

List of Publications Of Prof. A.K. Raychaudhuri

(Up dated May 2015)

(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_xCr₂₀ 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

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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 $\text{LaNi}_{1-x}\text{Co}_x\text{O}_3$ ”
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 $\text{LaNi}_x\text{Mn}_{1-x}\text{O}_3$ 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-Yba₂Cu₃O_{7.8} (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- Bi₂Sr₂CaCu₂O_{8.8} (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_xPS₃”** 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_xPS₃”** 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 LaNi_{1-x}Co_xO₃”** 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
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(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.Banerjee , 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 $\text{Bi}_2\text{Ca}_{1-x}\text{Y}_x\text{Sr}_2\text{Cu}_2\text{O}_{8+\delta}$ ”**
Physica **C 200**, 273

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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.Banerjee, K.Chattopadhyay and A.K.Raychaudhuri,
(1993) **“Superconductivity in rapidly quenched metallic systems with nanoscale structure”**
J. of Appl. Physics **73**, 2934

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(1993) **“Tunneling studies on magnet 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 transition temperature”.** Pramana –J. Phys. **41**, 401

57. S.Banerjee and A.K.Raychaudhuri
(1993) **“Magnetoresistance of $\text{Fe}_x\text{Ni}_{80-x}\text{Cr}_{20}$ ($50 < x < 66$) and $\text{Fe}_{25}\text{Cr}_{75}$ 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 $(\text{Y}_{1-x}\text{Pr}_x)\text{Ba}_2\text{Cu}_3\text{O}_{7-8}$ single crystals”.**
Physica **C 218**, 245

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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 $\text{Fe}_x\text{Ni}_{80-x}\text{Cr}_{20}$ alloys”** Phys Rev **B 50**, 8195

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(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 $\text{Fe}_x \text{Ni}_{80-x} \text{Cr}_{20}$ 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 $\text{La}_{1-x} \text{Sr}_x \text{MnO}_3$ 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 $\text{La}_{1-x} \text{A}_x \text{MnO}_3$ (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 $\text{La}_{1-x} \text{Ca}_x \text{MnO}_3$ ”
 Solid State Comm. **94**, 515
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(1995) “Room temperature giant magnetoresistance in $\text{La}_{1-x} \text{Pb}_x \text{MnO}_3$ ”
 J. of Physics D: Appl. Phys. **28**, 1743
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(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 $\text{La}_{1-x} \text{Sr}_x \text{CoO}_3$ 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 $\text{Ln}_{1-x} \text{A}_x \text{MnO}_3$ (Ln = La, Nd, Gd)”
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(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 LaMnO₃ systems.” Phys. Rev B **53**, 3348
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(1996) “Effect of Y substitution in La-Ca-Mn-O perovskite showing giant magnetoresistance” Phys. Rev. B **53**, 12 160
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(1996) “Effect of particle size on the giant magnetoresistance of La_{0.7}Ca_{0.3}MnO₃”
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(1996) “Thermopower of giant magnetoresistive system La_{1-x}Ca_xMnO₃”
 Solid state commn. **98**, 701
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(1996) “Resistivity, giant magnetoresistance and thermopower in La_{0.7}Sr_{0.3}MnO₃ 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
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(1996) “Large Resistance fluctuation in epitaxial films thin films of GMR oxides “
 Appl. Phys. Letts., **69** , 851 and Errata 1978
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(1996) “Nanostructure of giant magnetoresistive oxide film Nd_{2/3}Sr_{1/3}MnO₃”
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82. R. Mahendiran and A.K. Raychaudhuri
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 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}MnO₃ “
 J. Phys : Condensed Matter (letters) **8**, L 739
84. R. Mahendiran, S.K. Tewary, A.K. Raychaudhuri, R. Mahesh and C.N.R Rao
(1996) “Thermopower and nature of the hole doped states in LaMnO₃ and related systems”
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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}MnO₃”
 J. Phys : Condensed Matter (letters) **8**, L 455
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(1996) “Insulator –Metal transition , Giant magnetoresistance and related aspects of the cation deficient LaMnO₃ compositions, La_{1-δ}MnO₃ and LaMn_{1-δ}O₃ “ 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 $\text{La}_{0.67}\text{Ba}_{0.33}\text{MnO}_3$ and $\text{La}_{0.8}\text{Ca}_{0.2}\text{MnO}_3$ “
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(1996) “Structural changes and related effects due to charge ordering in $\text{Nd}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$
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(1997) “Electrical transport, magnetism and magnetoresistance in ferromagnetic oxides with mixed magnetic exchange : a study of the $\text{La}_{0.7}\text{Ca}_{0.3}\text{Mn}_{1-x}\text{Co}_x\text{O}_3$ system”
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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 $\text{LnMn}_{1-x}\text{Cr}_x\text{O}_3$
J. Solid state Chem. **127**, 354

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Phys. Rev. (Rapid commn.) **58**, R 14665 (1998).

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