

LIST OF PUBLICATIONS (2010-2014)

LIST OF PUBLICATIONS 2010

- Structural and magnetic properties of pure and cobalt doped Gallium Nitride nanocrystals,
V. Ganesh, S. Suresh and K. Baskar,
Mater. Res. Soc. Symp. Proc. **1257**, (2010)1257-003-37.
- Synthesis and characterization of nanocrystalline Gallium Nitride by nitridation of Ga-EDTA complex,
V. Ganesh, S. Suresh, M. Balaji and K. Baskar,
J. Alloys. Compd, **498**, (2010) 52-56.
- Optical and field emission properties of ZnO nanostructures deposited using high-pressure pulsed laser deposition”,
T. Premkumar, Y. Zhou, Y. F. Lu and K. Baskar,
ACS Appl. Mater. **2** (2010) 2863 – 2869
- Modifications of Defects Concentration Induced by Ammonia Flow Rate and its Effects on Gallium Nitride Grown by MOCVD,
S. Suresh, V. Ganesh, T. Prem Kumar, M. Balaji, V. Ganesan and K. Baskar,
Mater. Res. Soc. Symp. Proc., **1195** (2010) 1195-B03-05.
- Studies on the Effect of Ammonia Flow Rate Induced Defects in Gallium Nitride grown by MOCVD,
S. Suresh S. Lourudoss, G. Landgren and K. Baskar,
J. Crystal Growth, **312** (2010) 3151-3155
- Investigations on the nonidealities in Pd/n-GaN Schottky diodes grown by MOCVD,
V. Ganesh, S. Suresh, M. Balaji and K. Baskar,
J. Alloys Compd., **506** (2010) 615-619

LIST OF PUBLICATIONS 2011

- Structural characteristics of 70 MeV Si⁵⁺ Ion Irradiation Induced Nanoclusters of Gallium Nitride,
S. Suresh, V. Ganesh, M. Balaji and K. Baskar,
International Journal of Nanoscience, **10** (2011) 823-826
- Structural, Optical and Electrical characteristics of 70 MeV Si⁵⁺ Ion Irradiation Induced Nanoclusters of Gallium Nitride”,
S. Suresh, V. Ganesh, U.P. Deshpande, T. Shripathi, K. Asokan, D. Kanjilal and K. Baskar,
Journal of Materials Science **46** (2011) 1015-1020.
- Growth of Zn₃As₂ on GaAs by liquid phase epitaxy and their characterization,

M. Nagarajan, S. Sudhakar, S. Lourduoss, K. Baskar “
Journal of Crystal Growth, **314** (2011) 119-122.

LIST OF PUBLICATIONS 2012

- Effects of AlN nucleation layers on the growth of AlN films using high temperature hydride vapor phase epitaxy,
M. Balaji, A. Claudel, V. Fellmann, I. Gélard, E. Blanquet, R. Boichot, A. Pierret, B. Attal-Trétout, A. Crisci, S. Coindeau, H. Roussel, D.Pique, K. Baskar and M. Pons,
Journal of Alloys and Compounds **526** (2012) 103– 109.
- Significance of initial stages on the epitaxial growth of AlN using High Temperature Halide Chemical Vapor Deposition”
M. Balaji, A. Claudel, V. Fellmann, I. Gélard, E. Blanquet, R. Boichot, S. Coindeau, H. Roussel, D. Pique, K. Baskar and M. Pons,
Phys. Status Solidi **C 9** (2012) 511–514
- On the emission states in MQWs of InGaN/GaN and AlGaIn based SQW,
J. Kumar, P.Arivazhagan and K. Baskar
Proceedings of SPIE Vol. **8484** (2012) 84840R
- Photon decay time studies on $\text{Al}_{0.45}\text{Ga}_{0.55}\text{N}/\text{Al}_{0.18}\text{Ga}_{0.82}\text{N}/\text{Al}_{0.45}\text{Ga}_{0.55}\text{N}$ double heterostructures grown on sapphire substrate by MOCVD,
P. Arivazhagan, R. Ramesh, M. Jayasakthi, R.Loganathan, M. Balaji, K. Baskar
Proceedings of SPIE Vol. **8549** (2012) 85492S.
- Studies on the dislocation densities of gallium nitride grown by MOCVD,
R. Loganathan, M. Jayasakthi, P. Arivazhagan, K.Prabakaran, M.Balaji, K. Baskar,
Proceedings of SPIE Vol. **8549** (2012) 85492Q.
- Growth and Characterization of $\text{Al}_x\text{Ga}_{1-x}\text{N}$ on GaN/ Al_2O_3 ,
M. Jayasakthi, R. Ramesh, P. Arivazhagan, R. Loganathan, K. Prabakaran, M. Balaji, K. Baskar,
Proceedings of SPIE Vol. **8549** (2012) 85492R.
- Morphological transition of ZnO nanostructures influenced by magnesium doping,
T. Premkumar, Y.S. Zhou, Y. Gao, K. Baskar, L. Jiang and Y.F. Lu,
Appl. Surf. Sci., Volume **258** (2012) 2297–2300
- Synthesis and characterization of pure and Co-doped gallium nitride nanocrystals
V. Ganesh, S. Suresh, E. Celasco and K. Baskar,
Appl Nanoscience, Volume **2** (2012) 169-176.

