

MANGALORE UNIVERSITY



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PROFILE

NAME	Dr.S M DHARMAPRAKASH
DESIGNATION	Professor
AFFILIATION	Department of Physics Mangalore University MANGALAGANGOTRI 574199 , India Tel : 91.824.2287363 (Off) Mobile : 09449805183 FAX : 91.824.2287367 E-Mail : smdharma@yahoo.com
CITIZENSHIP	Indian
PROFESSIONAL EXPERIENCE	
2005 – Present	Professor, Mangalore University
2005 – 1998	Associate Professor, Mangalore University
1998 – 1982	Assistant Professor, Mangalore University
EDUCATIONAL QUALIFICATIONS	
B.Sc. Physics, Chemistry & Mathematics	St Philomena College, Puttur.D.K. Karnataka
M.Sc. Physics	Mangalore University, Magalaagangotri. 574199, Karnataka
Ph.D. Physics (Studies in Crystal Growth)	Mangalore University, Mangalagangotri. 574199, Karnataka
Post Doctoral Fellow	Purdue University, West Lafayette, IN, U S A.
AWARDS & RECOGNITIONS	
<input type="checkbox"/>	BOYSCAST Fellow, Department of Science and Technology, Ministry of Science and Technology, New Delhi.

- Post-Doctoral Fellow, Purdue University, West Lafayette, IN, USA.
- DST Young Scientist Research Project award
- TWAS, Italy, Research Project Award
- Journal of Optics & Laser Technology Most downloaded Paper Award 2012" by ELSEVIER Publishers, Netherland.

TEACHING EXPERIENCE	35 Years Teaching Physics for M.Sc. M.Phil and Ph.D Courses	
OTHER RESPONSIBILITIES	Chairman, Department of Physics, Mangalore University. (2009-2011) and (2013-2014) Head, Microtron Centre, Mangalore University (2009-2011) Member - Academic Council Mangalore University (2014-2016) Coordinator (DST- FIST) - (2011-2016) Coordinator (UGC SAP) - (2012-2017) Director - Centre for Distance Education (2015 till date). -	
RESEARCH ACTIVITY	31 Years of Research Experience.	
RESEARCH INTEREST	Crystal growth, Organic nonlinear optical materials, Thin films of metal oxides applicable to solar cells and optoelectronics.	
RESEARCH PUBLICATIONS	250 Research Papers published in National/International Journals Presented more than 50 articles in National/International Conferences Project reports: 10.	
BOOKS PUBLISHED	2.	
RESEARCH GUIDANCE	Guided 16 Ph. D. students	
Ph.D. DEGREES AWARDED		
1) K Suryanarayana Bhat	23-01-1999	Growth and characterization of doped calcium tartrate tetrahydrate crystals
2) S Govinda Bhat	19-06-2011	Growth and properties of some nonlinear optical materials
3) M Narayana Bhat	19-12-2003	Studies on some novel nonlinear optical materials
4) M Narayana Moolya	12-08-2008	Studies on nonlinear optical hydrogen halides of glycine and L-Tyrosine single crystals

5) A Jayarama	06-01-2007	Growth and properties of thiourea and glycine mixed nonlinear optical materials
6) M R Sureshkumar	31-10-2009	Growth and characterization of glycine complex and L-Threonine crystals.
7) Venkataraya Shettigar	09-04-2009	Studies on structural and nonlinear optical properties of new chalcone derivatives
8) H J Ravindra	04-02-2010	Crystal growth, characterization and nonlinear optical properties of D- π -A- π -D type chalcone derivatives
9) P S Patil	22-02-2011	Single crystal X-ray structures and nonlinear optical studies of chalcone derivatives.
10) Chitharanjan Rai	08-05-2012	Studies on optical and electrical properties of doped tri glycine sulphate crystals.

