

## Education.....

- Ph.D in Physics, Kannur University, Kannur ..... November 2014  
Thesis : Structural and Morphological studies of nanostructured semiconducting metal oxides for the fabrication of Dye Sensitized Solar Cells  
Supervisor : Dr. T.L. Remadevi, Principal, PRNSS College, Mattanur, Kannur, Kerala, India
  - UGC-CSIR-NET.....December 2004
  - M.Phil in Applied Physics, Cochin University of Science and Technology (CUSAT), Cochin.....March 2003
  - PGDCA, Electronics Research and Development Centre, Dept. of Electronics, Govt. of India .....January 1998
  - M.Sc.Ed in Physics, Regional College of Education, Mysore University, Mysore, Karnataka.....May 1994
  - B.Ed. in Physical Science, B.Ed Centre, Chovva, University of Calicut, Calicut, Kerala .....January 1991
  - B.Sc. in Physics, Sree Narayana College, Kannur, Calicut University, Calicut, Kerala .....April 1989
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## Professional Experience.....

- ❖ Nehru Arts and Science College, Kanhangad..... 2004-present  
Assistant Professor, Department of Physics
  - ❖ Nehru Arts and Science College, Kanhangad..... 1996-2003  
Junior Lecturer, Department of Physics
  - ❖ Government Vocational Higher Secondary School, Kalliasseri .....1994-1996  
Non-vocational Guest Lecturer
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## Honours and Awards.....

- ✚ Certificate of Outstanding Contribution in Reviewing, Materials Science and Engineering B (Impact factor: 2) (Elsevier) ..... May 2015
- ✚ Certificate of Reviewing, Materials Research Bulletin (Impact factor: 2) (Elsevier).....May 2015
- ✚ Certificate of Reviewing, Materials Science in Semiconductor Processing(Impact factor:2) (Elsevier).....May 2015
- ✚ Certificate of reviewing, Materials Science and Engineering B (Impact factor: 2) (Elsevier).....May 2014
- ✚ Certificate of Reviewing, Materials Science and Engineering B (Impact factor: 2) (Elsevier).....May 2013
- ✚ Certificate of Outstanding Contribution in Reviewing, Materials Science and Engineering B (Impact factor: 2) (Elsevier) ..... May 2013
- ✚ Research fellowship awarded by UGC (Faculty Development Programme).....02-02-2010 to 01-02-2012



## Teaching and advising.....

### B.Sc. Programmes – Kannur University, Kerala

- Electrodynamics
- Thermal Physics
- C++ Programming
- Python Programming
- B.Sc. Physics lab (Practical-I, Practical-II and Practical-III)
- Project

### Complementary Physics for B.Sc. Polymer Chemistry- Kannur University, Kerala

- Mechanics
- Magnetism and Thermal Physics
- Modern Physics and Electronics
- Optics and Photonics

### M.Sc. Programmes - Kannur University, Kerala

- Mathematical Physics
- Spectroscopy
- Microprocessors and applications
- Solid State Physics
- Basic Physics lab
- Electronics - Computer science lab
- Project

### M.Phil Programme - Bharathidasan University, Thiruchirappalli, Tamil Nadu

- Project [2015, 2016]

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## Invited Research Talks.....

- ❖ “Thin Film Solar Cells and applications”, Pazhassi Raja NSS College, Mattanur, Kerala .....2010
- ❖ “Dye Sensitized Solar Cells”, Mahatma Gandhi College, Iritty, Kerala ( 14-16 January 2015).....2015

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## Conferences/Seminars/Workshops/Short term Courses.....

1. Resource Sharing Workshop on Quantum Mechanics, Nehru Arts and Science College, Kanhangad, 4-5 and 8 March 2016
2. Indian Nanoelectronics Users' Programme (INUP) Familiarization Workshop on Nanofabrication Technologies, IIT Bombay, Mumbai, 16-18 December 2015 (Project of DeitY, MCIT, Govt. of India)
3. National seminar on Advanced Materials and their applications, Aquinas College, Edakochi, Kerala, 10-11 September 2015 (UGC)
4. National Conference on Emerging Methods in Nanotechnology (Nano Chem-2015), Pazhassi Raja NSS College, Mattanur, Kannur, Kerala, 17-18 September 2015 (UGC)
5. National Seminar on Optics and Photonics (NSOP-2015), Payyanur College, Payyanur, 6-7 August 2015 (KSCSTE)
6. Workshop on Spectroscopy: Instrumentation and Applications, Dept. of Physics-School of Nano Science and Technology, National Institute of Technology Calicut, 11 January 2014
7. National Seminar on Polymers –Plural Thoughts over the Boons and Bans, Nehru Arts and Science College, Kanhangad, 6-7 February 2014 (Kerala State Council for Science, Technology and Environment (KSCSTE))
8. National Seminar on Present and future scope of Nanoscience and Nanotechnology, Bishop Abraham Memorial College, Kerala, 2-4 September 2014, 106-113 (UGC)