LIST OF PUBLICATIONS 2013

- Rapid Growth of m-Plane oriented Gallium Nitride Nanoplates on Silicon Substrate Using Laser-Assisted Metal Organic Chemical Vapour Deposition
T. Premkumar, W.Xiong, M.Mahjourisamani, L.Fan, Ramesh, M.Mitchell, Y.Gao, K. Baskar, Y.S.Zhou, L.Jiang and Y.F.Lu,
Journal of Crystal Growth and Design, **13** (2013) 3171–3176

- Structural and Carrier Dynamics of GaN and AlGaN-Based Double Heterostructures in the UV Region, Ponnusamy Arivazhagan, Raju Ramesh, Mathaiyan Jayasakthi, Ravi Loganathan, Manavaimaran Balaji and Krishnan Baskar, Journal of ELECTRONIC MATERIALS, **42** (2013) pp 2486-2491

LIST OF PUBLICATIONS 2014

- Controlled nucleation and growth of nanostructures by employing surface modified GaN based layers/heterostructures as bottom layer
R.Ramesh, R.Loganathan, Sumithra Sivadas Menon, K.Baskar and Shubra Singh, RSC Advances **4** (2014) 7112-7119
- Structural and optical characterization of AlGaN/GaN layer
M. Jayasakthi, R. Ramesh, P. Arivazhagan, R.Loganathan, K. Prabakaran, M. Balaji, K. Baskar,
Journal of Crystal Growth 2014 (In press)
- “Structural optical and electrical studies of AlGaN/GaN heterostructures with AlN Interlayer grown on sapphire substrate by MOCVD”
R. Ramesh, P. Arivazhagan, M. Jayasakthi, R. Loganathan, K. Prabakaran, K. Kuppligam, M. Balaji, K. Baskar, Springer e-book Physics of Semiconductor Devices: 17th International Workshop on the Physics of semiconductor devices During December, (2014) 10-13
- Growth and characterization of AlInGaN/AlN/GaN epilayers grown by MOCV
Physics of Semiconductor Devices
R. Loganathan, R. Ramesh, P. Arivazhagan, M. Jayasakthi, K. Prabakaran, K. Kuppligam, M. Balaji, K. Baskar Environmental Science and Engineering, Springer International Publishing Switzerland (2014) pp 117- 118

LIST OF PUBLICATIONS 2010

- Studies on the growth, structural, optical, thermal and electrical properties of nonlinear optical cadmium mercury thiocyanate glycol monomethyl ether single crystal,
C.M. Raghavan, A. Bhaskaran, R. Sankar, R. Jayavel,
Current Applied Physics **10** (2010) 479-483.
- Crystal growth and characterization of L-tyrosinebromide (LTB) nonlinear optical single crystals,
P. Anandan, T.Saravanan, S.Vasudevan, R.MohanKumar, R.Jayavel,
Journal of Crystal Growth, **312**,(2010) 837-841.

- Synthesis, growth and characterization of organic nonlinear optical bis-glycine maleate (BGM) single crystals,
 D. Balasubramanian, P. Murugakoothan, R. Jayavel,
 Journal of Crystal Growth, **312**, (2010) 1855-185.
- Studies on the structural, Optical, dielectric and mechanical properties of non-linear optical manganese mercury Tetrathiocyanate glycol mono methyl ether (MMTG) single crystals”
 Bhaskaran, C. M. Raghavan, R. Mohan Kumar and R. Jayavel,
 Current Applied Physics **10** (2010) 1261-1266.
- Effect of rare-earth dopants on the growth and structural, optical, electrical and mechanical properties of L-arginine phosphate single crystals’,
 S. Arjunan, A. Bhaskaran, R. Mohan Kumar, R. Mohan, R. Jayavel,
 Journal of Alloys and Compounds, **506** (2010) 784.
- Electronic structure of Cu-doped ZnO thin films by x-ray absorption, magnetic circular dichroism, and resonant inelastic x-ray scattering,
 P. Thakur, K. H. Chae, V. Bisogni, J. C. Cezar, M. Subramanian, N. B. Brookes, R. Jayavel, G. Ghiringhelli, and K. Asokan,
 Journal of Applied Physics **107**, (2010) 103915.
- Intrinsic ferromagnetism and magnetic anisotropy in Gd doped ZnO thin films synthesized by pulsed spray pyrolysis method,
 Subramanian Munisamy, Masaki Tanemura, Tetsuo Soga, Takehiko Hihara, Pardeep Thakur, Ramasamy Jayavel, Takashi Jimbo, and V. Ganesan,
 Journal of Applied Physics, **108** (2010) 053904.
- Crystal growth, Structural and Optical Characterization of a semi-organic single crystal for frequency conversion applications,
 P. Anandan, G. Parthipan, T. Saravanan, R. Mohan Kumar, G. Bhagavannarayana, R. Jayavel,
 Physica B: Condensed Matter, **405** (2010) 4951.