11) K. Jayaprakash Gowda	25-09-2012	Crystal growth, electrical and optical properties of triglycine sulphate doped with divalent /trivalent metal ions
12) E Deepak D'Silva	04-05-2013	Crystal structure and nonlinear optical properties of solution grown organic materials.
13) S Raghavendra	25-07-2015	Synthesis and characterization of some new organic materials for photonic applications.
14) Felcy Jyothi Serrao	22-05-2017	Study of structural, optical and electrical properties of pure and doped ZnO thin film.
15) T Chandrashekar Shetty	04-04-2017	Investigations on the nonlinear optical materials embedded in polymers.
16) K V Anil kumar	2017	Nonlinear optical investigations of thermally evaporated organic phthalocyanine thin films
17) K M Sandeep	2017	Studies on optoelectronic properties of undoped and doped ZnO thin films processed by sol gel spin coating technique.
18) Shreesha Bhat		Studies on porphyrin sensitized titanium oxide thin films and its application in photovoltaics.
19) Kumar K		Optical and electrical properties of metal oxide based nanoparticles.
20) Prasad Kumar		Laser ablated TiO ₂ thin films and its application in photovoltaics.
21) Veena		Electrical and optical properties of undoped and doped carbon derivatives.
22) Parvathi Venu		Studies on Electrical and Optical properties of ZnO based thin films

M.Phil DEGREES AWARDED

1) Mr P R Kesava Chandran	1995	Growth and characterization of strontium tartrate tetrahydrate single crystals
2) Mr Nagaraja H S	1996	Studies on pure and ammonium doped strontium formate dehydrate single crystals

3) Ms Elby Jacob	1992	Studies on crystallization of barium cadmium formate crystals
4) Mr Venkataraya Shettigar	1999	Growth and characterization of barium cadmium formate crystals.

NUMBER OF STUDENTS CURRENTLY WORKING

Ph.D	05 (Full Time)
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NATIONAL COLLABORATION

- Advanced Centre of Research in High Energy Materials (ACRHEM), University of Hyderabad, Hyderabad 500046.
- School of Physical Sciences, National Institute of Science Education and Research (NISER), Jatni, 752050, India
- University of Mysore
- Department of Engineering Physics, K.L.E. Institute of Technology, Opposite Airport, Gokul, Hubballi 580030.
- Crystal growth & X-ray Analysis, CSIR, National Physical Laboratory, New Delhi.

INTERNATIONAL COLLABORATION

- X-ray Crystallography Unit, School of Physics, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia.
- National Laboratory of Solid State Microstructures and Department of Physics, Nanjing University, Nanjing 210093, People's Republic of China.
- Department of Physics, National University of Singapore, 2 Science Drive 3, Singapore 117542, Singapore
- The School of Natural and Computing Sciences, University of Aberdeen, UK.
- Korea Advanced Institute of Science and Technology.

PROFESSIONAL COLLABORATION

Membership	Indian Physics Teachers Association Society for advancement of Solid State Sciences Indian Physics Association Semiconductor Society of India International Association of Advanced Materials The Indian Science Congress Association
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REVIEWER

For about 25 International Journals

RESEARCH PROJECTS

- Crystal Growth of Nonlinear optical Ba and Cd formate (completed) UGC, New Delhi (1989-91)
- Studies on nonlinear optical antimony thiourea bromide single crystal (completed), UGC New Delhi (1992-93)

