

CURRICULUM VITAE

Dr. S. DINAKARAN

Assistant Professor

Department of Physics

St. Joseph's College (Autonomous)

Tiruchirappalli-620002

Tamil Nadu, India.

Email: sdinakar2007@gmail.com

dinakaran_ph1@mail.sjctni.edu

Education Qualification:

- Ph. D in Physics**, University of Madras, Chennai. August, 2010
- M.Phil in Physics**, University of Madras, Chennai, September, 2006.
- M.Sc Physics**, Annamalai University, Chidambaram, May, 2005
- B.Sc. Physics**, Manonmaniam Sundaranar University, Tirunelveli May, 2003.

Exam Qualified

State Eligibility Test (SET) for Assistant Professor on April 2017 conducted by Mother Teresa Women's University, Kodaikanal, Tamil Nadu.

Experience (Teaching/ Research)

- **Assistant Professor**, Department of Physics, St. Joseph's College (Autonomous), Trichy, from June 2016 to Till date.
- **Assistant Professor**, School of Advanced Sciences, VIT University, Vellore, from July 2013 to June 2016
- **Post Doctoral Research Associate**, LED IT Fusion Technology Research Centre, Yeungnam University, South Korea, from July 2011 to June 2012.
- **Lecturer**, Prathyusha Institute of Technology and Management, Tiruvallure, from Oct2010 to June 2011.

Fields of Research Interest

- 1) Semiconductor thin films
- 2) Electrical modeling on solar cells
- 3) Synthesis of micro and nano size phosphors

Computer Awareness : MS-Office, C & C++ languages. Origin

Medals/Fellowship Awarded

- Academic Proficiency winner in M.Phil degree programme.
- Senior research Fellowship from CSIR, India in October 2008.

List of publications (International Peer reviewed)

1. G. Cynthia Jemima Swarnavalli, **S. Dinakaran**, N. Raman, R. Jegadeesh, Carol Pereira (2017) “Bio inspired synthesis of monodispersed silver nano particles using Sapindus emarginatus pericarp extract – Study of antibacterial efficacy” *Journal of Saudi Chemical Society*, 21, pp.172-179.
2. G. Cynthia Jemima Swarnavalli, **S. Dinakaran**, S. Divya (2016) “*Preparation and characterization of nanosized Ag/SLN composite and its viability for improved occlusion*”, *Applies Nanoscience*, 6, pp.1065-1072.
3. **S. Dinakaran**, Sunil Verma, S.Jerome Das, (2011) “*Solubility, crystal growth, morphology, crystalline perfection and optical homogeneity of lithium paranitrophenolate trihydrate, a semiorganic NLO crystal*”, *Cryst. Eng. Comm.* 13, pp. 2375-2380.
4. **S. Dinakaran**, Sunil Verma, S.Jerome Das, S.Kar, K.S.Bartwal, (2011) “*Determination of crystalline perfection, optical indicatrix, birefringence and refractive index homogeneity of ZTS crystals*”, *Applied Physics B, Laser and optics*, 103, pp. 345-349.
5. J. Mary Linet, **S. Dinakaran**, S. Jerome Das, (2011) “*Optical and microhardness studies on unidirectional grown triaqua glycine sulfato zinc (II): A semiorganic NLO crystal*”, *Journal of Alloys and Compounds*, 509, 9, 3832-3836.
6. **S. Dinakaran**, Sunil Verma, S.Jerome Das, S.Kar, K.S.Bartwal, (2010) “*Influence of forced convection on unidirectional growth of crystals*”, *Physica B Condensed Matter* (405) 3919–3923.
7. **S. Dinakaran**, Sunil Verma, S. Jerome Das, G. Bhagavannarayana, S. Kar, K.S. Bartwal, (2010) “*Investigations of crystalline and optical perfection of SHG oriented KDP crystals*”, *Applied Physics A*, 99, pp. 445-455.
8. **S. Dinakaran**, S. Verma, S. Jerome Das, S. Kar, K. S. Bartwal, (2010), “*Optical imaging of the growth kinetics and polar morphology of zinc tris(thiourea) sulphate single crystals*”, *Crystal Research Technology*, 43, pp. 233-238.
9. **S. Dinakaran**, Sunil Verma, S. JeromeDas, S. Kar, K. S. Bartwal, P. K. Gupta, (2010), “*Investigations for obtaining enhanced SHG element of KH₂PO₄ crystal*”, *Physica B: Condensed Matter*, 405, pp. 1809-1812.
10. K. Sugandhi, **S. Dinakaran**, M. Jose, R. Uthrakumar, A. Jeya Rejendran, G. Bhagvannarayana, V. Joseph, S. Jerome Das, (2010), “*Crystalline perfection, spectroscopic investigations and transport properties of trisglycine zinc chloride NLO single crystal*”, *Physica B: Condensed Matter*, 404, 18, 3929-3935.
11. R. Robert, C. JustinRaj, S. Krishnan, R. Uthrakumar, **S. Dinakaran**, S. Jerome Das, “*Spectral, optical and mechanical studies on L-histidine hydrochloride monohydrate (LHC)single crystals grown by unidirectional growth technique*”, *Physica B: Condensed Matter*, 405 (2010) 3248–3252.
12. **S. Dinakaran**, Sunil Verma, C. Justin Raj, J. Mary Linet, S. Krishnan, S. Jerome Das, (2009), “*Growth of a bulk organic single crystal of benzoylglycine by the unidirectional crystal growth method*”, *Crystal Growth and Design*, 9, pp 151 – 155.