LIST OF PUBLICATIONS 2011

- Growth and characterization of PZN-PT single crystals ,
 Srimathy, B., Jayavel, R., Thamizhavel, A., and Kumar, J.,
 American Institute of Physics Conference Proceedings **1139**,(2011) 119.
- Temperature and enhanced adduct mobility on the growth of MMTWNMP single crystals ,
 Srinivasan, R., Raghavan, C.M., Saravanan, L., Jayavel, R., and Baskar, K.,

American Institute of Physics Conference Proceedings, **1349**,(2011) 1025.

- Crystal growth and characterization of semiorganic single crystals of l-histidine family for NLO applications",
Anandan, P., and Jayavel, R.
Journal of Crystal Growth, **332**, (2011) 69.
- Crystal growth, structural and thermal studies of amino acids admixed l-arginine phosphate monohydrate single crystals ,
Anandan, P., Saravanan, T., Parthipan, G., Kumar, R.M., Bhagavannarayana, G., Ravi, G., and Jayavel,R.,
Solid State Sciences, **13**, (2011) 915.
- Second harmonic generation of semiorganic dichlorobis(L-proline)zinc(II) single crystals for laser applications,
Kalaiselvi, D., and Jayavel, R.
Optoelectronics and Advanced Materials, Rapid Communications, **5**, (2011) 58.

LIST OF PUBLICATIONS 2012

- Growth, optical, dielectric and hardness studies of an organic nonlinear optical picolinium maleate single crystal,
Pandi, P., Peramaiyan, G., Mohan Kumar, R., and Jayavel,
Advanced Materials Research, **584**, (2012) 24.
- Hydrothermal synthesis and magnetic property studies of multiferroic YMnO₃ nanorods
Dhinesh Kumar, R., and Jayavel, R.
Advanced Materials Research, **584**, (2012) 253.
- Studies on synthesis, growth, structural, thermal, linear and nonlinear optical properties of organic picolinium maleate single crystals,
Pandi, P., Peramaiyan, G., Sudhahar, S., Chakkaravarthi, G., Mohan Kumar, R., Bhagavannarayana, G.,and Jayavel, R,
Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy **98**, (2012)7.
- Crystal growth, spectral and thermal analyses of a semi organic nonlinear optical single crystal: L-tyrosine hydrochloride
Anandan, P.a , Vetrivel, S.b, Karthikeyan, S.c, Jayavel, R.d, Ravi, G
Optoelectronics and Advanced Materials, Rapid Communications, **6**, (2012) 1128.

- Effect of iodic acid dopant on the growth and structural, optical, and electrical properties of l-arginine phosphate single crystals
 Arjunan, S., Bhaskaran, A., Kumar, R.M., Mohan, R., and Jayavel, R,
 Materials and Manufacturing Processes . **27**, (2012) 49.

- Synthesis, growth and characterization of L-proline dimercuricchloride single crystals for frequency conversion applications
 Kalaiselvi, D., and Jayavel, R.,
 Applied Physics A: Materials Science and Processing, **107** (2012), 93.

- Crystal growth and characterization of l-histidine hydrochloride monohydrate semiorganic nonlinear optical single crystals
 Anandan, P. , Jayavel, R., Saravanan, T., Parthipan, G., Vedhi, C., Mohan Kumar, R,
 Optical Materials, **34**, (2012) 1225.

- Crystal growth of PZN-PT single crystals and critical issues for higher piezoelectric Coefficient,
 Srimathy, B., Jayavel, R., Ganesamoorthy, S., Bhaumik, I., Karnal, A.K., Natarajan, V., Varadarajan, E.,and Kumar, J.,
 Crystal Research and Technology, **47**, (2012) 523.

