



Name **Dr. K Joy**

Educational Qualification M.Sc.,M.Phil. Ph.D

Reader in Physics
Mar Ivanios College, (University of Kerala)
Trivandrum 695015

Address

Meenathethil Gardens, Bagathsing Nagar, Kottamugal,
Nalanchira P O Trivandrum
Email : jolly2jolly@gmail.com

Tel +91-471-2542283 (R)
+91-471-2530887(O)

Research Interests

- Optical and Electrical properties of thin films
- Transparent conducting thin films
- Electronic Ceramics Materials,
- Nanomaterials

Research project

1. Preparation of Terbium and Erbium doped nano particle

Zirconium oxide thin films for photoluminescence applications by sol-gel method and their characterization **Funded by KSCSTE, Govt of Kerala**

2. Development of metal doped nano crystalline ZrO₂ thin films by sol-gel dip coating and RF magnetron sputtering method, for band gap tuning in optical and electronic devices. **Funded by UGC, Govt of INDIA**

Research Students

1. S. Sujatja
2. Arun Manohar M G
3. John Berlin I

Publications

SCI Journals : 3

Communicated : 2

SEMINARS, SYMPOSIA AND CONFERENCE PROCEEDINGS : 20
Edition of books : 3

Instrumental Experiences

- Uv visible photo spectrometer (JASCO)
- PL spectrometer (Perkin Elmer)
- X-ray Diffraction Techniques(Rigaku Japan)
- Scanning Electron Microscopy (JEOL.JSM.35C)
- Impedance Analyzer (HP 4192A) for dielectric measurements
- Atomic Force Microscopy (Shjimads)
- Ellipsometry
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Seminars organized 1. Lecture workshop on Quantum Mechanics, Quantum Field Theory , Group theory and Tensors 1-3 Aug2007, Indian Academy of Sciences ,Mar Ivanios College, Trivandrum

2. Refresher Course in Experimental Physics 22nd October -1st November 2007, Indian Academy of Sciences-Mar Ivanios College, Trivandrum

3. ICOPVS 2008 23 – 28 October 2008 Mascot Hotel Trivandrum

4. National workshop on Experimental physics March 2009, Kerala State Council for Science Technology and Environment-Mar Ivanios College Trivandrum