- Growth, characterization and properties of mixed formate crystals (completed) DST, New Delhi (1994-97)
- Growth and nonlinear optical properties of Mn and Ni doped barium formate crystals (completed) 1996-97.
- Growth and properties of some nonlinear optical single crystals (completed) DST New Delhi (2002-05)
- Neutron diffraction technique to determine the crystal structure of some non-linear optical crystals (completed), UGC DAE (2002 -07).
- Characterization of materials using X-Ray diffractometer (completed), DST, New Delhi (2002 -07).
- Crystal growth of lithium niobate crystals (completed) DRDO, New Delhi, (2005-08).
- Effect of electron irradiation on the electrical and optical properties of TGS crystals (completed) BRNS (2007-09).
- Novel organic materials for nonlinear optical applications (completed) DST, New Delhi (2007-10)
- X-Ray Structural Characterisation of New Organic Materials for Non-Linear Optical Applications, -, Collaborative project, University Sains Malaysia (2007-2010).
- Nonlinear optical properties of electron irradiated organic materials, Completed, BRNS (2010-13)
- Development of nanostructural pure and doped ZnO for efficient display and dosimetry applications (Co investigator) , completed, BRNS (2011-14)
- Electron irradiated ZnO for photonic applications (completed), UGC New Delhi (2012-15).
- DST - FIST Program (Co-ordinator), (2011-16)
- UGC - SAP Program (Co-ordinator), (2012-17)
- UGC CPEPA Program (Investigator) (2017 -2021).

BOOKS Published: 1)A book on "*Organic materials for nonlinear optical applications: New Chalcones*" has been published by Lambert Academic Publishing, Omni-Scriptum GmbH & Co KG, Heinrich - Bocking.Str, 6-8, 66121, Saarbrucken, Deutschland/Germany.

2)A book on "*Linear and nonlinear optical properties of new organic crystals*" has been published by Lambert Academic Publishing, Omni-Scriptum GmbH & Co KG, Heinrich - Bocking.Str, 6-8, 66121, Saarbrucken, Deutschland/Germany.

RESEARCH PUBLICATIONS (September 2017)

- 1) Structure Property Relationship of a New Nonlinear Optical Organic crystal: 1-(3, 4-dimethoxyphenyl)-3-(3-fluorophenyl) prop-2-en-1-one for Optical Power Limiting Applications, S

Raghavendra, CSC Kumar, TCS Shetty, BN Lakshminarayana, S M Dharmaprakash, Results in Physics, 7 (2017) 2550-2556.

- 2) Experimental and computational studies on second-and third-order nonlinear optical properties of a novel D- π -A type chalcone derivative: 3-(4-methoxyphenyl)-1-(4-nitrophenyl) prop-2-en-1-one, SR Maidur, PS Patil, SV Rao, M Shkir, SM Dharmaprakash, Optics & Laser Technology 97 (2017) 219-228.
- 3) Optical nonlinearity of DA- π -D and DA- π -A type of new chalcones for potential applications in optical limiting and density functional theory studies, TCS Shetty, CSC Kumar, KNG Patel, TS Chia, S M Dharmaprakash, Journal of Molecular structure 1143 (2017) 306-317.
- 4) Influence of Ga doping ratio on the saturable absorption mechanism in Ga doped ZnO thin solid films, K M Sandeep. Shreesha Bhat, S M Dharmaprakash, K Byrappa, Journal of Physics D: Applied Physics 50 (2017) 095105.
- 5) Structural, optical and LED characteristics of ZnO and Al doped ZnO thin films, Sandeep K M, Shreesha Bhat, Dharmaprakash S M, Journal of Physics and Chemistry of Solids, 104 (2017) 36-44.
- 6) Effect of Mn²⁺ doping on crystalline and optical properties of Potassium Hydrogen Phthalate (KHP) crystals, R K Raju, H J Subhash, S M Dharmaprakash, H S Jayanna, Materials Research Innovations, (2017), 1-7.
- 7) Structural and optical properties of a new organic crystal 3-(2-chloro-5-(trifluoromethyl) phenyl)-1-(3,4-dimethoxyphenyl)prop-2-en-1-one for nonlinear optical applications, T Chandrashekhara Shetty, C S Chidankumar, S Raghavendra, T S Chia, S Chandrāju, S M Dharmaprakash, Materials Technology – Advanced Performance Materials 37 (2017) 140-147.
- 8) Third order nonlinear optical properties and crystal structures of (E)-1 (3, 4-dimethoxyphenyl)-3-(4-(trifluoromethyl) phenyl) prop-2-en-1-one, CS Chidan Kumar, TCS Shetty, TS Chia, S Chandrāju, S M Dharmaprakash, Materials Research Innovations 21 (2017) 198-205.
- 9) Impact of $\alpha \rightarrow \beta$ Transition in the Ultrafast High-Order Nonlinear 2 Optical Properties of Metal-Free Phthalocyanine Thin Films 3 K. V. Anil Kumar, Samir Kumar, S. M. Dharmaprakash, and Ritwick Das. Journal of Physical Chemistry C 120 (2016) 6733-6740.
- 10) Annealing-induced modifications in sol-gel spin-coated Ga:ZnO thin films. Felcy Jyothi Serrao, K. M. Sandeep and S. M. Dharmaprakash. Journal of sol gel science and Technology.78 (2016), 438-445
- 11) Sol aging effect on the structural, optical and electrical properties of Ga-doped ZnO thin films Felcy Jyothi Serrao and S. M. Dharmaprakash. Journal of Materials Technology 31 (2016), 443-447.
- 12) Structural, optical and electrical properties of sol-gel prepared Ga:ZnO thin film. F. J. Serrao and S. M. Dharmaprakash. Materials Research Innovations (2016).1-5
- 13) Nonlinear absorption, optical limiting behavior and structural study of a new chalcone derivative-1-(3, 4-dimethylphenyl)-3-[4 (methylsulfanyl) phenyl] prop-2-en-1-one, TCS Shetty, S Raghavendra, CSC Kumar, SM Dharmaprakash, Optics & Laser Technology, 77, (2016) 23-30.

