998)" Low energy excitation in crystalline perovskite oxides : Evidence from noise experiments".
Phys. Rev. (Rapid commn.) **58,** R 14665 (1998).

104. M. Sugantha, R.S. Singh, A.Guha, A.K. Raychaudhuri and C.N. R Rao
(1998) " Effect of Substitution of Mn^{3+} by other trivalent cations on the colossal magnetoresistance and related properties of the mangantes ". Mat. Res. Bull. **33**, 1129

105. A. Arulraj, P.N. Santhosh, R. Srinivasa Gopalan, A. Guha, A.K. Raychaudhuri, N. Kumar and C.N.R Rao .
(1998) "Charge-ordering in the rare-earth manganates: origin of the extraordinary sensitivity to the average radius of the A-site cations" J. Phys; Condens. Matter **10,** 8497

1999

106. A. Biswas, S. Elizabeth, A.K. Raychaudhuri and H.L. Bhat
(1999) " The density of states of hole-doped manganites : A scanning tunneling microscopy/spectroscopy study"
Phys. Rev. **B 59** , 5368

107. N. Gayathri, A.K. Raychaudhuri, X.Xu, J.L. Peng and R.L. Greene
(1999)"Magnetoresistance of the metallic perovskite oxide $LaNiO_{3-\delta}$"
J. Phys: Condens. Matter **11,** 2901

108. G. Ramaswamy and A.K.Raychaudhuri
(1999) "Electric field and potential around localized scatterers in thin metal films studied by scanning tunneling potentiometry" Appl. Physics Letts. **75,** 1982

109. A.Ghosh and A.K.Raychaudhuri
(1999) "Conductance fluctuation near Anderson transition"
J.Phys. Condens. Matter (letters) **11**, L 457

110. A.Guha, A. Ghosh, A.K.Raychaudhuri, S. Parashar, A.R. Raju and C.N.R Rao
(1999) "Non-linear conduction and broad band noise in charge ordered rare-earth manganate $Nd_{0.5}Ca_{0.5}MnO_3$" Applied Physics Letters **75,** 3381

2000

111. A Biswas, A. Arulraj, A.K.Raychaudhuri and C.N.R Rao
(2000) "Collapse of charge ordering gap of $Nd_{0.5}Sr_{0.5}MnO_3$ in an applied magnetic field"
J.Phys. Condens. Matter (letters) **12**, L 101

112. A.Ghosh and A.K.Raychaudhuri
(2000) "Universal conductance fluctuations in heavily doped single crystals of Si"
Phys. Rev Letts. **84**, 4681

113. A.Guha, A.K.Raychaudhuri, A.R. Raju and C.N.R Rao
(2000)"Non linear conduction in charge ordered $Pr_{0.63}Ca_{0.37}MnO_3$: Effect of magnetic fields"
Phys. Rev **B 62**, 5320

114. A.Guha, N.Khare, A.K.Raychaudhuri, and C.N.R Rao
(2000)"Magnetic field resulting from non-linear electrical transport in single crystals of charge – ordered $Pr_{0.63}Ca_{0.37}MnO_3$ " Phys. Rev **B62,** (Rapid Comm) R11941

2001

115. A.K.Raychaudhuri, Ayan Guha,I.Das,R.Rawat and C.N.R Rao
(2001)"Specific Study study of Single crystalline $Pr_{0.63}Ca_{0.37}Mn0_3$ in presence of a magnetic field"
Phys. Rev **B64,** 165111

116. Dipten Bhattacharya*, Pintu Das, A. Pandey, A.K. Raychaudhuri†, Amitava Chakraborty and V.N. Ojha
(2001) "On the factors affecting the high temperature insulator-metal transition in rare-earth manganites" J.Phys. Condens. Matter (letters) **13**, L 431-439

117. Arindam Ghosh and A.K.Raychaudhuri
(2001) :"Electric field induced migration of oxygen ions in epitaxial metallic oxide films : non-Debye relaxation and 1/f noise." Phys. Rev **B 64**, 104304

118. A.Tripathy , J.P. Singh, R. Ahuja, R.N.Dutt, D.Kanjilal, A Guha, A,Biswas and A. K.Raychaudhuri
(2001)"Development of an in-situ UHV Scanning tunneling microscope in the beam line of 15 MV tandem accelarator for studies of surface modifications by swift heavy ion beam"
Rev. Sci . Instr**. 72** 3884-3890.

119. Swastik Kar and A.K. Raychaudhuri
(2001)" Temperature and frequency dependence of Flicker noise in degenerately doped Si single crystals" J.Phys D : Appl. Phys. **34,** 3197

120. A.K.Raychaudhuri, Ayan Guha,I.Das,R.Rawat and C.N.R Rao
(2001)" Thermal relaxation in charge ordered $Pr_{0.63}Ca_{0.37}Mn0_3$ in the presence of a magnetic field"
Solid State Communication **120** 303

2002

121.. Arindam Ghosh and A.K.Raychaudhuri
(2002) "Effect of two- level systems on the spectral density of universal conductance fluctuations in doped Silicon" Phys.Rev.. **B65** 03310

122. .J. Mitra, A.K.Raychaudhuri, N.Gayathri and Ya.M.Mukovskii
(2002) "Point contact spectroscopy of single crystal $La_{0.75}Sr_{0.25}MnO_3$ and resistivity due to electron-phomon interaction." Phys Rev**. B 65,** 140465 (R)

123. A.K.Raychaudhuri, A.Ghosh and S.Kar
(2002) "Flicker noise in degenerately doped Si single crystals near the metal-insulator transition"
Pramana- J.Of Physics, **58,** 343

124. . Neeraj Khare, U.P. Moharil, A,K,Gupta, A.K.Raychaudhuri ,S.P.Pai and R.Pinto
(2002) 'Temperature dependence of magnetoresistance and non-linear conductance of bicrystal grain boundary in epitaxial $La_{0.67}Ba_{0.33}MnO_3$ thin film" Appl. Physics Letters **81,** 325

125. Mandar Paranjape, A.K.Raychaudhuri and others
(2002)"CVD of thin films of Co grown on different substrates : Study of microstructure"
Thin Solid Films , **413**, 8

126. L. Sudheendra, H.D.Chinh, A.R. Raju, A.K. Raychaudhuri and C.N. R Rao
(2002) " Grain size effects on charge-ordering , phase segregation and related properties of rare-earth manganites, $Nd_{0.5}A_{0.5}MNO_3$ (A=Sr and Ca). Solid State Communication **122,** 53

127. B.C. Satishkumar, A. Govindaraj, P.V.Vanitha, A.K.Raycahudhuri and C.N.R Rao
(2002) "Barkhausen jump and related magnetic properties of iron nanowires encapsulated in aligned nanotubes bundles" Chemical Physics Letters **362,** 301

128. Mandar Pranjape and A.K.Raychaudhuri
(2002) " Annealing induced grain growth and grain connectivity in epitaxial film of $La_{0.67}Ca_{0.33}MnO_3$ and its effect on the low field colossal magnetoresistance"
.Solid State Communication **123** 521