- Crystal growth, structural and photoluminescence studies of L-tyrosine hydrobromide semi organic single crystal"
 Anandan, P., Vetrivel, S., Jayavel, R., Vedhi, C., Ravi, G., Bhagavannarayana, G.,
 Journal of Physics and Chemistry of Solids, **73**, (2012) 1296.

- Synthesis, structural, optical and thermal studies of an organic nonlinear optical 4-aminopyridinium maleate single crystal
 Pandi, P., Peramaiyan, G., Kumar, M.K., Kumar, R.M., and Jayavel, R.,
 Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, **88**, (2012)77.

- Effect of B₂O₃ flux on the crystal structure, Dielectric properties of sodium potassium Niobate single crystal grown by flux method
 R.Saravanan, D.Rajesh, S.V.Rajasekaran, R.Perumal M.Chitra and R.Jayavel
 Advanced Material Research **584**, (2012) 150-154

LIST OF PUBLICATIONS 2013

- Influence of PT composition on the properties of PZN-PT single crystals
 Srimathy, B., Jayavel, R. and Kumar, J.,
 AIP Conference Proceedings, **1512**, (2013) 890.

- Crystal structure dielectric properties of $K_{0.5}Na_{0.5}NbO_3$ single crystal grown by flux method using B_2O_3 flux
 R.Saravanan, D.Rajesh, S.V.Rajasekaran, R.Perumal M.Chitra and R.Jayavel
 Crystal Research Technology **48**, (2013) 22-28
- Investigation of the Dielectric properties of Antimony Doped $K_{0.5}Na_{0.5}NbO_3$ single crystal Grown by Flux method
 R.Saravanan, D.Rajesh, S.V.Rajasekaran, R.Perumal M.Chitra and R.Jayavel
 Advanced Material Research **623**, (2013) 224-228
- Structural, Morphological and Electrical studies of Lithium ion irradiated $K_{0.5}Na_{0.5}NbO_3$ single crystal grown by flux method
 R.Saravanan, D.Rajesh, S.V.Rajasekaran, R.Perumal M.Chitra and R.Jayavel
 American Institute of Physics Conference Proceedings **1512**, (2013) 914-915
- Effect of Ta doped on microstructure of sodium potassium niobate single crystal grown by flux method
 R.Saravanan, D.Rajesh, S.V.Rajasekaran, R.Perumal M.Chitra and R.Jayavel
 American Institute of Physics Conference Proceedings **1536**, (2013) 863-864
- Evolution of surface modification by Ar^+ ion implantation with incident angle into sodium potassium niobate single crystal
 R.Saravanan, D.Rajesh, S.V.Rajasekaran, R.Perumal M.Chitra and R.Jayavel
 American Institute of Physics Conference Proceedings **1536**, (2013) 829-830
- Low temperature hydrothermal synthesis and magnetic studies of $YMnO_3$ nanorods
 Dhinesh Kumar, R., Jayavel, R.
 Materials Letters **113**, (2013), 210-213

LIST OF PUBLICATIONS 2014

- Growth and characterization of potassium halides mixed l-arginine phosphate monohydrate semi organic nonlinear optical single crystals
 Anandan, P., Parthipan, G., Pazhanivel, K., Ravi, G., Jayavel, R.
 Optik **125** (2014) 8 - 10
- Role of dopant induced defects on the properties of Nd and Cr doped PZNT single crystals
 Srimathy, B., Jayavel, R., Bhaumik, I., Ganesamoorthy, S., Karnal, A.K., Gupta, P.K., Kumar, J.
 Materials Science and Engineering B: Solid-State Materials for Advanced Technology **185** (2014) 60 - 66

- Investigations on the growth aspects and characterization of semiorganic nonlinear optical single crystals of l-histidine and its hydrochloride derivative
Anandan, P , Arivanandhan, M, Hayakawa, Y., Rajan Babu, D., Jayavel, R, Ravi, G., Bhagavannarayana, G
Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy **121**, (2014) 508-513

LIST OF PUBLICATIONS 2010

- Efficient energy transfer between Ce^{3+} and Nd^{3+} in cerium codoped Nd: YAG laser quality transparent ceramics
P. Samuel, T. Yanagitani, H. Yagi, H.Nakao, Ken Ichi Ueda, S. Moorthy Babu
Journal of Alloys and Compounds **507** (2) (2010) 475-478.
- Growth of two dimensional $KGd(WO_4)_2$ nanorods by modified Sol-gel Pechini method
D. Thangaraju, P. Samuel and S. Moorthy Babu
Optical Materials **32**(10) (2010) 1321-1324.
- **Recharging process, hillock formation, implanted strain under H^+ ion implantation in titanium doped lithium niobate**

