

### **Research Publications 2004-2005**

1. Pseudopotential in the study of superconducting state parameters of metallic glasses. P. N. Gajjar, A. M. Vora and A.R. Jani, Modern Physics Letters B (Singapore) 18, 573 (2004)
2. Superconducting state parameters of metals. P. N. Gajjar, A. M. Vora and A.R. Jani, Indian Journal of Physics (India) 87, 775 (2004)
3. Thermodynamics of d and f- shell liquid metals – a Vibrational approach. J. K. Baria, H. J. Trivedi, P. N. Gajjar and A.R. Jani, Indian Journal of Physics (India) 87, 943 (2004)
4. Thermodynamic properties of some simple metals in liquid phase by Pseudopotential theory. P. B. Thakor, V. N. Patel, B. Y. Thakore, P. N. Gajjar and A.R. Jani; Indian Journal of Pure and Applied Physics (India) 42, 684 (2004)
5. Application of pseudopotential to III-V semiconductor compounds. A. R. Jivani, P. N. Gajjar and A. R. Jani; Indian Journal of Pure and Applied Physics (India) 42, 833 (2004)
6. Total Energy, Equation of states and bulk modulus of AlP,AlAs and AlSb semiconductors. A. R. Jivani, H. J. Trivedi, P. N. Gajjar and A. R. Jani; Pramana J. of Phys. (India) 64, 153 (2005)
7. Some physical properties of some GaX (X = P, As, Sb) Semiconductor compounds. A. R. Jivani, H. J. Trivedi, P. N. Gajjar and A. R. Jani; Physica B **357** 305-311 (2005)
8. Elastic and electronic properties of Ga Based semiconductor compounds. A. R. Jivani, P. N. Gajjar and A. R. Jani; Solid State Physics (India) 47 (2004).
9. Electrical characterization of strontium tartrate single crystals. S.K. Arora, V.A. Patel, R.G. Patel and Anjana Kothari; J. Phys. Chem. Solids (USA) **65**, 965- 73 (2004)
10. Kinetics and mechanism of thermal decomposition of strontium tartrate crystals. S.K. Arora, Vipul Patel and Anjana Kothari; J. Mater. Chem. Phys. (USA) 84, 323 - 30 (2004)
11. Gel growth and preliminary characterization of strontium tartrate trihydrate. S.K. Arora, Vipul Patel, Anjana Kothari and Brijesh Amin; J. Crystal Growth (USA) 4, 343 – 49 (2004)
12. Dielectric behavior of strontium tartrate single crystals. S.K. Arora, Vipul Patel, Brijesh Amin and Anjana Kothari; Bull. Mater. Sci. (India) 27, 101 - 07 (2004)

13. Optical absorption in SrC<sub>4</sub>H<sub>4</sub>O<sub>6.3</sub>H<sub>2</sub>O crystals. S.K. Arora, Vipul Patel, Anjana Kothari and Bhupendra Chudasama; J. Mater. Sci. Engineering (USA) 113, 263 – 68 (2004)
14. Single crystal growth and photoelectrochemical study of copper tungstate. S.K. Arora, Thomas Mathew, Bhupendra Chudasama and Anjana Kothari; J. Crystal Growth (Netherlands) 275/1-2 e657 - e662 (2005)
15. Single crystal growth and characterization of strontium tartrate. S.K. Arora, Vipul Patel, Bhupendra Chudasama and Brijesh Amin; J. Crystal Growth (Netherlands) 275/1-2 e663 - e667 (2005)
16. Effect of pressure on optical and electrical properties of tungsten diselenide single crystals. Tejal A. Patel, J.B. Patel, M.N. Parmar, G.K. Solanki & M.P. Deshpande; High Pressure Research 24 (2) 255-261 (2004)
17. Growth of molybdenum disulphide using iodine as transport material. Rajiv Vaidya, Madhavi Dave, S.S.Patel, S.G. Patel and A.R. Jani; Pramana Journal of Physics 63, No. 3, 1-5 September 2004.
18. Growth and characterization of NbSe<sub>2</sub> single crystals. Rajiv Vaidya, Mehul Dave, S.G.Patel and A.R. Jani; Indian Journal of Physics, 79(1), 85-87 (2005)
19. Charge Transport through In-pSi (100) Schottky barrier. B P Modi, Achamma John Mathai, K D Patel, V M Pathak, R Srivastava; Indian Journal of Physics 78(9), 995-997 (2004)
20. Electron-Phonon resonance in some new charge transfer complexes. R.G.Patel G.K.Solanki, S.M. Prajapati, and A.T. Oza; Ind. J. Phys., 78A 47I (2004)
21. Vibrational Spectra of charge transfer complexes of lead phthalocyanine. A.T. Oza, S.G. Patel, R.G.Patel, S.M.Prajapati and Rajiv Vaidhya; Thin Solid Films (2004)
22. Infrared Spectra of charge transfer complexes of metal-free phthalocyanine. Mukesh Patel, S.G.Patel, Mehul Dave and A.T.Oza, Ind.J.Pure & Appl. Phys, 42, 79 (2004)
23. Infrared Spectra of charge transfer complexes of bis (N-phenyl-Salicy laldiminato) Cu<sup>II</sup>, J.H.Prajapati, S.G.Patel, and A.T.Oza, Ind. J. Pure Appl. Phys, 42, 572 (2004)
24. Infrared Spectra of charge transfer complexes of bis (N-ethyl salicylal –diminato) Cu<sup>II</sup> , J.H.Prajapati, S.G.Patel, and A.T.Oza, Ind. J. Phys., 78, 1365 (2004)
25. Spectroscopic study of effect of charege transfer on photoconductivity of quin hydrone, Parimal Trivedi, Ashok Patel, R.G.Patel, Vipul.A. Patel and A.T.Oza, Ind.J.Pure & Appl. Phys., 2005

26. Kuhn periodicity in oligoanilines and oligoaniline-iodine complexes S.M.Prajapati, G.K.Solanki, R.G.Patel and A.T.Oza, Mol. Cryst. Lia. Cryst. 2005.
27. Electron scattering from aeronomic molecule, B. K. Antony, K.N.Joshipura & N.J.Mason, Int. J. Mass Spectrom. (Elsevier, UK) 233, 207 (2004)
28. R- matrix calculation of low energy Electron collisions with LiH. B. K. Antony, K.N.Joshipura, N.J.Mason and Jonathan Tennyson,; J. Phys.-At. Molec. Opt. Phys. (UK) B **37**, 1689 (2004)
29. Total and ionization cross sections of electron scattering by fluorocarbons. B. K. Antony, K.N.Joshipura & N.J.Mason, J. Phys. (UK) B **38** 189 (2005).