13. J. Mary Linet, **S. Dinakaran**, S. Mary Navis Priya, and S. Jerome Das, (2009) “*Growth and characterization of pure and Hg²⁺ doped thiosemicarbazide cadmium chloride crystals*”, Crystal Research Technology, 44, pp. 173 – 176.
14. C. Justin Raj, S. Krishnan, **S. Dinakaran**, J. Mary Linet, R. Uthrakumar, R. Robert, S. Jerome Das, (2009), “*Growth, optical, mechanical, dielectric and theoretical studies on potassium pentaborate tetrahydrate (KB₅O₈.4H₂O) single crystal by modified Sankaranarayanan-Ramasamy method*”, Journal of Material Science and Technology, 25, No-6, pp. 1-4.
15. R. Priya, C. Justin Raj, S. Krishnan, **S. Dinakaran**, R. Robert, S. Jerome Das, (2009), “*Optical, mechanical and surface analysis on potassium boromalate monohydrate grown by SR method*”, International Journal of Materials Sciences. 4, pp. 63–70.
16. **S. Dinakaran**, S. Jerome Das, (2008), “*Uniaxial growth of nonlinear optical active lithium paranitrophenolate trihydrate single crystal by Sankaranarayanan-Ramasamy (SR) method*”, Journal of Crystal Growth, 310, pp. 410 – 413.
17. **S. Dinakaran**, J. Mary Linet, C. Justin Raj, S.M. Navis Priya, S. Jerome Das, (2008), “*Investigations on the nucleation studies of sodium para nitrophenolate dihydrate single crystals*”, Materials Research Bulletin, 43, pp. 2010 – 2017.
18. C. Justin Raj, **S. Dinakaran**, S. Krishnan, B. Milton Boaz, R. Robert, S. Jerome Das, (2008), “*Studies on optical, mechanical and transport properties of NLO active L-alanine formate single crystal grown by modified Sankaranarayanan–Ramasamy (SR) method*”, Optics Communications, 281, pp. 2285 – 2290.
19. F.A.P. Rathi, **S. Dinakaran**, R. Robert, R. Mahalakshmi, F. Yogam, S. Jerome Das, (2008), “*Characterization of L-aspartate crystals grown in gel medium*”, Crystal Research Technology, 43, pp 729-732.
20. C. Justin Raj, S. Krishnan, **S. Dinakaran**, R. Uthrakumar, S. Jerome Das, (2008), “*Growth and optical absorption studies on potassium dihydrogen phosphate single crystals*”, Crystal Research Technology, 43, pp 245 – 247.
21. C. Justin Raj, S. Krishnan, **S. Dinakaran**, S. Mary Navis Priya, R. Uthrakumar, S. Jerome Das, (2008), “*Growth and characterization of nonlinear optical potassium boromalate monohydrate (KBM) single crystal grown by modified Sankaranarayanan- Ramasamy (SR) Method*”, Crystal Growth and Design, 8, pp. 3956 – 3958.
22. J. Mary Linet, S. Mary Navis Priya, **S. Dinakaran**, S. Jerome Das, (2008), “*Dielectric and microhardness studies on L-citrulline and L-ascorbic acid admixture TGS crystals*”, Crystal Research Technology, 43, pp. 806 – 810.
23. R. Uthrakumar, C. Vesta, C. Justin Raj, **S. Dinakaran**, Rani Christhu Dhas, S. Jerome Das, (2008) “*Optical and dielectric studies on pure and Ni²⁺, Co²⁺ doped single crystals of bis thiourea cadmium chloride*”, Crystal Research Technology, 43, pp. 428 – 432.
24. S. Krishnan, C. Justin Raj, **S. Dinakaran**, R. Uthrakumar, S. Jerome Das, (2008), “*Optical, thermal, dielectric and ferroelectric behaviour of sodium acid phthalate (SAP) single crystals*”, Journal of Physics and Chemistry of Solids, **69**, pp. 2883 – 2887.