9. National Workshop on Data Analysis using Statistical Software, Nehru Arts and Science College, Kanhangad, 16-17 October 2014 (UGC)
10. National Seminar on Current Trends in Materials Science, Aquinas College, Edakochi, Kerala 13-14 August 2014 (UGC)
11. Lecture workshop on Statistical Mechanics, Nehru Arts and Science College, Kanhangad, 15-17 July 2011 (Indian Academy of Sciences, Bangalore; The National Academy of Sciences Allahabad; Indian National Science Academy, New Delhi)
12. National Seminar on Emerging trends in Optoelectronic and Solar energy Nanomaterials (EOSN-2011), PRNSS College Mattannur, India, 23-24 September 2011 (UGC)
13. Third International Conference on Frontiers in Nanoscience and Technology, Cochin Nano-2011, CUSAT, India, 14-17 August 2011
14. Pre-Conference Workshop of Third International Conference on Frontiers in Nanoscience and Technology, Cochin Nano-2011, CUSAT, India, 14 August 2011
15. 23<sup>rd</sup> Kerala Science Congress, Centre for Earth Science Studies, Thiruvananthapuram, India, 29-31 December 2011
16. International conference on light, OPTICS'11, NIT Calicut, India, 23-25 May 2011 (DST)
17. International conference on Nanomaterials and Nanotechnology (NANO 2010), KSR College of Technology, Tiruchengode, Tamil Nadu, India, 13-16 December 2010 (IUPAC, DST, DRDO, CSIR)
18. 20<sup>th</sup> Swadeshi Science Congress, Central Marine Fisheries Research Institute (CMFRI), Kerala, India, 6-8 November 2010 (ICAR India)
19. STAT Program on Nanomaterials, IIT Madras 30 August -3 September 2010, (IIT Madras and Govt. of Kerala)
20. Short Term course for Research Methodology in Science, Kannur University, 16-19 August 2010, (UGC)
21. National Seminar on the Potential role of Atmospheric Aerosols in Inducing Climate Changes-2010, 16-17 March 2010 (UGC)
22. International Conference on Nanotechnology and its Applications (Nanotech India 2009), Gokulam Park, Cochin, Kerala 14-16 August 2009
23. Workshop on Restructuring and Curriculum Designing of Undergraduate Course, Sree Narayana College, Kannur and BOS in Physics (UG) 5-6 March 2009 and 25-26 March 2009 (Kerala State Higher Education Council)
24. National Conference on Nanophotonic Materials (NCNM-2008), CUSAT, Cochin, 10-12 October 2008 (SPIE CUSAT Student Chapter, IIT Madras SPIE CUSAT Student Chapter and CUSAT)
25. Workshop on Introduction of Grading System at UG Level, Nehru Arts and Science College, Kanhangad, 01 January 2008 (Kannur University)
26. Teacher Training Programme, AKGMGHSS Pinarayi, Kannur, Kerala, 21-23 May 2007 (Directorate of Higher Secondary Education, Kerala)

### Orientation Programmes/Refresher Courses/FDP courses.....

- ❖ Orientation Programme, UGC-Academic Staff College, University of Kerala .....06-11-2008 to 03-12-2008
- ❖ Refresher course in Statistical Physics, Nehru Arts and Science College, Kanhangad, (Indian Academy of Sciences, Bangalore; The National Academy of Sciences Allahabad; Indian National Science Academy, New Delhi).....08-05-2013 to 21-05-2013
- ❖ Refresher course in Statistical Mechanics, UGC-Academic Staff College, Kannur University.....28-04-2015 to 17-05-2014
- ❖ Faculty Development Programme, University Grants Commission.....02-02-2012 to 01-02-2012

### Resource Person.....

- **“Python for Beginners”, Payyanur College, Payyanur, Kerala .....2016**

### Chair.....

Chaired Session-I of National Conference on “Emerging Methods in Nanotechnology” (Nano Chem-2015) at Department of Chemistry and Research Centre, PRNSS College, Mattannur, Kerala, September 17-18, 2015

## Professional Organizations

- Society for advancement of Physics Education (SAPE), Kerala
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## Peer-reviewed publications.....

