

Name : Dr. S.Stephen Rajkumar Inbanathan

Designation : Assistant Professor

Department : Physics

Date of Joining : 13 July 2000

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Educational Qualification:

Degree	Subject	College / University & Place	Year Completed
Ph.D*	PHYSICS	Banaras Hindu University Varanasi	1996
M.Sc** Specialized in Solid State Physics	PHYSICS	Banaras Hindu University Varanasi	1987
B.Sc (Special) Physics	PHYSICS	Madurai Kamaraj University, Madurai	1985
BCS	THEOLOGY	SERAMPORE UNIVERSITY	2004

*Synthesis, Structure and Property of Bismuth based superconductors

** Crystal growth and Characterization of Cadmium Iodide by using Burger's Precession Method

Research Interests:

Hands on experience in Crystal Growth, Materials synthesis by conventional and semi-wet methods (Superconducting materials - Bismuth based cuprates – Nano particles), Materials characterization by single crystal/powder diffraction methods (XRD), Electron Microscopy, Electron Diffraction, High resolution Electron Microscopy, Scanning Electron Microscopy, Resistivity measurements (Four Probe Method), AC susceptibility Measurements, Physics instrumentation and Photometry of Stars.

Membership in Professional Bodies:

1. Matching Member, American Physics Society (APS)
2. Member, American Association of Physics Teachers (AAPT)

3. Life Member, Indian Physics Association (IPS)
4. Member, Plasma Research Society of India (PRS).

Publications:

Articles Published in International Journals:

- 1) Solid state synthesis, crystal growth, atomic packing and physicochemical studies of (E)-2-cyano-3-(3-hydroxyphenyl) acrylamide, V.K.Gupta, R.N.Rai, **S.S.R. Inbanathan**, M. Fleck, Journal of Crystal Growth 364 (2013) 1
- 2) Synthesis, Crystal growth and biological activity of 2-hydroxy chalcone, Kiruthiga,K, David Jebasingh,R and **S.S.R Inbanathan**, National Seminar on Recent Trends in Crystal Growth and Nano Materials , Tiruchirappalli, (March 2013)
- 3) Growth and Characterization of nonlinear optical Glycine single crystals with Malic acid., K. Moorthy A. Dhivya, P. Ranjitha and **S.S.R. Inbanathan**, Recent Trends in Crystal Growth and Nano Mateirals , Tiruchirappalli, (March 2013)
- 4) Magnetic and charge ordering properties of $\text{Bi}_{0.2}\text{Ca}_{0.8}\text{Mn}_{0.9}\text{X}_{0.1}\text{O}_3$ (where X = Ti,Cr, Fe, Co, Ni, Cu) Kamlesh Yadav, V. Vaithyanathan, **S.S.R. Inbanathan**, G.D. Varma, Journal of Alloys and Compounds 533 (2012)19
- 5) Uniaxial growth of (100) Zinc (tris) thiourea sulphate (ZTS) single crystal by Sankaranarayanan-Ramasay (SR) method and its Characterizations, M Iyaanar, C. Muthamizhchelvan, J. Thomas Joseph Prakash, **S.Stephen Rajkumar Inbanathan** and S. Ponnusamy Spectrochimica Acta Part A94 (2012)265
- 6) Convert your Physical balance into a Microbalance, **S.S.R. Inbanathan** and G. Balasubramanian, The Physics Teacher, (American Association of Physics Teachers)44,(2006)
- 7) Towards the rapid synthesis of pure 2223 powders with $\text{Bi}_{2-x}\text{Pb}_x \text{Sr}_2\text{Cu}_3\text{O}_y$, by semi-wet methods III Role of sintering temperature and duration. D.Pandey, **S.S.R. Inbanathan**, P.K. Srivastava, Alok Banejee, G. Singh, Physica C261(1995)157
- 8) Towards the rapid synthesis of pure 2223 powders with $\text{Bi}_{2-x}\text{Pb}_x \text{Sr}_2\text{Cu}_3\text{O}_y$, by semi-wet methods II. Optimization of Pb content using Pb-Sr-Ca carbonate precursors. D.Pandey, A.K. Singh, P.K. Srivastava,A.P.Singh, **S.S.R. Inbanathan** and G. Singh, Physica C241(1995)279
- 9) TEM studies on modulated structure in 2223 phase with $\text{Bi}_{1.6}\text{Pb}_{0.4} \text{Sr}_2\text{Cu}_3\text{O}_y$ composition, **S.S.R. Inbanathan**, G. Singh, A. P. Singh and D. Pandey, Acta.Cryst. Sup. A 49 (1994)338.
- 10) A novel route for rapid synthesis of 110K phase in Bismuth Cuprates, G. Singh, A.K. Singh and D. Pandey, **S.S.R. Inbanathan** which has been adjudged to be among the best our all the posters displaced in the XXV National Seminar on Crystallography, Madras.1993