25. S. Mary Navis Priya, J. Mary Linet, G. Bhagavannarayana, C. Justin Raj, S. Krishnan, **S. Dinakaran**, S. Jerome Das, (2008), “*Synthesis, Growth and Characterization of novel non linear optically active Dichloridodiglycinezinc dihydrate*”, Crystal Growth and Design, 8, pp.1663 - 1667.
26. S. Krishnan, C. Justin Raj, S. Mary Navis Priya, R. Robert, **S. Dinakaran**, S. Jerome Das, (2008), “Optical and dielectric studies on succinic acid single crystals”, Cryst. Res. Technol., 43, pp. 845 - 850.
27. S. Krishnan, C. Justin Raj, **S. Dinakaran**, S. Jerome Das, (2008), “*Investigation of Optical band gap in potassium acid phthalate single crystals*”, Cryst. Res. Technol., 43, pp. 670 - 673.
28. A.J. Varjula, C. Vesta, C. Justin Raj, **S. Dinakaran**, A. Ramanand, S. Jerome Das, (2007), “Growth and characterization of a new semi-organic nonlinear optical sodium paranitrophenolate paranitrophenol dihydrate single crystal”, Materials Letters, 61, pp. 5053–5055.
29. C. Justin Raj, G. Mangalam, S. Mary Navis Priya, J. Mary Linet, C. Vesta, **S. Dinakaran**, B. Milton Boaz, S. Jerome Das, (2007), “*Growth and characterization of nonlinear optical zinc hydrogen phosphate single crystal grown in silica gel*”, Crystal Research Technology, 42, No-4, pp. 344-348.

Conference Proceedings

- 1) G. Cynthia Jemima Swarnavalli, **S. Dinakaran**, S. Krishnaveni, “ *Rapid microwave synthesis of flower shaped Ag doped ZnO nanostructures*” in the “International Conference on Advances in New Materials ICAN – 2014” organised by the Department of Inorganic Chemistry, University of Madras, Chennai – 25, on 20th & 21st June 2014.
- 2) G. Cynthia Jemima Swarnavalli, **S. Dinakaran**, S Vishali, A.Jessy Jebasheela, “*A facile rapid green strategy for the synthesis of flower-shaped Ag doped ZnO nanostructures in aqueous medium- Study of catalytic degradation of nitrobenzene*”, International Conference on “Energy, Water and Environmental Science & Technology (ICEWEST–2015)” on 5, 6th Feb 2015 organised by the Department of Chemistry, Presidency College, Chennai. (Won first prize for the poster)
- 3) Tae Hoon Chung, Ja-Soon Jang, **S. Dinakaran**, jee eun park, Cheol-Hoi Kim, *Improved light extraction efficiency of InGaN/GaN based LED through thicker GaN Epi-layer* 16th International Conference on Metal Organic Vapor Phase Epitaxy (ICMOVPE-XVI), at Paradise Hotel Busan, Busan, South Korea May 2012.
- 4) **S. Dinakaran**, Sunil Verma, S. Jerome Das, (2008), “*Growth of NLO active lithium paranitrophenolate trihydrate single crystals*”, NECAN -08, Loyola College, February 28 – 29.
- 5) **S. Dinakaran**, C. Justin Raj, J. Mary Linet, C. Vesta, R. Uthrakumar, S. Jerome Das, (2008), “*Growth and nucleation studies on sodium paranitrophenolate Dihydrate single crystals*”, NCRAP -08, Pachaiyappa’s College, February 01 -02.