P. Kumar, S. Moorthy Babu, I. Bhaumik, S. Ganesamoorthy, A.K. Karnal, Praveen Kumar, G.O. Rodrigues, I. Sulaina, D. Kanjilal, A.K. Pandey and R. Raman

Nuclear Instruments and Methods in Physics Research B 218 (2010) 172-177

- Influence of dopant concentration on the structural and optical characteristics in Ti doped (2 and 5 mol %) $LiNbO_3$ nonlinear optical single crystal
P. Kumar, S. Moorthy Babu, I. Bhaumik, S. Ganesamoorthy, A. K. Karnal, A. K. Pandey, and R. Raman
Optical Materials **32** (2010) 1364-1367
- XPS, HRXRD and Refractive index analyses of Ti ions doped lithium niobate ($Ti:LiNbO_3$) nonlinear optical single crystal
P. Kumar, S. Moorthy Babu, S. Perero, Indranil Bhaumik, S. Ganesamoorthy, A. K. Karnal
PRAMANA-Journal of Physics **75** (2010) 1035-1040
- A controlled approach for synthesizing $CdTe@CrOOH$ (core-shell) composite nanoparticles
M.S. Abd El-sadek, S. Moorthy Babu

Current Applied Physics **11(3)** (2010) 926-932

- Aqueous synthesis and characterization of CdTe@Co(OH)₂ (core–shell) composite nanoparticles
M.S. Abd El-sadek, J. Ram Kumar, S. Moorthy Babu, M. Salim El-Hamidy
Materials Chemistry and Physics **124(1)** (2010) 592-599
- Synthesis, crystal growth and characterization of a metal-organic nonlinear optical tri-allylthiourea mercury chloride single crystals
R. Perumal, S. Moorthy Babu
Optics Communications **283(21)** (2010) pp4368-4371
- Crystal growth and characterization of Deuterated Glycine Phosphite single crystal
R. Perumal, S. Moorthy Babu
Materials Letters **64(19)** (2010) 2142-2144
- Synthesis, crystal growth, structural, spectral and optical properties of tri-allylthiourea mercury bromide (ATMB) single crystals
R. Perumal, S. Moorthy Babu
Physica B: Condensed Matter **405(20)** (2010) 4303-4306
- Crystal growth, structural perfection, phase transition, optical, and etching studies of doped glycine phosphite ferroelectric single crystals
R. Perumal, S. Moorthy Babu, G. Bhagavannarayana,
Journal of Alloys and Compounds **505(1)** (2010) 268-272
- Growth and optical characterization of colloidal CdTe nanoparticles capped by a bifunctional molecule
M.S. Abd El-sadek, S. Moorthy Babu,
Physica B: Condensed Matter **405(16)** (2010) 3279- 3283
- Synthesis, growth and characterization of an organometallic complex tri-allylthiourea cadmium bromide single crystals
R. Perumal, S. Moorthy Babu,
Current Applied Physics **10(3)** (2010) 858-865
- Selective synthesis and characterization of CdTe@Mn(OH)₂ (core–shell) composite nanoparticles
M.S. Abd El-sadek, J. Ram Kumar, S. Moorthy Babu, M. Salim El-Hamidy
Journal of Alloys and Compounds **496(1-2)** (2010) 589-594
- Optical characterization of ferroelectric glycinium phosphite single crystals
R. Perumal, K. Senthil Kumar, S. Moorthy Babu, G. Bhagavannarayana
Journal of Alloys and Compounds **490(1-2)** (2010) 342-349
- The role of potassium tellurite as tellurium source in mercaptoacetic acid-capped CdTe nanoparticles

M.S. Abd El-sadek, J. Ram Kumar, S. Moorthy Babu
Current Applied Physics **10(1)** (2010) 317-322