129. Swastik Kar and A.K.Raychaudhuri
(2002)"Onset of long range diffusion and exponent of $1/f^{\alpha}$ noise in metal films with electromigration damage" Appl. Physics Letters **81,** 5165

130. L. K. Brar, Mandar Pranjape, Ayan Guha and A.K.Raychaudhuri
(2002) "Design and development of the scanning force microscope for imaging and force measurement with sub-nanonewton resolution" Current Science , **83,** 1199

2003

131. M. Nath, S.Kar, A.K.Raychaudhuri, C.N.R Rao
(2003) "Superconducting $NbSe_2$ nanostructures", Chemical Phys. Letts. **368** 690

132. K.S.Nagapriya, A.K.Raychaudhuri, V.K.Jain , C.R.Jalwania and Vikram Kumar
(2003) "Effect of ambient on thermal parameters of micromachined bolometers"
Appl. Physics Letters **82,** 2721

133.C.N.R.Rao, Geo paul, Amitava Chaudhury, E.V.Sampthkumaran, A.K.Raychaudhrui, S. Ramashesha and Indranil Rudra
(2003) "Properties of a mixed valent iron compound with kagome lattice.
Phys Rev**. B 67** ,134425

134. Aveek Bid, Ayan Guha and A.K.Raychaudhuri
(2003) " Low frequency random telegraphic noise (RTN) and 1/f noise in rare-earth manganite $Pr_{0.63}Ca_{0.37}MnO_3$ near the charge ordering transition",
Phys Rev**. B 67** , 174415

135. Mandar Paranjape, A.K.Raychaudhuri, N.Mathur and M.Blamaire
(2003) "Effect of strain and microstructure on the electrical conduction in epitaxial films of $La_{0.7}Ca_{0.3}MnO_3$ ".
Phys Rev**. B 67** , 214415

136. Swastik Kar, A. K. Raychaudhuri and Arindam Ghosh

(2003)"Observation of non-Gaussian conductance fluctuations at low temperatures in P doped Silicon at the metal-insulator transition " .
Phys.Rev.Letts.**91,** 216603

137. Mandar Paranjape, Joy Mitra A. K. Raychaudhuri, N.K. Todd, N.D. Mathur and M.G. Blamire.
(2003) "Non-linear electrical transport through artificial grain boundary junctions in epitaxial thin film of $La_{0.7}Ca_{0.3}MnO_3$" .
Phys. Rev **B 68,**144409

138.J. Mitra and A. K. Raychaudhuri, Ya. M. Mukovskii and D.Shulyatev
(2003)" Depletion of density of states at the Fermi level in metallic colossal magnetoresistive Manganites" Phys Rev **B 68,** 134428

139. A. K. Raychaudhuri ,Swastik Kar and Arindam Ghosh
(2003)" Suppression of universal conductance fluctuations by an electric field in doped Si(P,B) near the meal-insulator transition" Physica **E 18**, 284

2004

140. K.Shnatha Shamkar, S.Kar, G.N.Subanna and A.K Raychaudhuri
(2004) "Enhanced ferromagnetic transition temperature in nanocrystalline lanthalum calcium manganese oxide ($La_{0.7}Ca_{0.3}MnO_3$) Solid State Comm. **129,** 479

141. K. Shantha Shankar, Sohini Kar, A.K. Raychaudhuri and G.N. Subbanna
(2004) "Synthesis of ordered array of nanowires of $La_{0.67}Ca_{0.33}MnO_3$ (x=0.33) in alumina templates with enhanced ferromagnetic transition temperature. Appl. Phys. Letts **, .84** 993

142. Barnali Ghosh,L.K.Brar,H.Jain.J.Mitra and A.K.Raychaudhuri
(2004) "Growth of oriented films of $La_{0.67}Ca_{0.33}MnO_3$ and $La_{0.67}Sr_{0.33}MnO_3$ on $SrTiO_3$ using chemical solution deposition." J.Phys. D: Appl. Physics **37,** 1548

143. A Bhaumik, M Ramakanth, L. K, Brar, A. K. Raychaudhuri, F. Rondelez and D. Chatterji*
(2004) "The formation of DNA layer on Langmuir-Blodgett films and its enzymatic digestion" Langmuir**, 20**,5891

144. N.Gayathri and A.K.Raychaudhuri
(2004) "Point contact spectroscopy and temperature dependence of resistivity of metallic sodium Tungsten Bronzes-Role of optical phonons." J. Low Temperature Physics **137**, 471

145. K. Shantha Shankar, Sohini Kar and A.K. Raychaudhuri
(2004) "Oriented growth of nanowires in templates: Example of Lanthanum Strontium Manganese oxide in alumina templates" Nanotechnology **15**, 1312

2005

146. J. Mitra, Mandar Paranjape , A. K. Raychaudhuri, N. D. Mathur and M. G. Blamire
(2005) "Temperature dependence of the density of states near Fermi level in a strain free epitaxial film of hole doped manganite $La_{0.7}Ca_{0.3}MnO_3$." Phys. Rev **B 71** , 094426

147. K.S.Nagapriya, Ayan Guha, A.K.Raychaudhuri, B.Bansal, V.Venkatraman, S.Parashar, C.N.R.Rao ,
(2005)"Collapse of charge-ordering state at high magnetic fields in the rare-earth manganite $Pr_{0.67}Ca_{0.33}MnO_3$" Phys. Rev **B 71** , 024426

148. Mandar A .Paranjape, K. Shantha Shankar, and A. K. Raychaudhuri*
(2005)"Electronic transport in nanostructured thin films of perovskite manganite $La_{0.67}Ca_{0.33}MnO_3$: Role of grain boundaries" Journal of Physics D: Appl. Phys.**38**, 3674

149. Aveek Bid, Achyut Bora and A. K. Raychaudhuri
(2005) "Low frequency conductance fluctuations (1/f_ noise) in 15nm Ag nanowires-Implication on its stability" Physical Review B **72**, 113415

150 Sohini Kar[1], J. Mitra[1] and A. K. Raychaudhuri[1, 2]
(2005) "Temperature dependence of the gap in the density of states near the Fermi level in a hole doped manganite "
Solid State Communication **136**,410-415

151**.** Loveleen K. Brar,, Priya Rajdev, Arup K. Raychaudhuri ,Dipankar Chatterji **.**
(2005) "Langmuir monolayer as a tool towards visualization of a specific DNA-protein complex"
Langmuir **21**, 10671

152**.** Barnali Ghosh,, Sohini Kar, Loveleen K. Brar and A.K. Raychaudhuri
(2005) "Electronic transport in nanostructured films of $La_{0.67}$ $Sr_{0.33}MnO_3$"
J.Appl.Phys, **98**, 094302