- 14) Structural and optical properties of a new organic crystal 3-(2-chloro-5-(trifluoromethyl) phenyl)-1-(3, 4-dimethoxyphenyl) prop-2-en-1-one for nonlinear optical applications, TCS Shetty, CSC Kumar, S Raghavendra, TS Chia, S Chandraj, S M Dharmaprakash, Materials Technology, (2016) 1-8
- 15) Crystalline perfection, third-order nonlinear optical properties and optical limiting studies of 3, 4-Dimethoxy -4'-methoxychalcone single crystal P.S. Patil, Shivaraj R. Maidura, S. Venugopal Rao, S.M. Dharmaprakash. Journal of Optics and Laser Technology. 81(2016)76.
- 16) Structural, thermal, linear and nonlinear optical studies of an organic optical limiter based on reverse saturable absorption A P Menezes, S. Raghavendra, A. Jayarama, H.P. Sarveshwara and S.M. Dharmaprakash, Journal of Molecular structure 1119 (2016) 167 - 176.
- 17) Sol-gel derived Al-Ga co-doped transparent conducting oxide ZnO thin films Felcy Jyothi Serrao, K. M. Sandeep, Shreesha Bhat, and S. M. Dharmaprakash Citation: AIP Conference Proceedings 1731,(2016) 080047.
- 18) Investigations on nonlinear absorption and nonlinear refraction of a new photonic crystal using Z-scan T. C. S. Shetty, K. M. Sandeep, N. P. Mascarenhas, and S. M. Dharmaprakash Citation: AIP Conference Proceedings 1731, (2016) 140026.
- 19) Li doped ZnO thin films for optoelectronic applications K. M. Sandeep, Shreesha Bhat, F. J. Serrao, and S. M. Dharmaprakash Citation: AIP Conference Proceedings 1731, (2016) 080055.
- 20) Optical Limiting Studies on Chalcone Doped PMMA Polymer Film T. Chandra Shekhara Shetty, S. Raghavendra, S.M.Dharmaprakash, Materials Today Proceedings 2 (2016) 2163 - 2168.
- 21) Wavelength dependent nonlinear optical switching in electron beam irradiated CuTTBPC thin Film, K. V. Anil Kumar, S. Venugopal Rao, S. Hamad and S. M. Dharmaprakash, RSC Advances., 6 (2016) 22083-22089.
- 22) Crystal structure and nonlinear optical absorption of a new chalcone derivative: a promising candidate for optical switching, TCS Shetty, S Raghavendra, CSC Kumar, SM xxDharmaprakash, Applied Physics B 122 (2016), 1-9.
- 23) Influence of Ga dopants on the structural, optical and electrical properties of solution processed ZnO thin films. Felcy Jyothi Serrao and S M Dharmaprakash. Journal of Optoelectronics and Advanced Materials, 18 (2016) 672.
- 24) Defect assisted nonlinear absorption characteristics of Al doped ZnO thin films, Sandeep K M, Shreesha Bhat, Patil P S, SDharmaprakash and Byrappa K, Journal of Applied Physics, 120, (2016)123107.
- 25) Ultrafast optical nonlinearities in 2, 9, 16, 23-Tetra-tert-butyl-29H, 31H-Phthalocyanine thin films, Samir Kumar, K V Anil Kumar, Sampyady Dharmaprakash, and Ritwick Das Optical Society of America (OSA) Publishing – Conference Papers – NOMA 2016, NoW2D- Page No W2D.1, ISBN: 978-1-943580-14-9.