- 11) TEM studies of Modulated structure in single phase 2223 with $\text{Bi}_{1.6}\text{Pb}_{0.4}\text{Sr}_2\text{Cu}_3\text{O}_y$ composition, **S.S.R. Inbanathan**, G. Singh, A.K. Singh and D. Pandey, XXII National Seminar on Crystallography, Jaipur, India 1992

Conference / Seminar Presentations:

- 1) Rescaled Range analysis of Temperature in Chennai, M. Suresh Kumar, M. Beaula Ruby Kamalam, **S. Stephen Rajkumar Inbanathan**, M .Mahalakshmi, UGC National seminar, AMMR, (2012)
- 2) Introduction to cellular automata: W. Christopher Immanuel and **S.Stephen Rajkumar Inbanathan** UGC National seminar, AMMR, Chennai (2012)
- 3) Impact of Tsunami on Total ozone column **S.Stephen Rajkumar Inbanathan** P. Indira and N. Mahalakhmi, UGC National seminar AMMR, Chennai (2012).
- 4) Modelling on surface ozone using artificial neural network in an urban area, **S.Stephen Rajkumar Inbanathan**, O. Mahendran, R.Samuel Selvaraj and R. Jayalakshmi, International Journal of Engineering Science and Technology (IJEST), Vol.3 (2011)1175
- 5) Growth of nonlinear optical γ glycine single crystals and its characterization by XRD, FTIR, UV-Vis NIR, TG-DTA, DSC and SHG analysis, **S.S.R. Inbanathan** and Beulah Ruby Kamalam XVII National Seminar on Crystal Growth, Chennai (Jan 2013)
- 6) Growth of diglycine hydrogen selenite acid single crystals and its characterization by XRD, FTIR, UV-Vis NIR, TG-DTA and DSC M. Beaula Ruby Kamalam and **S.S.R. Inbanathan**, XVII National Seminar on Crystal Growth, Chennai (Jan 2013)
- 7) Measurement and demonstration of Thermal expansion coefficient, **S.S.R.Inbanathan**, K.Moorthy and G. Balasubramanian , The Physics Teacher(American Association of Physics Teachers)45 (2007)
- 8) Growth and Characterization of Gama glycine NLO crystals, S. Ruby, K. Moorthy **and S.S.R. Inbanathan**, at 13th National conference on Crystal growth, SSN College, Madras (Jan 2009)
- 9) Growth and Characterization of Gama glycine crystals, R.David Jebasingh **and S.S.R. Inbanathan**, at 12th National conference on Crystal growth, SSN College, Madras (December, 2007)
- 10) Ionic conductivity studies in polymer blend electrolytes, **S.S.R. Inbanathan**, R,Sankara Gomathi and O.Mahendran, ICMAT Conference Singapore, 2007
- 11) Measurement of concentration gradient of solution in SR tube using a simple prism

interferometer. A. Vijayakumar, **S.S.R. Inbanathan** and G. Balasubramanian (Paper presented at 11th National conference on Crystal growth, SSN College, Madras (7-9 December, 2006) **Awarded Best poster award**)

12) Temperature controller for SR method using a filament bulb, K. Suresh, M. Vijayakumar, **S.S.R. Inbanathan** and Balasubramanian (Paper presented at 11th National conference on Crystal growth, SSN College, Madras (7-9 December, 2006))

13) Growth and Characterization of pure ADP and NaCl doped ADP using SR Method, M. Senthil Pandian, A. Kesavan, **S.S.R. Inbanathan** and G. Balasubramanian (Paper presented at 11th National conference on Crystal growth, SSN College, Madras (7-9 December, 2006))