2006

153. Aveek Bid, Achyut Bora and A. K. Raychaudhuri
(2006) " 1/f noise in nanowires- " Nanotechnology- **17,** 152

154. K.Shantha Shankar and A.K.Raychaudhuri
(2006) "Low temperature Polymer Precursor based Synthesis of Nanocrystalline particles of Lanthanum Calcium Manganese oxide ($La_{0.67}Ca_{0.33}MnO_3$) with Enhanced Ferromagnetic Transition Temperature" Journal of Materials Research **21**,27-33

155 R Chander and A K Raychaudhuri
(2006) "Growth of aligned arrays of ZnO nanorods by low temperature solution method on Si surface "Journal of Materials Science **41**, 3623

156. K. S. Nagapriya_, A. K. Raychaudhuri, Dipankar Chatterji
(2006) "Direct observation of large temperature fluctuations during DNA thermal denaturation"
Physical Review Letts. **96,** 038102

157 Himanshu Jain , A. K. Raychaudhuri, Ya. M. Mukovskii and D. Shulyatev
(2006) "Investigation of activated transport in hole doped rare earth manganites in the high temperature paramagnetic regime " Solid State Communication **138**, 318

158. Achyut Bora and A. K. Raychaudhuri
(2006) " Evolution of $1/f^{\alpha}$ noise during electromigration stressing of metal film: spectral signature of electromigration process". J. Applied Physics **99**, 113701

159. Manoranjan Ghosh and A.K.Raychaudhuri
(2006) "Structural and Optical properties of nanoparticles of $Zn_{1-x}Mg_xO$ grown by low temperature chemical route. J. Applied Physics **100**, 034315

160. Sohini Kar, Jaynta Sarkar, Barnali Ghosh and A. K. Raychaudhuri

(2006) "Spatially resolved study of electronic transport through grain boundaries in nanostructered films of colossal magnetoresistive (CMR) manganites." Physical . Review B **74**, 085412

161. Aveek Bid, Achyut Bora and A. K. Raychaudhuri
(2006) "Temperature dependence of the resistance of metallic nanowires (diameter ≥15nm): Applicability of Bloch-Gruneisen theorem." Phys. Rev B **74**, 035426

162. Himanshu Jain, A.K.Raychaudhuri, Ya M. Mukovski and D. Shulyatev
(2006) " Colossal Electroresistance and current induced switching in ferromagnetic insulating state of $La_{0.82}Ca_{0.18}MnO_3$". Applied Physics Letters **89**, 152116

163**.** Sohini Kar, Jayanta Sarkar and A.K.Raychaudhuri
(2006) " Investigation of the Effect of Microstructure and Grain boundaries in nanostructured thin films using scanning tunneling microscopy (STM) and local conductance map (LCMAP)
IEEE Transactions on Nanotechnology **5**, 707

2007

164. Soma Das, P. A. Sreeram and A. K. Raychaudhuri
(2007)" A method to quantitatively evaluate Hamaker constant using the jump-into-contact effect in Atomic Force microscopy" Nanotechnology **18,** 035501

165. Tapati Sarkar, Barnali Ghosh and A.K. Raychaudhuri
(2007) " Effect of size reduction on charge ordering in $La_{0.5}Ca_{0.5}MnO_3$ "
Journal of Nanoscience and Nanotechnology**. 7**, 2020

166 Soma Das, P.A. Sreeram and A. K. Raychaudhuri
(2007) "Effects of Nonlinear Forces on Dynamic Mode Atomic Force Microscopy and Spectroscopy"
Journal of Nanoscience and Nanotechnology **7**, 2167

167.Achyut Bora, Aveek Bid and A.K.Raychaudhuri
(2007) "Stability of Metal Nanowires (d ≥ 15nm) against Electromigration "
Journal of Nanoscience and Nanotechnology **7**, 1831

168..S.Nagapriya , A.K.Raychaudhuri and G.V. Shivashankar
(2007) 'Thermal fluctuations in histones during denaturation"
Journal of Nanoscience and Nanotechnology **7**, 2125

169. Manoranjan Ghosh and A.K.Raychaudhuri
(2007)" Structure and optical properties of Cd substituted ZnO ($Zn_{1-x}Cd_xO$) nanostructures synthesized by high pressure solution route". Nanotechnology **18** 115618

170. G.V.Soni, Loveleen Brar, F.M Hameed, A.K.Raychaudhrui and G.V.Shivashankar
(2007) "Distinct levels in the nanoscale organization of DNA-histone complex revealed by its mechanical unfolding" Appl. Physics. Letts. **90**, 163904

171. T. Phanindra Sai[*, 1] and A.K.Raychaudhuri
(2007) "Adhesion behavior of self assembled alkane- thiol monolayers on silver at different stages of growth." J. Phys. D: Appl. Phys. **40**, 3182

172. Tapati Sarkar, A.K. Raychaudhuri and S. Bannerjee
(2007) "Structure, magnetic and transport properties of nanoparticles of the manganite $Pr_{0.5}Ca_{0.5}MnO_3$" J. Appl. Phys. **101**, 124307

173. Himanshu Jain, A. K. Raychaudhuri, Nilotpal Ghosh and H. L. Bhat

(2007) "Colossal electroresistance in ferromagnetic insulating state of single crystal $Nd_{0.7}Pb_{0.3}MnO_3$". Phys. Rev B **76**, 104408

174. Manoj K. Yadav, Manoranjan Ghosh, Ranjit Biswas, A.K.Raychaudhuri, A. Mookherjee and S.Dutta.
(2007) " Band gap variation in Mg and Cd doped Zinc Oxide nanostructres and molecular clusters." Phy. Rev B . **76**, 195450

175. Sohini Kar and A.K. Raychaudhuri
(2007) "Localized reversible nanoscale phase separation in $Pr_{0:63}C_{0:3}$ MnO_3 single crystal induced by Scanning Tunneling Microscope Tip " Applied Phys. Letts**. 91**, 143124

2008

176. Ravi Chander and A.K.Raychaudhuri
(2008) "Electrodeposition of aligned arrays of ZnO nanorods in aqueous solution"
Solid State Communications **145** , 81

177. M. Venkata Kamalakar* and A.K.Raychaudhuri*
(2008) "**A novel method of synthesis of dense arrays of aligned single crystalline copper nanotubes using electrodeposition in presence of a rotating electric field"** Advanced . Mater. **20,** 149

178. Achuyt Bora and A.K.Raychaudhuri
(2008) "Low frequency resistance fluctuations in metal films under current stressing at low temperatures ($T < 0.3\ T_{melting}$)" Phys. Rev **B 77,** 075423

179.Tapati Sarkar, A.K.Raychaudhuri, T. Chatterji
(2008) "Size induced arrest of the room temperature crystallographic structure in nanoparticles of $La_{0.5}Ca_{0.5}MnO_3$. Appl. Phys. Letts **92,** 123104

180. Tapati Sarkar, Barnali Ghosh , A. K. Raychaudhuri and T.Chatterjee
(2008) "Crystal structure and physical properties of half-doped manganite nanocrystals with size < 100nm". Phys. Rev B **77**, 235112

181. Sudeshna Samanta, A. K. Raychaudhuri and Joy Mitra
(2008) "Very low frequency resistance fluctuations in thin films of $La_{0.67}Ca_{0.33}MnO_3$ with quenched disorder" Phys. Rev B **78**, 014427

182. Anindya Das, Soma Das, A.K.Raychaudhuri
(2008) "Growth of two-dimensional arrays of uncapped gold nanoparticles on silicon substrates"
Bulletin of Materials Science **31**, 277.