- 6) **S. Dinakaran**, J. Mary Linet, S. Mary Navis Priya, C. Vesta, S. Jerome Das, (2006), “*Dielectric, Photoconductivity and thermal studies on Hippuric acid single crystals*”, 11th National Seminar on Crystal Growth, Center for Crystal Growth, SSN College of Engineering, December 7-9.
- 7) **S. Dinakaran**, J. Mary Linet, C. Justin Raj, R. Uthrakumar, S. Jerome Das, (2007), “*Growth and characterization of non – linear optical L-lysine monohydrochloride dihydrate single crystals*”, National Laser Symposium, Applied Physics Department, Faculty of Technology & Engineering, M.S. University of Baroda, Vadodara, Gujarat, Dec 17 – 20.
- 8) **S. Dinakaran**, S. Mary Navis Priya, J. Mary Linet, R. Uthrakumar, S. Jerome Das, (2007), “*Studies on growth and nucleation kinetics of semi-organic L-lysine monohydrochloride dihydrate single crystals*”, National conference on recent trends in opto electronics and laser technology, NCOL, Department of Optoelectronics, University of Kerala, Thiruvananthapuram, Kerala, April 9-11.
- 9) R. Priya, C. Justin Raj, S. Mary Navis Priya, **S. Dinakaran**, S. Jerome Das, (2009) “*Uniaxial growth of potassium boromalate monohydrate (KBM) single crystal by modified Sankaranarayanan – Ramasamy (SR) method*”, NCAIMS 2009, St. Joseph College of Arts & Science, Cuddalore – 607 001.
- 10) J. Mary Linet, S. Mary Navis Priya, **S. Dinakaran**, S. Krishnan, S. Jerome Das, (2009), “*Growth and characterisation of amino acid admixed Triglycine Sulphate (TGS) crystals*”, NCAIMS 2009, St. Joseph College of Arts & Science, Cuddalore – 607 001.

Workshops (WS) attended

- National Workshop on Recent Advances and Applications of Material Science organized by The Gandhigram Rural Institute-Deemed University, Gandhigram, 02-03 November, 2017.

Faculty Development Program attended

1. Faculty Development Program on “MATLAB” organized at VIT University, 16-18 December, 2013.
2. Faculty Development Program on “WITTING ERROR FREE TECHNICAL CONTENT” organized at VIT University, 11 June, 2014.
3. Faculty Development Program on “ELECTROMAGNETIC THEORY” organized at VIT University, 06 October, 2015.
4. Faculty Development Program on “EFFECTIVE TEACHING OF COMPLEX CONCEPTS USING BLACK BOARD “ AND “SETTING HIGHER ORDER THINKING QUESTIONS IN EXAMINATIONS (HOTS)” organized at VIT University, 19 March, 2016.

5. Faculty Development Program on “CRYSTALLOGRAPHY” organized at VIT University, 26 February, 2016.
6. Faculty Development Program on “THE VANISHING ART OF LECTURING” organized at VIT University, 17 March, 2015.
7. Faculty Development Program on “RESEARCH CHALLENGES IN NUCLEAR PHYSICS” organized at VIT University, 10 December, 2014.
8. Faculty Development Program on “DEVELOPING FUNDED RESEARCH PROJECT – OPPORTUNITIES AND OPTIONS” organized at VIT University, 27 August, 2014.
9. Faculty Development Program on “NANOSTRUCTURED METAL OXIDES AND NITRIDES FOR GAS SENSING APPLICATIONS” organized at VIT University, 01October, 2015.
10. Faculty Development Program on “NANOSTRUCTURED METAL OXIDES AND NITRIDES FOR GAS SENSING APPLICATIONS” organized at VIT University, 01October, 2015.

Invited Talk

- GaN based Blue LED- Theory and Fabrication, State Level Seminar on Recent Advances in Materials, Annai Velankanni College, Tholayavattam, 25-01-2018.

Academic activities

Courses Handled

- Mathematical Physics, Quantum Mechanics, Atomic, Solid state and Nuclear Physics, Astrophysics, Physics for competitive Examination- St. Joseph’s College
- Modern Physics, Semiconductor Device Physics and Engineering Physics – VIT University, Vellore
- Engineering Physics –I and Engineering Physics-II – Prathyusha Institute of Technology and Management, Tiruvallure,

Administrative Experience

- Assistant director of New Hostel, St. Joseph’s College, Trichy from June 2016 to April 2017.

Professional activities

- Reviewer in Journal of Materials Science: Materials in Electronics
- Reviewer in DAE-BRNS National Laser Symposium (NLS-22) organized by Manipal University, Manipal, January 8-11, 2014
- Reviewer in 26th DAE-BRNS National Laser Symposium (NLS-26) organised by BARC in Mumbai December 20-23, 2017.

- Reviewer in 27th DAE-BRNS National Laser Symposium (NLS-27) organised by RRCAT in Indore, December 3-6, 2018.
- Reviewer and Scientific committee member in WCC Centenary International Conference on Viable Synergies in Mathematical and Natural Sciences organized by Women's Christian College, Chennai 7-9 January 2016.