- 26) Femtosecond nonlinear optical properties of as grown and annealed Phthalocyanines thin films, Samir Kumar, K. V. Anil Kumar, S.M. Dharmaprakash and Ritwick Das, IEEE Xplore digital Library, 2016.
- 27) 8 MeV electron beam induced modifications in the structural, optical and electrical properties of Al doped ZnO thin film, KM Sandeep, S Bhat, SM Dharmaprakash, Materials Science in Semiconductor Processing 56, (2016) 265-271.
- 28) Third order nonlinear optical properties and crystal structures of E-1 (3, 4-dimethoxyphenyl)-3-(4-(trifluoromethyl) phenyl) prop-2-en-1-one, CS Chidan Kumar, TCS Shetty, TS Chia, S Chandraju, Materials Research Innovations, 21 (2017) 198-205.
- 29) Gamma irradiation effects on crystalline and optical properties of pure and doped Potassium hydrogen phthalate (KHP) single crystals, R K Raju, S M Dharmaprakash and H S Jayanna, Optik, International journal of light and electron optics. 127 (2016) 11649-11656.
- 30) Phase dependence ultrafast third order optical nonlinearities in metallophthalocyanine thin Films. Samir Kumar, K. V. Anil Kumar, S. M. Dharmaprakash²and Ritwick Das, Journal of Applied Physics, 2016, 120 (2016) 123104.
- 31) Structural defects and photoluminescence studies of sol gel prepared ZnO and Al doped ZnO films, K M Sandeep, Shreesha Bhat and S M Dharmaprakash Applied Physics A 122 (2016) 975.
- 32) Third order nonlinear optical effects in a new Chalcone derivative embedded in a polymer host. T. Chandra Shekhara Shetty, S. Raghavendra, and S. M. Dharmaprakash AIP Conference Proceedings 1665, 080070 (2015).
- 33) Nonlinear absorption, optical limiting behavior and structural study of a new Chalcone derivative-1-(3, 4-dimethylphenyl)-3-[4(methylsulfanyl) phenyl] prop-2-en-1-one., T C S Shetty, S Raghavendra, C S Chidankumar and S M Dharmaprakash, Journal of Optics and Laser Technology, 77 (2015) 23.
- 34) Growth and structure of a new photonic crystal: Chlorine substituted chalcone H. P. Sarveshwara, S. Raghavendra, Jayarama A, Anthoni Praveen Menezes, and S. M. Dharmaprakash, AIP Conference Proceedings 1665, 100026 (2015).
- 35) Aging effects of the precursor solutions on the properties of spin coated Ga-doped ZnO thin films. Felcy Jyothi Serrao and S. M. Dharmaprakash, AIP Conference Proceedings 1665, 080067 (2015).
- 36) Structure - property relation and third order nonlinear optical absorption study of new organic crystal: 1-(3, 4-Dimethoxyphenyl)-3-(2-fluorophenyl) prop-2-en-1-one crystal, CSC Kumar, S Raghavendra, TS Chia, S Chandraju, SM Dharmaprakash, optical Materials 49, (2015) 279- 285.
- 37) Growth, Characterisation, Optical and Dielectric Properties of Pure and Urea Doped Potassium Hydrogen Phthalate (KHP) Crystals Raju R K, S M Dharamaprakash and H S Jayanna, Int. Jl. Of Pure and Applied Physics 11 (2015) 61.
- 38) Structural, linear and nonlinear optical study of zinc tetra-tert-butyl phthalocyanine thin film KV A Kumar, S Raghavendra, SV Rao, S Hamad, SM Dharmaprakash, Optik- International Journal for Light and Electron Optics 126 (24) (2015) 5918-5922.