183. Manoranjan Ghosh, Ritwik Bhattacharyya, A.K.Raychaudhuri
(2008) "Growth of compact arrays of optical quality single crystalline ZnO nanorods by low temperature method" Bulletin of Materials Science **31**, 283.

184. Manoranjan Ghosh and A. K. Raychaudhuri,
(2008) "**Shape transition in ZnO nanostructures and its effect on blue-green photo luminescence"**
Nanotechnology **19,** 445704

185. Manoranjan Ghosh and A.K.Raychaudhuri
(2008) "Ionic environment control of visible photo-luminescence from ZnO nanoparticles"
Appl. Phys. Letters **93**, 123113

186. .H. Jain and A.K.Raychaudhuri
(2008) "Hot electron effects and non--linear transport in hole doped manganites"
Appl. Phys. Letters **93**, 182110

2009

187. Achuyt Bora and A.K.Raychaudhuri
(2009) "Scanning Thermal Microscope Study of a Metal Film Under Current Stressing: Role of Temperature Inhomogeneity in Damage Process". J.Phys D: Applied Physics **42** , 035503

188. Sunandan Baruah, Sudarson Sekhar Sinha, Barnali Ghosh, Samir Kumar Pal, A. K. Raychaudhuri, and Joydeep Dutta.
(2009) "**Photoreactivity of ZnO nanoparticles in visible light: Effect of surface states on electron transfer reaction".** Journal of Applied Physics **105**, 074308.

189. M. Venkata Kamalakar and A.K.Raychaudhuri
(2009) "Low temperature electrical Transport in ferromagnetic Ni Nanowires".
.PHYSICAL REVIEW B **79**, 205417

190. Barnali Ghosh, Dipten Bhattacharya, S. Patnaik, A.K. Raychaudhuri and S. Arumugam
(2009) "Large magnetocapacitance effect in single crystal bilayer manganite $Pr(Sr_{0.1}Ca_{0.9})_2Mn_2O_7$ near the Neel Temperature. J. Appl. Phys. **105**, 123914

191. S. Arumugam, Barnali Ghosh and A. K. Raychaudhuri
(2009) "Pressure (P > 8*GPa*) induced metallization of ferromagnetic insulating $La_{0:79}Ca_{0:21}MnO_3$"
J. Appl. Phys. **106**, 023905

192. Rajesh Kumar Neogy and A. K. Raychaudhuri
(2009) "**Frequency dependent enhancement of heat transport in nanofluid with ZnO nanoparticles**
Nanotechnology **20** 305706

193 . M. Venkata Kamalakar, A. K. Raychaudhuri, Xueyong Wei, Jason Teng and Philip D Prewett
(2009) "Temperature dependent electrical resistivity of a single crystalline ferromagnetic nanowire"
Appl.Phys.Letts. **95**, 013112

194. Tapati Sarkar, M. Venkata Kamalakar, and A. K. Raychaudhuri
(2009) "Transport Properties of Nanoparticles of Complex Oxides: Likely Presence of Coulomb Blockade at Low Temperature" Journal of Nanoscience and Nanotechnology **9**, 5315

195. Sudeshna Samanta, M. Venkata Kamalakar, and A. K. Raychaudhuri
(2009) "Investigation of Very Low-Frequency Noise in Ferromagnetic Nickel Nano wires"
Journal of Nanoscience and Nanotechnology **9**, 5243

196. Manoranjan Ghosh_ Nita Dilawar, A. K. Bandyopadhyay, and A. K. Raychaudhuri1
(2009) "Phonon dynamics of Zn_{1-x} Mg,CdO alloy nanostructures and their phase segregation"
J. Appl. Phys. **106,** 084306

197. M. Venkata Kamalakar and A. K. Raychaudhuri
(2009) "Critical Phenomena in Magnetic Nanowires",
Journal of Nanoscience and Nanotechnology **9**, 5248

198. Barnali Ghosh and A.K.Raychaudhuri
(2009) "Synthesis and Physical Properties of Ordered Arrays of Nanowires of Complex Functional Oxides" Journal of Nanoscience and Nanotechnology **9**, 5533

199. D. Mohanta, S.S. Narayanan, S.K. Pal and A.K. Raychaudhuri
(2009) "Time-resolved photoluminescence decay characteristics of bovine serum albumin-conjugated semiconductor nanocrystallites" Journal of Experimental Nanoscience **4,** 177

200. Soma Das and A.K.Raychaudhuri
(2009) "Growth of Atomically Smooth Films of Metal-Arachidates by Langmuir-Blodgett Technique" Journal of Nanoscience and Nanotechnology **9**, 5362

2010

201. T Phanindra Sai and A K Raychaudhuri
(2010) "Observation of Peierls transition in nanowires (diameter ~130nm) of charge transfer molecule TTF:TCNQ synthesized by electric field directed growth" Nanotechnology **21** 045703

202. Soma Das, A.K.Raychaudhuri, P.A.Sreeram, Dirk Dietzl
(2010) "**The effect of intrinsic instability of cantilever on static mode atomic force spectroscopy "** Nanotechnology **21** 045706

203. Rabibrata Mukherjee, Soma Das, Anindya Das, Satinder Sharma, Arup K. Raychaudhuri and Ashutosh Sharma
(2010) "Stability and Dewetting of Metal Nanoparticles Filled Thin Polymer Films: Control of Instability Lengthscale and Dynamics". ACS NANO **4** 3709

204. K.S. Nagapriya, A. K Raychaudhuri
(2010)"Thermal fluctuation spectroscopy of DNA thermal denaturation",
Biophysical Journal **99,** 2666

205. Abhinandan Makhal, Soumik Sarkar† Tanujjal Bora, Sunandan Baruah, Joydeep Dutta, A. K. Raychaudhuri and Samir Kumar Pal
(2010) "Role of Resonance Energy Transfer in Light Harvesting of Zinc Oxide-Based Dye-Sensitized Solar Cells " J. Phys. Chem. **C 114**, 10390

206. Abhinandan Makhal, Soumik Sarkar Tanujjal Bora, Sunandan Baruah, Joydeep Dutta, A. K. Raychaudhuri and Samir Kumar Pal
(2010) "Dynamics of light harvesting in ZnO nanoparticles". Nanotechnology **21** 265703

207. S K Chaudhuri1, Manoranjan Ghosh, D Das and A K Raychaudhuri
(2010) "Probing defects in chemically synthesized ZnO nanostrucures by Positron Annihilation and Photoluminescence Spectroscopy". J.Appl. Phys**. 108**, 064319