LIST OF PUBLICATIONS 2011

- Spectroscopic Analysis of Eu doped transparent CaF₂ ceramics at different Concentration
P. Samuel, H. Ishizawa, Y. Ezura, Ken Ichi Ueda, S. Moorthy Babu,
Optical Materials **33** (2011) 735–737
- Effect of dysprosium active ions on spectral properties of KGW single crystals
P. Samuel, D. Thangaraju and S. Moorthy Babu
Journal of Alloys and Compounds **509** (1) (2011) 177-180.
- Influence of pH and microwave calcination on the morphology of KGd(WO₄)₂ particles derived by Pechini Sol–Gel method
D. Thangaraju, S. Moorthy Babu P. Samuel, A. Durairajan and Y. Hayakawa,
Journal of Sol-Gel Science and Technology **58** (2011) 419–426
- Nano hillock and complex crater formation by low energy proton implantation with incident angle into lithium niobate single crystal
P. Kumar, S. Moorthy Babu
Radiation Effects and Defects in Solids **166**(4) (2011) 258-264
- Nucleation kinetics and growth aspects of glycine phosphite ferroelectric single crystals
R. Perumal, S. Moorthy Babu
Materials Chemistry and Physics **126**(1-2) (2011), pp 381-385
- Influence of different stabilizers on the optical and nonlinear optical properties of CdTe nanoparticles
M.S. Abd El-sadek, Ahmad Y. Nooralden, S. Moorthy Babu, P. K.Palanisamy
Optics Communications **284**(12) (2011) 2900-2904
- Nano hillock and complex crater formation by low-energy proton implantation with incident angle into lithium niobate single crystal
P. Kumar and S. Moorthy Babu
Radiation Effects & Defects in Solids **166** (2011) 258-264
- Nucleation kinetics and growth aspects of glycine phosphate ferroelectric single crystals
R.Perumal and S.Moorthy Babu
Materials Chemistry and Physics **126** (2011) 381-385
- Effect of dysprosium active ions on spectral properties of KGW single crystals
P. Samuel, D.Thangaraju and S. Moorthy Babu

- Influence of pH and microwave calcinations on the morphology of KGd(WO₄)₂ particles derived by Pecini Sol-Gel method”
D.Thangaraju, S.Moorthy Babu, P.Samuel, A.Durairajan and Y.Hayakawa
J.Sol-Gel. Sci. Technology **58** (2011) 419-426
- A controlled approach for synthesizing CdTe@CrOOH (core-shell) composite nanoparticles
M.S.Abd El-sadek and S.Moorthy Babu
Current Applied Physics **11** (2011) 926-932
- Growth of homogeneous polycrystalline Si_{1-x}Ge_x and Mg₂Si_{1-x}Ge_x for thermoelectric application
Y.Hayakawa, M.Arivanandhan, Y.Saito, T.Koyama, Y.Momose, H.Ikeda, A.Tanaka, C.Wen, Y.Kubota, T.Nakamura, S.Bhattachary, D.K.Aswal, S.Moorthy Babu, Y.Inatomi and H.Tatsuoka
Thin Solid Films **519** (2011) 8532-8537
- Spectroscopic analysis of Eu doped transparent CaF₂ ceramics at different concentration
P. Samuel, H. Ishizawa, Y. Ezura, Ken Ichi Ueda and S. Moorthy Babu
Optical Materials **33** (2011) 735-737
- CdTe@Cu(OH)₂ Nanocomposite: Aqueous Synthesis and Characterization
M. S. Abd El-sadek and S. Moorthy Babu
Journal of Solid State Chemistry **184** (2011) 1135-1140
- Influence of Different Stabilizer on the Optical and Nonlinear Optical Properties of CdTe Nanoparticles
M.S.Abd El-sadek, A.Y Nooralden, S. Moorthy Babu and P.K. Palanisamy
Optics Communication **284** (2011) 2900 - 2904
- Study of the influence of dopants on the crystalline perfection of ferroelectric glycine phosphate single crystals using high resolution X-ray diffraction analysis
K.Senthil Kumar, S.Moorthy Babu and G.Bhagavannarayana
J.Applied Crystallography **44** (2011) 313 - 318
- Polymerized Complex Sol-Gel Synthesis, Structural and Optical Properties of Monoclinic Eu³⁺ Doped KGd(WO₄)₂ Crystalline Red Phosphors
D.Thangaraju, A.Durairajan, S.Moorthy Babu and Y.Hayakawa
AIP Proceedings **1391** (2011) 54-58

- . Linear and Nonlinear Optical Properties of Mercaptoacetic Acid- Capped CdTe Nanoparticles by Z-scan Technique
M. S. Abd El-sadek, S. Moorthy Babu, Ahmad Y. Nooralden, and P. K. Palanisamy
Nanoscience and Nanotechnology Letters **3** (2011) 637-642
- Paramagnetic Potassium Holmium double Tungstate Nanocrystals: Synthesis and Characterization
D.Thangaraju, A.Durairajan, S.Moorthy Babu and Y.Hayakawa
Journal of Alloys and Compounds **509** (2011) 9890 - 9896
- Efficient Energy Transfer Between Ce³⁺/Cr³⁺ and Nd³⁺ ions in Transparent Nd/Ce/Cr:YAG ceramics
P.Samuel, G.A.Kumar, T.Yanagitani, H.Yagi, K.Ueda and S.Moorthy Babu
Optical Materials **34** (2011) 303-307
- Development of Co-doped Transparent YAG Ceramics for Efficient Energy Transfer for Solar Pumped Laser Applications
S.Moorthy Babu, P.Samuel, D.Thangaraju, T.Yanagitani, H.Yagi and K.Ueda
KIRAN **22** (2011) 32-35