- 39) Effect of NaCl doping on growth, characterization, optical and dielectric properties of Potassium Hydrogen Phthalate (KHP) Crystals, R K Raju, S M Dharmaparakash, H S Jayanna, *Advances in Materials Physics and Chemistry* (5) (2015) 339-407.
- 40) Structural, nonlinear absorption and optical limiting properties of a new organic crystal 3-(3-fluorophenyl)-1-[4-(methylsulfanyl) phenyl] prop-2-en-1-one. S Raghavendra, C S Dileep and S M Dharmaparakash, *Journal of "Molecular crystals and liquid crystals"* 609 (2015) 192.
- 41) Thickness dependence properties of spin coated ZnO nano crystalline films, Felcy Jyothi Serrao and S.M. Dharmaparakash . *SAHYADRI International Journal of Research* 1 (2015) 21.
- 42) Growth kinetics, spectral and optical properties of glycine fixed sodium nitrate crystal, S Satheeshchandra, A Jayarama, N Shetty, S M Dharmaparakash, *SAHYADRI International Journal of Research* 1 (2015) 11.
- 43) Study on nonlinear optical properties of 2,4,5-trimethoxy-4'-bromo chalcone single crystal. P.S.Patil, M.S.Bannur , D.B.Badigannavar , S.M.Dharmaparakash, *Optics and Laser Technology* 52 (2014) 37.
- 44) Structural and optical properties of new organic crystal 1-[4-(methylsulfanyl)phenyl]-3-(2,4,5-trimethoxyphenyl) prop-2-en-1-one for optical limiting Applications. S. Raghavendra K.V. Anil Kumar, T. Chandra Shekhara Shetty, S. M. Dharmaparakash. *Journal of Molecular Structure* 1074 (2014) 653.
- 45) Structural, nonlinear absorption and optical limiting properties of a new organic crystal 3-(3-fluorophenyl)-1-[4-(methylsulfanyl) phenyl] prop-2-en-1-one.S. Raghavendra, C. S. Dileep, S. M. Dharmaparakash, *Journal of Molecular crystals and Liquid crystals.* (2014) 1542.
- 46) 1-[4-(methylsulfanyl) phenyl]-3-(4-nitrophenyl) prop-2-en-1-one: A reverse saturable absorption based optical limiter S Raghavendra,, C S Chidankumar, A Jayarama S M Dharmaparakash, *Materials Chemistry and Physics*, 149-150 (2014) 487-494.
- 47) Crystal structure and optical properties of a new non linear optical chalcone crystal. B Ganapayya, A Jayarama, S.M.Dharmaparakash, *Mol. Crystals and Liq.Crystals* 571 (2013) 87.
- 48) Linear Optical and SHG characterization of New Chalcone Crystals, S.Raghavendra, A.Jayarama, Chadra Shekhara Shetty, S.M Dharmaparakash. *American Institute of Physics conference Proceedings* 1512 (2013) 908.
- 49) Synthesis, growth, and characterization of 3-(4-Methoxyphenyl)-1-(9-hydroxy-2-yl) prop-2-en-1-one single crystal: A potential NLO material, A. Jayarama, H.J. Ravindra, Anthoni Praveen Menezes, S.M. Dharmaparakash, Seik Weng Ng *Journal of Molecular structure* 1051 (2013) 285.
- 50) Electrical and optical characteristics of nonlinear optical chalcone derivative. E D D'Silva and S M Dharmaparakash, *Crystal Growth* 65 (2013) 19724.