208. Anupam Giri, Abhinandan Makhal, Barnali Ghosh, A. K. Raychaudhuri and Samir Kumar Pal
(2010) "Functionalization of Manganite Nanoparticles and their interaction with biologically relevant small ligands: Picosecond Time-Resolved FRET Studies" RSC NANOSCALE **2,** 2704

209. M. Venkata Kamalakar and A. K. Raychaudhuri
(2010) " Resistance anomaly near phase transition in confined ferromagnetic nanowires".
Physical Review B **82**, 195425

210. Tapati Sarkar , A. K. Raychaudhuri,A. K. Bera and S. M. Yusuf
(2010) "Effect of size reduction on the ferromagnetism of the manganite La_{1-x} Ca_xMnO_3 (x=0.33)".
New Journal of Physics **12** 123026

2011

211. Sarathi Kundu and A. K. Raychaudhuri
(2011) "Effect of water and air-water interface on the structural modification of Ni-Arachidate Langmuir-Blodgett films ". Journal of Colloid and Interface Science **353,** 316

212. Shanewaz Mandal and A.K.Raychaudhuri
(2011) "Observation of a large gate- controlled persistent photoconduction in single crystal ZnO at room temperatures". Appl Phys.Letts **98**, 023501

213. S. Chandra, Barnali Ghosh, A. K. Raychaudhuri, M. H. Phan and H. Srikanth
(2011) "Fabrication and Magnetic anisotropy study of $La_{0.67}Ca_{0.33}MnO_3$ nanowires"
J. Appl. Phys**. 109**, 07D720

*214. Manoranjan Ghosh and A. K. Raychaudhuri
(2011) "Field induced reversible control of visible luminescence from ZnO nanostructures"
Appl.Phys. Letts **98,** 153109

215. Barnali Ghosh, K. Das and A.K. Raychaudhuriţ
(2011) " Voltage bias induced modification of all oxide $Pr_{0.5}Ca_{0.5}MnO_3$ /$SrTi_{0.95}Nb_{05}O_3$ junctions"
J. Appl. Phys. **109**, 083934

216. S Batabyal,; A. Makhal,; K,Das, A.K.Raychaudhuri,S.K.Pal
(2011) "Ultrafast dynamics of excitons in semiconductor quantum dots on a plasmonically active nano-structured silver film"
Nanotechnology **22,** 195704

217. J P Naik, P D Prewett, K Das, A K Raychaudhuri
(2011) "Instabilities in Focused Ion Beam-Patterned Au Nanowires".
Microelectronic Engineering **88** , 2840

218. S. Das, K Das, R K Singha, S Manna, A Dhar, S K Ray and A K Raychaudhuri,
(2011) "Improved infra-red photoluminescence characteristics from circularly ordered self-assembled Ge islands",
Nanoscale Research Letters **6,** 416

219. Manotosh Chakravorty, Kaustuv Das, A.K.Raychaudhuri , J P Naik and P D Prewett
(2011) "Temperature and strain dependent resistance of platinum nanowires grown by focused ion beam on SiO_2/Si substrate". Microelectronic Engineering **88**, 3360

2012
220. S. Chandra , A.I. Figueroa , Barnali Ghosh , A.K. Raychaudhuri , M.H. Phan , P. Mukherjee , H. Srikanth
.
(2012) "Fabrication and magnetic response probed by RF transverse susceptibility in La0.67Ca0.33MnO3 nanowires". Physica B **407** 175–178

221. Sudeshna Samanta, A. K. Raychaudhuri, Ya. M. Mukhovskii
(2012) "Non-Gaussian resistance noise in the ferromagnetic insulating state of a hole doped manganite." Physical Review **85**, 045127

222. K. Das · S. Das · R. K. Singha · S. K. Ray · A. K. Raychaudhuri
(2012) "Preferential ordering of self-assembled Ge islands on focused ion-beam patterned Si(100)"
J Nanopart Res . **14**, 725

223. Tapati Sarkar, . M. Venkata Kamalakar and A.K.Raychaudhuri

(2012) "Electrical transport properties of nanostructured ferromagnetic perovskite oxides $La_{0.67}Ca_{0.33}MnO_3$ and $La_{0.5}Sr_{0.5}CoO_3$ at low temperatures (5 K >T > 0.3 K) and high magnetic field". New J. of Physics **14** 033026

224. M. Venkata Kamalakar and A. K. Raychaudhuri
(2012) "Temperature dependent (3K≤ T ≤300K) electrical transport in Cu nanotubes grown in porous alumina templates." ". New J. of Physics **14** 043032.

225. Ruma Manda1, Susmita Saha, Dheeraj Kumar, Saswati Barman, Semanti Pal, Kaustuv Das, Arup Kumar Raychaudhuri, Yasuhiro Fukuma, YoshiChika Otani and Anjan Barman
(2012) "Optically Induced Tunable Magnetization Dynamics in Nanoscale Co Antidot Lattices"
ACS NANO **6** 3397 .

226. Debdutta Lahiri, S. Khalid, Tapati Sarkar, A. K. Raychaudhuri and Surinder M. Sharma
(2012) "**XAFS investigation of the role of orientational disorder in the stabilization of ferromagnetic metallic phase in nanoparticles of $La_{0.5}Ca_{0.5}MnO_3$** " J.Phys.: Condensed Matter **24** 336001

227. Soma Biswas, A.K. Raychaudhuri, P.A. Sreeram, Dirk Dietzel
(2012) "Tuning the instability in Static Mode Atomic Force Spectroscopy as obtained in an AFM by applying an electric field between the tip and the substrate." Ultramicroscopy **122** 19

228. Sayan Chandra , Anis Biswas , Subarna Dutta , Barnali Ghosh , V. Siruguri , A.K. Raychaudhuri , M.H. Phan and H. Srikanth
(2012) "Evidence of canted magnetic state in self-doped $LaMnO_{3+\delta}$ ($\delta \approx 0.04$): A magnetocaloric study ". J.Phys.: Condensed Matter **24** 366004

229. J P Naik , K. Das, P D Prewett , A K Raychaudhuri
(2012) "**Liquid like instabilities in Gold Nanowires Fabricated by Focused Ion Beam Lithography"**
Appl. Phys. Letts **101**, 163108

230. Anupam Giri; Nirmal Goswami,; M Bootharaju,.; Lourdu Paulrajpillai; , Robin John; Nguyen Thanh,; Thalappi Pradeep, ; Barnali Ghosh,; Arup Raychaudhuri,; Samir Pal,
(2012) "Emergence of Multicolor Photoluminescence in $La_{0.67}Sr_{0.33}MnO_3$ Nanoparticles"
Journal of Physical Chemistry C **116**, 25623

2013

231. Rabaya Basori, K. Das, Prashant Kumar, K.S.Narayan, A. K. Raychaudhuri
(2013) "**Large photoresponse of Cu:TCNQ nanowire arrays formed as aligned nanobridges".**
Appl. Phys. Lett. **102**, 061111 ;