LIST OF PUBLICATIONS 2012

- SiO₂/KGd(WO₄)₂:Eu³⁺ Composite Luminescent Nanoparticles: Synthesis and Characterization
D.Thangaraju, A. Durairajan, D. Balaji, S. Moorthy Babu and Y.Hayakawa
Materials Chemistry and Physics **135** (2012) 1115-1123
- . Synthesis, crystalline perfection, optical and dielectric studies on metal-organic tri-allylthiourea cadmium chloride (ATCC) nonlinear optical single crystal by solution growth technique
R. Perumal, S. Moorthy Babu
Journal of Alloys and Compounds **538** (2012) 131-135
- Synthesis and Characterization of Pure and Mn doped CdS nanoparticles and thin films
D.Venkatesan, D.Deepan, J.Ramkumar, S.Moorthy Babu and R.Dhanasekaran
Journal of Nanomaterials **2012** (2012) Article ID 492573, 8 pages

LIST OF PUBLICATIONS 2013

- Synthesis, Structural and vibrational studies on Mixed Alkali metal Gadolinium Double Tungstate, K_{1-x}Na_xGd(WO₄)₂
A. Durairajan, D. Thangaraju, and S. Moorthy Babu
Optical Materials **35** (2013) 735-739
- Sol-Gel Synthesis and Characterizations of Nano Crystalline NaGd(WO₄)₂ for Anisotropic Transparent Ceramic Laser Application

A.Durairajan, D. Thangaraju, D. Balaji and S. Moorthy Babu
Optical Materials **35** (2013) 740-743

- Synthesis and characterization of monoclinic $\text{KGd}(\text{WO}_4)_2$ particles for non-cubic transparent ceramics
D. Thangaraju, A. Durairajan, D. Balaji and S. Moorthy Babu
Optical Materials **35** (2013) 753-756
- Structural, Compositional and Optical analysis of $\text{InAs}_x\text{Sb}_{1-x}$ crystals grown by Vertical Directional Solidification Method
M.Haris, Y.Hayakawa, F.C.Chou, P.Veeramani and S.Moorthy Babu
Journal of Alloys and Compounds **548** (2013) 23-26
- Novel $\text{KGd}_{1-(x+y)}\text{Eu}_x\text{Bi}_y (\text{W}_{1-z}\text{Mo}_z\text{O}_4)_2$ nanocrystalline red phosphors for tricolor white LEDs
D.Thangaraju, A. Durairajan, D. Balaji, S. Moorthy Babu and Y.Hayakawa
Journal of Luminescence **134** (2013) 244-250
- Growth, Dielectric, Piezoelectric, Ferroelectric, HRXRD and Microhardness studies of metal ions doped Glycine Phosphite ferroelectric single crystals
K.Senthilkumar, S.Moorthy Babu, Binay Kumar and G.Bhagavannarayana
Journal of Crystal Growth **362** (2013) 343-348
- Growth, vibrational and luminescence analysis of monoclinic $\text{KGd}_{(1-x)}\text{Pr}_x(\text{WO}_4)_2$ ($x=0.5, 2, 5\%$) single crystals
D.Thangaraju, A. Durairajan, P.Samuel and S.Moorthy Babu
Journal of Crystal Growth **362** (2013) 319-323
- Synthesis, structural and luminescence analysis of $\text{NaGd}_{1-x}\text{Tb}_x(\text{WO}_4)_2$ solid solution for white LED application
A.Durairajan, D.Thangaraju, D.Balaji and S.Moorthy Babu
AIP Conf. Proc. **1512** (2013) 1230-1231
- Synthesis and characterization of Eu^{3+} :YAG nanopowder by precipitation method
D.Balaji, D.Thangaraju, A.Durairajan and S.Moorthy Babu
AIP Conf. Proc. **1512** (2013) 1234-1235
- Investigation of structural and luminescent properties of Pr^{3+} activated $\text{CsGd}(\text{WO}_4)_2$ by sol-gel synthesis
D. Balaji, D.Thangaraju, A. Durairajan and S. Moorthy Babu
Materials Science and Engineering B, **178**(2013) 762-767
- Enhanced Light absorption in CdTe nanoparticle/P3HT nanofiber blends
S.Ananthakumar, J.Ramkumar and S.Moorthy Babu
AIP Conf. Proc. **1536** (2013) 167-168
- Properties of Ferroelectric Glycine Phosphite Single Crystals
K.Senthil Kumar, S.Moorthy Babu, Binay Kumar and G.Bhagavannarayana