- 51) Synthesis, growth, and characterization of a new NLO material 3-(2,3- dimethoxyphenyl)-1- (10-hydroxy-2-yl) prop-2-en-1-one. B Ganappayya, A Jayarama and S M Dharmaparakash, Journal of molecular structure 1007 (2012) 175.
- 52) Structural, optical and electrical characteristics of a new NLO crystal. E.D. D'Silva, G.K. Podagatlapalli, S.V. Rao, S.M. Dharmaparakash, Optics and laser Technology, 44 (2012) 1689.
- 53) Study on third-order nonlinear optical properties of 4-methylsulfanyl chalcone derivatives using picosecond pulses. E.D. D'Silva, G. K. Podagatlapalli, S. Venugopal Rao, S.M. Dharmaparakash, Materials Research Bulletin, 47 (2012) 3552.
- 54) Crystal growth and dielectric, mechanical, electrical and ferroelectric characterization of n-bromo succinimide doped triglycine sulphate crystals, C. Rai, K Byrappa and S M Dharmaparakash, Physica B : Condensed Matter 406 (2011) 3308.
- 55) Iminodiacetic acid doped ferroelectric triglycine sulphate crystal: Crystal growth and characterization, C Rai, N. Moolya and S M Dharmaparakash, Physica B: Condensed Matter 406 (2011) 1.
- 56) New, high efficiency nonlinear optical chalcone Co-crystal and structure-property relationship, D'Silva E, Podagatlapalli G, Rao S, Rao D, S M Dharmaparakash, Crystal Growth & Design 11 (2011) 5362.
- 57) Synthesis, growth and characterization of novel second harmonic nonlinear chalcone crystal, D'Silva E, Narayan Rao D, Philip R, Butcher R, Rajnikant, S M Dharmaparakash, Journal of Physics and Chemistry of Solids 72 (2011) 824.
- 58) Synthesis, growth and characterization of organic NLO crystals of 4-SCH₃-4-chlorochalcone, E D D'Silva E, S M Dharmaparakash, AIP Conference Proceedings 1349 (2011) 1241.
- 59) Second harmonic chalcone crystal: synthesis, growth and characterization, E D D'Silva, D Narayana Rao, Reji Philip, Ray J Butcher, Rajnikant, S M Dharmaparakash, Physics B 406 (2011) 2206.
- 60) Crystal growth and characterization of 4 methylamino benzaldehyde doped TGS crystals, S M Dharmaparakash and Chitharanjan Rai C, Acta Crysta 67 (2011) C 468.
- 61) 8 MeV electron irradiation effect on the dielectric and optical properties of iminodiacetic acid doped ferroelectric triglycine sulphate crystals. Tai C, Sanjeev, S M Dharmaparakash. Nucl. Inst. and Methods in Physics Research, B: Beam interactions with materials and Atoms B 268 (2010) 2510.
- 62) Designing novel chalcone single crystals with ultrafast optical responses and large multiphoton absorption coefficients. Kiran A, Lee H, Ravindra H, S M Dharmaparakash, Kim K, Lim H and Rotermund F, Current Applied Physics 10 (2010) 1290.
- 63) Improved ferroelectric and pyroelectric parameters in iminodiacetic acid doped TGS crystal, Rai, Sreenivas K, S M Dharmaparakash, Journal of Crystal Growth 312 (2010) 273.