232. Rajesh Kumar Neogy, A. K. Raychaudhuri
(2013) "Effect of stabilizer on dynamic thermal transport of nanofluids"
Nanoscale Research letters , **8**:125

233. Rajib Nath, A. K. Raychaudhuri, Ya. M. Mukovskii, Parthasarathi Mondal, Dipten Bhattacharya and P. Mandal
(2013) "Electric field driven destabilization of the insulating state in nominally pure $LaMnO_3$
J.Phys.: Condensed Matter **25** 155605

234. Putul Malla Chowdhury, · Barnali Ghosh, · A.K.Raychaudhuri , ·S.D.Kaushik, · V. Siruguri
(2013) "Stability of charge and orbital order in half-doped $Y_{0.5}Ca_{0.5}MnO_3$ nano crystallites"
J. Nanoparticle Research. **15**, 1585

235 Sudeshna Samanta, ¤ K. Dasand A. K. Raychaudhuri

(2013) "Low frequency °ficker noise in a MSM device made with single Si Nanowire (diameter~50nm)"
Nanoscale Research Letters , **8** 165

236. Anis Biswas, Sayan Chandra, Tapas Samanta, Barnali Ghosh, Subarna Datta, M. H. Phan, A. K. Raychaudhuri, I. Das, and H. Srikanth,
(2013) "Universality in the entropy change for the inverse magnetocaloric effect" .
Phys. Rev B **87**, 134420

237. Sayan Chandra, Anis Biswas, Subarna Datta, Barnali Ghosh, A K Raychaudhuri and Hariharan Srikanth
(2013) "Inverse magnetocaloric and exchange bias effects in single crystalline La0:5Sr0:5MnO3 nanowires"
Nanotechnology 24, 505712

238. Sudeshna Samanta, K. Das, and A. K. Raychaudhuri
(2013) "Junction effect on transport properties of a single Si nanowire metal-semiconductor-metal device"
IEEE Transaction on Nanotechnology **12**, 1089

239. Shahnewaz Mondal, Rishi Ram Ghimire, and A. K. Raychaudhuri
(2013) "Enhancing photoresponse by synergy of gate and illumination in electric double layer field effect transistors fabricated on n-ZnO"
APPLIED PHYSICS LETTERS **103**, 231105

240. Sabyasachi Ghosh and A. K. Raychaudhuri
(2013) "Link between depressions of melting temperature and Debye temperature in nanowires and its implication on Lindeman relation"
JOURNAL OF APPLIED PHYSICS **114**, 224313

241. Ruma Mandal, Pinaki Laha, Kaustuv Das, Susmita Saha, Saswati Barman, A. K. Raychaudhuri, and Anjan Barman
(2013) "Effects of antidot shape on the spin wave spectra of two-dimensional Ni $_{80}$Fe$_{20}$ antidot lattices"
APPLIED PHYSICS LETTERS **103**, 262410

2014

243. Barnali Ghosh, V Siruguri, A K Raychaudhuri and Tapan Chatterji
(2014) "Effect of size reduction on the structural and magnetic order in $LaMnO_{3+\delta}$ ($\delta \approx 0.03$) nanocrystals: a neutron diffraction study"
J. Phys.: Condens. Matter **26,** 025603

244. Rabaya Basori, A. K. Raychaudhuri
(2014) "Role of Contact and Contact Modification on Photo-response in a Charge Transfer Complex Single Nanowire Device"
Nano-Micro Lett. **6**, 63

245. Manotosh chakravorty and A.K.Raychaudhuri
(2014)"Low field magnetoresistance of Gadolinium nanowire"
J. Appl. Phys. **115**, 054308

246. Rabaya Basori, K. Das, Prashant Kumar, K.S.Narayan and A. K. Raychaudhuri
(2014) "Single CuTCNQ charge transfer complex nanowire as ultra high responsivity photo-detector"
OPTICS EXPRESS **22** , 4944 (2014)

247. Abhijit Maity, Gourab D Banik, Chiranjit Ghosh, Suman Som, Sujit Chaudhuri, Sunil B Daschakraborty, Shibendu Ghosh, Barnali Ghosh, Arup K Raychaudhuri and Manik Pradhan[5]
(2014) "**Residual gas analyzer-mass spectrometry for human breath analysis: a new tool for noninvasive diagnosis of *Helicobacter pylori* infection**
Journal of Breath Research **115**, 054308 (2014)

248. Rajib Nath and A.K.Raychaudhuri
(2014) " Electric Double Layer (EDL) gate controlled non-linear transport in nanostructured functional perovskite film" APPLIED PHYSICS LETTER **104**, 083515

249. K. Das, S. Samanta, Prashant Kumar, K.S. Narayan and A. K. Raychaudhuri
(2014) "Fabrication of Single Si Nanowire Metal-Semiconductor-Metal Device for Photodetection"
IEEE Transactions on Electron Devices **61** , 1444

250. Rajib Nath, A. K. Raychaudhuri, Ya M Mukovskii, N. Andreev, Vladimir Chichkov
(2014) "Room temperature resistive state switching with hysteresis in $GdMnO_3$ thin film with low threshold voltage". APPLIED PHYSICS LETTER **104 ,** 183508

251. Amlan Dutta, Swastika Chatterjee, A. K. Raychaudhuri, Amitava Moitra, and T. Saha-Dasgupta.
(2014) "**In-silico investigation of Rayleigh instability in ultra-thin copper nanowire in premelting regime"** Journal of Applied Physics **115**, 244303

252. Subarna Datta, Sudeshna Samanta, Barnali Ghosh and A. K. Raychaudhuri
(2014) "Low-Frequency Resistance Fluctuations in a single nanowire (diameter _ 45nm) of a complex oxide and its relation to magnetic transitions and phase separation"
Applied Physics Letters **105**, 073117;

253. K. Das[1], S. Mukherjee[2], S. Manna[3], S. K. Ray[3,*], A .K .Raychaudhuri[1,#]
(2014) "Single Si nanowire (diameter ≤ 100nm) based polarization sensitive near-infrared photodetector with ultra-high responsivity." RSC- Nanoscale **6** , 1123

254. L. Pagliari, M. Dapiaggi,F. Maglia,T. Sarkar, A.K. Raychaudhuri, T. Chatterji, M. Carpenter
(2014) ""Strain heterogeneity and magnetoelastic behavior of nanocrystalline half-doped La, Ca manganite, La0.5Ca0.5MnO3", J.Phys.: Condensed Matter **26**, 435303 .

