Name : Dr. J. Martin Sam Gnanaraj

Designation : Assistant Professor

Department : Physics

Qualification : M.Sc., Ph.D.,

Experience : Teaching: 04 Years Research :11 Years

Area of Specialization(s) : Crystal Growth, Nanomaterials, Graphene and CNT

Email (Official ID) :martinsamgnanaraj@drngpasc.ac.in

Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Post Doctoral Fellowship	Physics	SSN College of Engineering	2022
Ph.D.	Physics	Bharathidasan University	2017
M.Sc	Physics	St. Joseph's college, Tiruchirappalli	2011
B.Sc	Physics	St. Joseph's college, Tiruchirappalli	2009

Projects

On-going

Project Title	Agency	Amount	Duration
Development of Picric Acid based crystalline materials for the protection of photosensitive components against intense laser radiation during eye surgeries Role: Co-PI	UGC-DAE- CSR	Rs.45,000	01 Year

Research Publications (Indexed)

International

1. **Evaluation of the structural, optical, thermal, mechanical and nonlinear optical properties of cadmium chloride incorporated Thiosemicarbazide crystal: A potential material for optical and second harmonic generation applications**
   J. Thomas Joseph Prakash, J. Martin Sam Gnanaraj

   International Journal of Engineering, Science and Innovative Technology 3(2014)607-614

2. **Growth and characterization of Cadmium Thiosemicarbazide Bromide crystals for antibacterial and nonlinear optical applications**
   J. Thomas Joseph Prakash, J. Martin Sam Gnanaraj

   Spectrochimica Acta Part: A Molecular and Biomolecular spectroscopy 135 (2015) 25-30

3. **Effect of amino acid dopants on the spectral, optical, mechanical and thermal properties of potassium acid phthalate crystals for possible optoelectronic and frequency doubling applications**
   J. Thomas Joseph Prakash, J. Martin Sam Gnanaraj, S. Shek Dhavud, S. Ekadevasena

   Optics and Laser Technology 72(2015)108-115

4. **Synthesis, Growth and Characterization of Ni^{2+} incorporated Potassium Acid Phthalate crystal: A potential material for nonlinear optical applications**
   J. Thomas Joseph Prakash, J. Martin Sam Gnanaraj, S. Ekadevasena

   Optik- International Journal for Light and Electron Optics 126 (2015) 1821-1825

5. **Modification of structural, optical, thermal and mechanical properties of KDP crystals on the addition of Ni^{2+}**
   S. Ekadevasena, J. Thomas Joseph Prakash, J. Martin Sam Gnanaraj

   Optik - International Journal for Light and Electron Optics 125 (2014) 2620–2624

6. **Investigations on the Structural, optical, Mechanical and Microstructural properties of L-Arginine doped SAP crystals- A potential material for NLO applications**

   M Iyanar, J Thomas Joseph Prakash, S Ekadevasena, S Shek Dhavud, J. Martin Sam Gnanaraj.

   International Journal of Advanced Scientific Research and development 2(2015) 218-228

7. **Synthesis, Growth and Characterization of L-Cysteine Ethyl Ester Hydrochloride single crystal- A potential semiorganic material for NLO applications**
   J. Thomas Joseph Prakash, J. Martin Sam Gnanaraj, S. Shek Dhavud

International Journal of Research in Pharmaceutical and Nano Sciences. 5(2016) 176 - 186.

8. **Growth and characterization of Methyl Orange doped KAP crystals - A Potential material for Optical and Second Harmonic Generation applications**

   A.Kanagavalli, T. Seethalakshmi, J. Thomas Joseph Prakash, J. Martin Sam Gnanaraj.

   International Journal of Research in Pharmaceutical and Nano Sciences. 5 (2016) 164 - 175.

9. **Effect of a Group 10 Bivalent metal ion doping on the Growth, Optical, Thermal and Mechanical properties of ZTS crystals**

   J. Thomas Joseph Prakash, S. Ekadevasena, A. Kanagavalli, J. Martin Sam Gnanaraj, S. Shek Dhavud,M. Iyanar.

   International Journal of Arts and Science Research 3 (2016) 16-24.

10. **Linear and nonlinear optical analysis of cadmium Thiosemicarbazide chloride crystals for optical limiting Applications**

    J. Martin Sam Gnanaraj, J. Thomas Joseph Prakash

    International Journal of Arts and Science Research5 (2017) 204-215.

11. **L-Lysine doped Oxalic acid single crystals – A potential phase matchable organic material for optical limiting applications**

    J. Martin Sam Gnanaraj, M. Iniya Pratheepa, M. Lawrence

    Optics & Laser Technology 107 (2018)478-483

12. **Facile synthesis of reduced graphene oxide from Azadirachta indica for optical power limiting applications: an eco-friendly approach**

    J. Martin Sam Gnanaraj, G. Satheesh Kumar, M. Senthil Pandian,

    P. Ramasamy, K. Varuna, S. Senthil Kumar

    Journal of Materials Science: Materials in Electronics 33(2022) 20631-20641

13. **Growth of potassium iodide-doped L-alanine nonlinear optical single crystals: investigation of physico-chemical properties**

    G. Satheesh Kumar, J. Martin Sam Gnanaraj, V. Kathiravan,

    P. Karuppasamy, M. Senthil Pandian, P. Ramasamy

    Journal of Materials Science: Materials in Electronics (2022). https://doi.org/10.1007/s10854-022-09342-y

Editorial / Review Board Member

- Reviewer in the Journal of Molecular Structure (Elsevier) under the Editorial Board of Dr. Rui Fausto, Dr. Sylvia Antonio.
- Editorial Board Member and Technical Reviewer in Symbiosis online Publishing Services, Nanoscience & Technology: Open Access, Symbiosis Group, 1203 Heron Dr., Normal, IL 61761
- Reviewer in the Journal of Spectrochimica Act:A Molecular and Biomolecular Spectroscopy (Elsevier)

Membership in Professional Bodies

Name of the Professional Body	Nature of membership	Duration
Indian Association for Crystal Growth (IACG)	Permanent	Life-Time
Indian Association of Physics Teachers	Permanent	Life-Time