AIP Conf. Proc. **1536** (2013) 901-902

- Synthesis and vibrational characterization of $\text{KLa}(\text{WO}_4)_2$ crystalline powders by modified Pechini method
K.Kavi Rasu, A.Durairajan, D.Balaji and S.Moorthy Babu
AIP Conf. Proc. **1536** (2013) 1147-1148

- Multi-photon induced photoluminescence in TGA capped CdTe nanoparticles
J.Jayabalan, S.Ananthakumar, S.Khan, Asha Singh, Puspen Mondal, A.K.Srivastava, S.Moorthy Babu and Rama Chari
Asian Journal of Chemistry **25** (2013) S42-S44

LIST OF PUBLICATIONS 2010

- Mineralization of oriented nano hydroxyapatite in photopolymerized polyacrylamide gel matrix.
M. I. Ahymah Joshy, K. Elayaraja, R. V. Suganthi, S. Narayana Kalkura.
Cryst. Res.Technol. **45**, (2010), 551-556.

LIST OF PUBLICATIONS 2011

- 125MeV Si^{9+} ion irradiation of calcium phosphate thin film coated by rf-magnetron sputtering technique.
K. Elayaraja, M.I. Ahymah Joshy, R.V. Suganthi, S. Narayana Kalkura., M. Palanichamy, M. Ashok, V.V. Sivakumar, P.K. Kulriya, I. Sulania, D. Kanjilal , K. Asokan.
Applied Surface Science **257**, (2011), 2134–2141.

- Fibrous growth of strontium substituted hydroxyapatite and its drug release.
R.V. Suganthi, K. Elayaraja, M.I. Ahymah Joshy, V. Sarath Chandra, E.K. Girija and S. Narayana Kalkura.
Materials Science and Engineering: C, **31**, (2011), 593-599.

- In vitro sustained release of amoxicillin from lanthanum hydroxyapatite nano rods.
M.I. Ahymah Joshy, K. Elayaraja, R.V. Suganthi, Sarath Chandra Veerla, S. Narayana Kalkura .
Current Applied Physics, **11**, (2011), 1100-1106.

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- Role of material processing on the thermal stability and sinterability of nanocrystalline hydroxyapatite.
E.K. Girija, G. Suresh Kumar, A. Thamizhavel, Y. Yokogawa, S. Narayana Kalkura.
Powder Technology, **225**, (2012)190–195.
- Synthesis, characterization and in vitro studies of zinc and carbonate co-substituted nano-hydroxyapatite for biomedical applications.
G. Suresh Kumar, A. Thamizhavel, Y. Yokogawa, S. Narayana Kalkura, E.K. Girija.
Materials Chemistry and Physics, **134**, (2012), 1127–1135.
- Regional Differences in Composition of Cholesterol Gallstones in India.
M Ashok, K Arunkumar, Choudhury G, Narayana Kalkura S, Jayanthi V.
Journal of Medical Science & Research, **3**, (2012)3-5.

LIST OF PUBLICATIONS 2013

- Effect of irradiation of Si⁵⁺ ion on Fe doped hydroxyapatite.
V.Sarath Chandra, K. Elayaraja, R.V. Suganthi, Ahymah Joshy, M. I., Sulania, I., Kulriya, P. K., Asokan, K., Kanjilal, D. and Narayana Kalkura, S.
Adv. Mat. Lett. **4** (2013) 438-443.
- Surface modification of nanocrystalline calcium phosphate bioceramic by low energy nitrogen ion implantation.
K. Thanigaiarul, K. Elayaraja, P. Magudapathy, U.K. Mudali, K.G.M. Nair, M. Sudarshan, J.B.M. Krishna, A. Chakraborty, S. Narayana Kalkura.
Ceramics International **39**, (2013) 3027–3034.
- Freeze dried cross linking free biodegradable composites with microstructures for tissue engineering and drug delivery application.
M.I. Ahymah Joshy, K. Elayaraja, N. Sakthivel, V. Sarath Chandra, G.M. Shanthini, S. Narayana Kalkura.
Mater. Sci. Eng. C **33**, (2013) 466-474.
- Nanocrystalline biphasic resorbable calcium phosphate (HAp/ β -TCP) thin film prepared by electron beam evaporation technique,
K.Elayaraja, V. Sarath Chandra, M.I. Ahymah Joshy, R.V.Suganthi, K.Asokan, S.Narayana Kalkura,
Applied Surface Science **274** (2013) 203-209.