2015

255 Manotosh Chakravorty and A. K. Raychaudhuri
.(2015) "Magnetoresistance of polycrystalline Gadolinium with varying grain size." Journal of Applied Physics **117**, 034301 (2015)

256. Shahnewaz Mondal, Rishi Ram Ghimire and A. K. Raychaudhuri
(2015) "Mobility enhancement in Electric Double Layer gated n-ZnO UV photodetector by synergy of gate and illumination: A photo Hall study", Applied Physics Letters **106**, 041102 (2015);

257. Rishi Ram Ghimire, Shahnewaz Mondal and A. K. Raychaudhuri
(2015) "Large enhancement of UV photo response of a nanostructured ZnO thin film using an electric double layer gate dielectric " , Journal of Applied Physics **117**, 105705 (2015);

258. Rajib Nath and A. K. Raychaudhuri
(2015) "Control of co-existing phases and charge transport in a nanostructured manganite film by field effects with an electric double layer as the gate dielectric" RSC Adv., **5,** 57875 (2015)

259. Rabaya Basori and A. K. Raychaudhuri
(2015) "Low temperature transport of a charge transfer complex nanowire grown with an electric field from the vapour phase" . RSC Adv., **5**, 86497 (2015)

260. Ajit K. Katiyar, S. Mukherjee, M. Zeeshan, Samit. K. Ray,,and A. K. Raychaudhuri
(2015) "Enhancement of Efficiency of a Solar Cell Fabricated on Black Si Made by Inductively Coupled Plasma−Reactive Ion Etching Process: A Case Study of a n-CdS/p-Si Heterojunction Cell" ACS Appl. Mater. Interfaces, ,**7**, 23445–23453 (2015)

261 Sudeshna Samanta , A. K. Raychaudhuri, Xing Zhong and A. Gupta
(2015)" Dynamic phase coexistence and non-Gaussian resistance fluctuations in VO2 near the metal-insulator transition". PHYSICAL REVIEW B **92**, 195125 (2015)

262. Ravindra Singh Bisht, Rishi Ram Ghimire, and A. K. Raychaudhuri
(2015) "Control of Grain Boundary Depletion Layer and Capacitance in ZnO Thin Film by a Gate with Electric Double Layer Dielectric". J. Phys. Chem. C , **119** , 27813–27820 **(2015)**

2016

263. Amlan Dutta , Arup Kumar Raychaudhuri and Tanusri Saha-Dasgupta
(2016) "Plasticity-mediated collapse and recrystallization in hollow copper nanowires: a molecular dynamics simulation " Beilstein J. Nanotechnology **. 7,** 228 (2016)

264. Pabitra Mandal, Bipul Das, and A. K. Raychaudhuri

(2016) "**Stability of a current carrying single nanowire of tungsten (W) deposited by Focused Ion Beam (FIB)"**
Journal of Applied Physics **119**, 084301 (2016)

265. Sudeshna Samanta, Deepika Saini, Achintya Singha, Kaustuv Das, Prabhakar R. Bandaru, Apparao M. Rao, and Arup Kumar Raychaudhuri
(2016) "Photoresponse of a Single Y-Junction Carbon Nanotube"
ACS Applied Materials and Interfaces **8 ,** 19024 (2016)

266. Rabaya Basori, Manoranjan Kumar & Arup K. Raychaudhuri
(2016) "Sustained Resistive Switching in a Single Cu:7,7,8,8tetracyanoquinodimethane Nanowire"
Scientific Reports **6** 26764 (2016)

267. Aveek Bid and A.K Raychaudhuri
(2016) "Structural instability and phase co-existence driven non-Gaussian resistance fluctuations in metal nanowires at low temperatures" Nanotechnology **27**, 455701 (2016)

2017

268. Rajesh Kumar Neogy , Rajib Nath , A.K. Raychaudhuri
(2017) "Thermal transport enhancement in gold nanofluid containing network like structure"
Materials Chemistry and Physics **186,** 478 (2017)

269. Rishi Ram Ghimire, A.K. Raychaudhuri
(2017) "High performance thin film transistor (flex-TFT) with textured nanostructure ZnO film channel fabricated by exploiting electric double layer gate insulator"
Appl. Phys. Lett. **110**, 052105 (2017);

270. Samt K Ray, Ajit K Katiyar and A. K Raychaudhuri
(2017) "One-dimensional Si/Ge nanowires and their heterostructures for multifunctional applications—a review" Nanotechnology **28**, 092001 (2017)

271. Shaili Sett, K Das and A K Raychaudhuri
(2017) "Weak localization and the approach to metal–insulator transition in single crystalline germanium nanowires" J. Phys.: Condens. Matter **29** (2017) 115301

272. Soumen Dhara and A. K. Raychaudhur
(2017) "Enhancement in red emission at room temperature from europium doped ZnO nanowires by 1,10 phenanthroline-europium interface induced resonant excitations.
AIP ADVANCES **7**, 025306 (2017)

273. Ravindra Singh Bisht, Sudeshna Samanta and A. K. Raychaudhuri
(2017) "Phase co-existence near metal-insulator transition in a compressively strained $NdNiO_3$ grown on $LaAlO_3$: Scanning tunneling, noise and impedance spectroscopy studies"
PHYSICAL REVIEW B **95**, 115147 (2017)

274. Shaili Sett, K. Das, and A. K. Raychaudhuri
(2017) "Investigation of factors affecting electrical contacts on single germanium nanowires"
JOURNAL OF APPLIED PHYSICS **121**, 124503 (2017)

275. Soumendu Datta, A. K. Raychaudhuri, and Tanusri Saha-Dasgupta
(2017) "First principles study of bimetallic $Ni_{13-n}Ag_n$ nano-clusters (n = 0–13): Structural, mixing, electronic, and magnetic properties" The Journal of Chemical Physics **146,** 164301 (2017)

276. Manotosh Chakravorty, A K Raychaudhuri, Tapati Sarkar and Mikael Svante Andersson

(2017) "Proposed Bose–Einstein condensation of magnons in nanostructured films of Gd at low temperature and its manifestations in electrical resistivity and magnetoresistance"
In press J. Phys.: Condens. Matter **00** (2017) 000000 (8pp)

Review Articles published in international periodicals of repute

1. S.Hunklinger and A.K.Raychaudhuri
(1986) "Thermal and elastic anomalies in Glasses at low temperatures"
PROGRESS IN LOW TEMPERATURE PHYSICS. Vol. IX page 265

2. A.K.Raychaudhuri and M.Rajeswari
(1989) "Heat release and calorimetry near glass transition" Rev. of solid state Science. **3,** 259

3. A.K. Raychaudhuri
(1995) "Metal-insulator transition in perovskite oxides: a low temperature perspective" Advances in Physics **44,** 21

4. C.N.R Rao, R. Mahesh, A.K. Raychaudhuri and R. Mahendiran
(1998)"Giant magnetoresistance , charge ordering and other novel properties of perovskite oxide manganates" J. Phys. Chem. Solids **59,** 487

5.A.K.Raychaudhuri
(1999) " Charge ordering in rare-earth mangamites" Ind. J.Phys. , **73S ,** 237

6.B.R. Chakraborty, P. Mohan, S.M. Shivaprasad,D.R.Sharma, C. Anandan, A.C. Gupta, and A.K.Raychaudhuri
(2000)"Surface Analytical facility at NPL, New Delhi" Current Science **78,** 1523