- 64) Growth of 4-(dimethylamino) benzaldehyde doped triglycine sulphate single crystals and its characterization, C Rai, K Sreenivas, S M Dharmaparakash, *Physica B: Condensed Matter* 404 (2009) 3886.
- 65) Efficient π electron conjugated push – pull nonlinear optical chromophore 1-(4-methoxyphenyl)-3-(3,4-dimethoxyphenyl)-2-propen-1-one: A vibrational spectral study. J P Abraham, D sajan, V shettigar, S M Dharmaparakash, I Ne'mec, H Joe, *Journal of Molecular Structure* 917 (2009) 27.
- 66) Nonlinear optical properties of 2,4,5-Trimethoxy-4'-nitrochalcone: observation of two photon induced excited state nonlinearities, B Gu, Wei Ji, X Qin Huang, P S Patil and S M Dharmaparakash, *Optics Express* 17 (2009) 1126.
- 67) Structure and NLO property relationship in a novel chalcone co-crystal, H J Ravindra, K Chandrashekar, W T A Harrison, S M Dharmaparakash, *Applied Physics B: Lasers and Optics*, 94 (2009) 503.
- 68) Crystal growth, characterization, structural characteristics and second harmonic generation in N benzoyl glycine crystals, A Jayarama, J H ravindra and S M Dharmaparakash, *Materials Chemistry and Physics* 113 (2009) 91.
- 69) Design of new organic single crystals for ultrafast optical applications, Pacific Rim Conference on Lasers and Electro Optics, CLEO- Technical Digest Art. No 5292206 (2009)
- 70) Concentration dependent two photon absorption and subsequent excited-state absorption in 4-methoxy-2-nitroaniline, Gu B, Ji W, Huang X, Patil P S and S M Dharmaparakash, *Journal of Applied Physics* 106 (2009) 187.
- 71) Structure report on 1,4-Bis(fluoro-methyl)benzene, Hun H K, Kia R, P S Patil and S M Dharmaparakash, *Acta Cryst E* 65 (2009) 459 .
- 72) Structure report on 3-(2,4-Dichloro-phenyl)-1,5 di-2-furylpentane -1,5-dione, Fun H K, Kia R, Patil P S and S M Dharmaparakash, *Acta Cryst E* 65 (2009) 336.
- 73) Synthesis, crystal growth, characterization and structure – NLO property relationship in 1,3-bis(4-methoxyphenyl)prop-2-en-1-one single crystal, H J Ravindra, WTA Harrison, M R S Kumar and S M Dharmaparakash, *Journal of Crystal Growth* 311 (2009) 310.
- 74) Structural reports on 2-Bromo-1-(4-methylphenyl)-3-phenylprop-2-en-1-one, H K Fun, S R Jebas, P S Patil, M S Karthikeyan and S M Dharmaparakash, *Acta Cryst E* 64 (2008) 32.
- 75) Structural reports on 3-Hydroxy-4-methoxybenzaldehyde thiosemicarbazone hemihydrate, H K Fun, R Kia, E D D'Silva, P S patil and S M Dharmaparakash, *Acta Cryst E* 64 (2008) 2274
- 76) Structural reports on 2,5-Dimethoxybenzaldehyde thiosemicarbazone, H K Fun, S R Jebas, E D D'Silva, P S Patil and S M Dharmaparakash, *Acta Cryst E* 64 (2008) 2276.
- 77) Thiourea doped ammonium dihydrogen phosphate: A single crystal neutron diffraction investigation, A Jayarama, M R Sureshkumar, S M Dharmaparakash and R Chitra, *Pramana J of Physics* 71 (2008) 905.
- 78) Structural reports on 1-(4-Aminophenyl)-3-(2-chlorophenyl)prop-2-en-1-one, H K Fun, R Kia, P S Patil and S M Dharmaparakash, *Acta Cryst E* 64 (2008) 2014.

- 79) Structural reports on E-3-(2,4-Dichlorophenyl)-1-(2-thienyl) prop-2-en-1-one, H K fun, P S Patil, S M Dharmaprakash, S Chantrapomma, I A Razak, Acta Cryst E 64 (2008) 1814.
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