

Department of Physics:

1. Journal Publication:

1. M. Infant Shyam Kumar and **S. Shahil Kirupavathy**, Investigations on the capacitive behaviour of hydrothermally synthesised cadmium Meta niobate incorporated reduced graphene oxide hybrid nanocomposite electrode material, 2021, Journal of Materials Science; Materials in Electronics, Accepted.
2. M. Vinolia, **S. Shahil Kirupavathy**, Eunice Jerusha, S. Muthu, M. Infant Shyam Kumar, Structure, hirshfeld surface studies, optical and mechanical analysis on a third order nonlinear optical crystal 2-amino-6-methylpyridin-1-ium 2-chloro-4-nitrobenzoate (2A6M2C4N), 2021, Optical Materials, **122**, 111731
3. R. Ramalakshmi, S. Stella Mary, **S. Shahil Kirupavathy**, S. Muthu, Renjith Thomas Growth, Spectral, Optical, Electrical and Computational Analysis of Sodium Oxalate Single Crystals, 2021, Heliyon, **7**, e06527.
4. R. Ramalakshmi, S. Stella Mary, **S. Shahil Kirupavathy**, Influence of metallic dopants on the growth, optical and mechanical properties of pure ammonium oxalate crystals, 2021, Optical Materials, **119**, 110880.
5. M. Infant Shyam Kumar, **S. Shahil Kirupavathy**, S. Shalini, Exploration on novel reduced graphene oxide/strontium pyro niobate electrode material for electrochemical energy storage applications, 2021, Carbon Letters, **31**, 619-63.
6. S. Shalini, **S. Shahil Kirupavathy**, M. Infant Shyam Kumar, Growth and characterisation of a third order nonlinear optical crystal 4-dimethylamino pyridinium p-bromophenolate, 2021, Journal of Molecular Structures, **1124**, 129078.
7. **Moses. V. G. Isaiah** and **Hamsavalli. G**, Synthesis and Physical properties of lead sulphide-Polyvinyl alcohol –Poly Ethylene Glycol nanocomposite thick flim, 2021, advanced materials and applications, **6**, 1-5.
8. **J. Arumugam**, Amal George, A. Dhayal Raj, A. Albert Irudayaraj, R.L. Josephine, S. John Sundaram, Tahani Saad Algarni, Amal M. Al-Mohaimeed, Balamuralikrishnan Balasubramanian, K. Kaviyarasu, Improved Ag doped Bi₂S₃ nanowire-based photodiode: Fabrication and performance, Materials Letters, 2021, **302**, 130403.
9. **J. Arumugam**, Amal George, A. Dhayal Raj, M. Selvaraj, A. Albert Irudayaraj, T. Pazhanivel, R. L. Josephine, K. Bhuvaneshwari, Role of surfactant in tailoring the properties of Bi₂S₃ nanoparticles for photocatalytic degradation of methylene blue dye, 2021, J Mater Sci: Mater Electron, **Accepted**.
10. J Christina Jebapriya, D Reuben Jonathan, **S. Shahil Kirupavathy**, R Ragu, Johanan Christian Prasana, 2(E)-(4-N,N-dimethylaminobenzylidene)-5 methyl cyclohexanone - A novel centrosymmetric crystal for nonlinear optical applications, 2020, Optical Materials, **107**, 110035.
11. Eunice Jerusha & **S. Shahil Kirupavathy**, Effect of L-Asparagine as dopant on the growth and characteristics of Ammonium Tetroxalate Dihydrate single crystal, 2020, Materials Science-Poland, **38**, 48-61.
12. S. Stella Mary, **S. Shahil Kirupavathy**, An insight on spectral, microstructural, electrical and mechanical characterization of Ammonium oxalate monohydrate crystals, 2020, Materials Science-Poland, In press.

13. V. Rajadurai, **V. Ramesh kumar**, R. Radha, Multiple bright and dark soliton solutions in three component spinor Bose-Einstein condensates, 2020, Phys. Lett. A. 384, 126163.
14. M. Infant Shyam Kumar and **S. Shahil Kirupavathy**, Synthesis and characterization of hydrothermally derived novel reduced graphene oxide/magnesium niobate (RGOMN) hybrid nanostructure for energy storage applications, 2019, Material Research Express, **6**, 125522.
15. S. Stella Mary, **S. Shahil Kirupavathy**, Swift heavy ion irradiation effects on structural, optical and electrical properties of potassium pentaborate (KB5) single crystals, 2019, Transactions on Electrical and Electronic Materials, **20**, 513-517
16. S. Shalini, **S. Shahil Kirupavathy**, Eunice Jerusha, G. Vinitha, Linear and nonlinear optical properties of a new organic Dimethylamino pyridinium p-bromochlorophenolate crystal for nonlinear devices, 2019, Journal of Materials Science : Materials Electronics, **30**, 6528–6536.
17. S. Shalini, **S. Shahil Kirupavathy**, Eunice Jerusha, Growth and characterisation of Dimethylamino pyridinium p-bromo-chlorophenolate mixed crystal: A new organic NLO material for terahertz applications, 2019, Journal of Molecular Structures, **1178**, 126 – 134.
18. M. Infant Shyam Kumar, **S. Shahil Kirupavathy**, Eunice Jerusha, Sureshkumar, M. Vinolia, Synthesis and characterization of novel reduced graphene oxide supported barium niobate (RGOBN) nanocomposite with enhanced ferroelectric properties and thermal stability, 2019, Journal of Materials Science : Materials Electronics, **29**, 19228–19237.
19. Eunice Jerusha, **S. Shahil Kirupavathy**, G. Vinitha, S. Shalini, Effect of P-Nitrophenol as dopant in Ammonium Tetroxalate Dihydrate for THz application – Spectral, optical, thermal and dielectric analyses, 2019, Optics & Laser Technology, **111**, 734-743.
20. S. Shalini, **S. Shahil Kirupavathy**, Eunice Jerusha, G. Vinitha, 4-Dimethylamino pyridinium p-Chlorophenolate a novel third order nonlinear optical single crystal - Growth and characterization, 2018, Journal of Materials Science : Materials Electronics, **29**, 21145 – 21156.
21. Eunice Jerusha, **S. Shahil Kirupavathy**, M. Vinolia, G. Vinitha, Changeover in the third order NLO behaviour of P-Nitrophenol doped Ammonium Hydrogen Oxalate Hemihydrate crystals, 2018, Journal of Materials Science: Materials, **29**, 19532–19543.
22. Eunice Jerusha & **S. Shahil Kirupavathy**, Phase transitional ferroelectric behaviour of Ammonium Tetroxalate Dihydrate single crystal, 2018, Indian Journal of Pure & Applied Physics, **56**, 875-883.
23. Eunice Jerusha, **S. Shahil Kirupavathy** & S. Shalini, Influence of L-lysine as dopant in ammonium tetroxalate dihydrate – spectral, optical, thermal, mechanical and dielectric properties, 2018, Indian Journal of Pure & Applied Physics, **56**, 444-452.

4. Funded research projects

S. No	Title of the Project	File Number	Investigators	Sanctioned on	Funding Agency	Amount Sanctioned	Project period
1	Nonlinear excitation in Bose Einstein condensate and Electromagnetically induced transparency	DST/SERB/YSS/2015/000004	V. Ramesh Kumar	20/11/2015	DST-TIDE	33.52 Lakhs	2 Years