7. A.K. Raychaudhuri
(2002) "Measurement of 1/f noise and its application in materials science"
Current Opinion in Solid State & Materials Science **60,** 67-85

8. A.K.Raychaudhuri
(2002) "**Magnetoresistance of perovskite oxides: Physics and applications"**
Frontiers in Materials Physics-vol 1 page 85-112 (ed. D. Chakravarty and S.P.Sengupta, Allied Publishers)

9. . A.K.Raychaudhuri
(2004)"Nanolithography and nanomanipulation"
p 688 The chemistry of Nanomaterials" (Ed. C.N.R Rao, A.Muller and A.K.Chetham Wiley-VCH , Germany)

10. K. Shantha Shankar and A.K.Raychaudhuri
(2005) "Fabrication of Nanowires of multicomponent oxides: Review of recent advances"
materials Science and Engineering **C 25,** 738-751

11. 235. Barnali Ghosh (Saha) [a], A. K. Raychaudhuri[a], V. Siruguri[b], Tapan Chatterji[c], Thomas Hansen[c], Ya. M. Mukovskii[d]
(2013) Pressure induced destabilization of ground state of a low doped manganite
Powder Diffraction, Cambridge On-Line Journals (COJ)

(c) Full Papers in international conference /symposia proceedings published as books and not published elsewhere in journals (none of the papers are duplicated in the journal publications).

1. A.K. Raychaudhuri and R. O. Pohl
(1971) "Low temperature thermal conductivity of MnO, Al_2O_3 , SiO_2 glass"
Amorphous Magnetsim II (ed. Levy and Hasegawa, Plenum, New York) p 571

2. A.K. Raychaudhuri
(1980) "Electrical polarizability of phonon scattering states in glasses "
Phonon Scattering in condensed Matter (Ed Maris, Plenum , New York) p 29

3. A.K. Raychaudhuri , J.M. Peech and R.O. Pohl
(1980) "Phonon scattering in glassses and highly disordered crystals "
Phonon Scattering in Condensed Matter (Ed Maris, Plenum , New) p 45

4. A. K. Raychaudhuri
(1984) Glasses below 1K - A review of recent developments
Indo-Soviet Conference on Low temperature Physics, Bangalore

5. H. Srikanth and A.. K. Raychaudhuri
(1993) "Phonon Spectrocopy of Perovskite oxides using point contact techniques "
Phonon Scattreing in Condensed Matter VII (Ed. Meissner and Pohl, Springer, Heidelberg ,) p 158

6. A. K . Raychaudhuri
(1993) "Thermal conduction in dense liquids"
Phonon Scattreing in Condensed Matter VII (Ed. Meissner and Pohl, Springer, Heidelberg) p 249

7. J.E. Van Cleve, R.O. Pohl and A.K. Raychaudhuri
(1993) "Glass like properties in Polycrystalline solids"
Phonon Scattreing in Condensed Matter VII (Ed. Meissner and Pohl, Springer, Heidelberg ,) p 249

8. Sohini Kar, Barnali Ghosh, L. K. Brar, M A. Paranjape* and A. K. Raychaudhuri#
(2004) "Mapping of local electronic properties in nanostructured CMR thin films by Scanning Tunneling Microscopy (STM) and Local Conductance Map (LCMAP) " MRS Fall meeting 2004 , Boston

9. Mandar Paranjape1, J. Mitra1, A.K. Raychaudhuri1, N.D. Mathur and M.G. Blamire
(2004) "Biaxial strain induced electrical inhomogenities and phase separation in the ferromagnetic metallic phase in thin films of La0.7Ca0.3MnO3: A scanning tunneling potentiometry/spectroscopy study. **"**MRS Fall meeting 2004 , Boston

10. A. Ghosh, A.Guha and A.K.Raychaudhuri
(2004) "**Low-frequency conductance fluctuations in a shape memory alloy near the martensite transition**.
SPIE international conference on Noise and fluctuations 2004

11. Manoranjan Ghosh, and A.K.Raychaudhuri
(2007) "Optical properties of Mg substituted ZnO nanoparticles obtained by solution growth."
IEEE Transaction on Nanotechnology **" (**accepted).see in ieee explorer)

12. Aveek Bid, Achuyt Bora and A.K.Raychaudhrui
(2007) " Debye temperature of metallic nanowires in the temperature range 4.2K -300K"

Journal of Nanoscience and Technology **7**, 1867

13.Sohini Kar, Jayanta Sarkar, Barnali Ghosh and A.K .Raychaudhrui
(2007) Effect of Grain boundaries on the local electronic transport in nanostructered films of colossal magnetoresistive manganites". Journal of Nanoscience and Technology **7**, 2051

14. Jayanta Sarkar and A.K.Raychaudhrui
(2007) "Piezoresistivity in thin films of nanocrystalline manganites"
Journal of Nanoscience and Technology **7**, 2058

15. T Phanindra Sai, and A K Raychaudhuri
(2008) "Electric Field Directed Growth of Molecular Wires of Charge Transfer Molecules on Prefabricated Metal Electrodes"
Mater. Res. Soc. Proc. **1058** , JJ0503

16. . Sayan Chandra , Anis Biswas , Subarna Datta, Barnali Ghosh , A.K. Raychaudhuri , M.H. Phan and H. Srikanth
(2012) " Multiple magnetic transitions and magnetocaloric effect in hydrothermally synthesized single crystalline $La_{0.5}Sr_{0.5}MnO_3$ nanowires." Mater. Res. Soc. Symp. Proc. **1454**

(d) Chapters in books

1. A.K. Raychaudhuri
(1987) "Relaxation in glasses - manifestations at low temperatures "
Non- Debye Relaxation in Condensed Matter, World Scientific, Singapore) p 193

2. A.K. Raychaudhuri
(1996) "A study of electrical contacts between two solid bodies using scanning probe microscopy"
Solid -Solid Interactions (Ed. Adams, Biswas and Briscoe, Imperial college ,) p 117

2. C.N.R Rao and A.K. Raychaudhuri
(1998)"Colossal magnetoresistance , charge ordering and other novel properties of manganates and related materials"
Colossal magnetoresistance , chrage ordering and related properties of manganese oxides
(Ed. Rao and Raveau, World Scientific) p 1

3., R.Srinivasan, A.K.raychaudhuri and S. Kasturirangan
"Cryogenics and Properties of Solids at Low temperatures"
(Allied Publishers 2008)

4.:Instabilities in Focused Ion Beam-patterned nanostructures.
A.K. Raychaudhuri Pages 435-463 in "FIB Nanostructures" (edited by Zhiming M. Wang) ***Springer Lecture Notes in Nanoscale Science and Technology Volume 20 (2013)***

(e) Semi popular articles ;

1. A.K.Raychaudhuri.
(1997) " Seeing with electrons"
Resonance **2 ,** 55

2. A.K.Raychaudhuri
(1998) " Modern Magnetism and the pioneering experiments of K.S. Krishnan"
Current Science **75,** 1207