### Journal Papers

1. K. Deepa, K.C. Preetha, **K.V. Murali**, A.C. Dhanya, A.J. Ragina, T.L. Remadevi, "The effect of various complexing agents on the morphology and optoelectronic properties of chemically deposited ZnS thin films: A comparative study", **Optik** 125 (2014) 5727–5732
2. **K. V. Murali**, A. J. Ragina, K. C. Preetha, K. Deepa, T. L. Remadevi, "Wet chemical synthesis of quantum confined nanostructured tin oxide thin films by successive ionic layer adsorption and reaction technique", **Materials Research Bulletin**, 48 (2013) 3009–3016.
3. **K. V. Murali**, A. J. Ragina, K. C. Preetha, K. Deepa, T. L. Remadevi, "Influence of ammonia, lithium hydroxide, and hexamine on ZnO films synthesized by successive ionic layer adsorption and reaction technique", **Journal of Materials Science** 48 (2013) 1852–1861.
4. A.C Dhanya, K. C. Preetha, A. J. Ragina, **K. V. Murali**, K. Deepa, T. L. Remadevi, "Effect of deposition time on optical and luminescence properties of ZnS thin films prepared by photoassisted chemical deposition technique", **Materials Science in Semiconductor Processing**, 16(2013) 955-962
5. A. J. Ragina, **K. V. Murali**, K. C. Preetha, T. L. Remadevi, "UV irradiated wet chemical deposition and characterization of nanostructured tin sulfide thin films", **J Mater Sci: Mater Electron**, 23 (2012) 2264-2271
6. **K. V. Murali**, K. C. Preetha, A. J. Ragina, K. Deepa, T. L. Remadevi, "Optical red shift in ZnO nanoflowers fabricated on non-seeded substrates by soft wet chemical route", AIP Conference Proceedings, **Materials Physics and Applications** 1391(2011) 561-563.
7. K. C. Preetha, **K. V. Murali**, A. J. Ragina, K. Deepa, T. L. Remadevi, "Effect of cationic precursor pH on optical and transport properties of SILAR deposited nano crystalline PbS thin films", **Current Applied Physics** 12 (2012) 53-59
8. A. J. Ragina, **K. V. Murali**, K. C. Preetha, K. Deepa, T. L. Remadevi, "A study of optical parameters of tin sulphide thin films using the Swanepoel method", AIP Conference Proceedings, **Materials Physics and Applications**, 1391 (2011) 752-754
9. A. J. Ragina, K. C. Preetha, **K. V. Murali**, K. Deepa, T. L. Remadevi, "Wet chemical synthesis and characterization of tin sulphide thin films from different host solutions", **Advances in Applied Science Research**, 2 (3) (2011) 438-444
10. K. C. Preetha, **K. V. Murali**, A. J. Ragina, K. Deepa, T. L. Remadevi, "Studies on gold doped lead sulphide thin films grown by SILAR Technique", AIP Conference Proceedings, **Materials Physics and Applications** 1391 (2011) 749-751
11. **Murali K.V**, Aldrin Antony, Manoj Ramachandran and M. K. Jayaraj, "Preparation and characterisation of ZnS thin films by Chemical bath deposition and Electron beam evaporation", Asia-Pacific optical and wireless conference Proc.SPIE Materials, active devices and optical amplifiers Edited by Chang-Hasnain, Connie J.; Huang, Dexiu; Nakano, Yoshiaki; Ren, Xiaomin. **Proceedings of the SPIE**, Volume 5280, 600 (2004)
12. A. Antony, **K.V. Murali**, R. Manoj and M.K. Jayaraj, "The effect of pH on the growth and properties of chemical bath deposited ZnS films", **Materials chemistry and physics** 90, 106-110 (2005)

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### Conference Papers

1. **K.V. Murali**, T.L. Remadevi, "Characterisation of polycrystalline tin oxide thin films prepared by SILAR", **National seminar on Advanced Materials and their applications**, Aquinas College, Edakochi, Kerala, 10-11 September 2015
2. **K.V. Murali**, T.L. Remadevi, "Zinc oxide films with nanoflake morphology synthesized by wet chemical method SILAR", **National Seminar on Current Trends in Materials Science**, Aquinas College, Edakochi, Kerala 13-14 August 2014, 182-189
3. Maya P.T., Sruthi.T., Sathyan T.V., K.V. Murali, T.L. Remadevi, "Nanostructured semiconducting zinc oxide thin films with nanoflower morphology synthesized by two-step chemical method", **National Seminar on Present and future scope of Nanoscience and Nanotechnology**, Bishop Abraham Memorial College, Kerala, 2-4 September 2014, 106-113

4. Neethu. K, Athira. M, Naseema. K, K.V.Murali, T.L. Remadevi, "Characterization of zinc oxide films synthesized by SILAR and CBD using zinc nitrate-zinc acetate baths with triethanolamine", **National Seminar on Present and future scope of Nanoscience and Nanotechnology**, Bishop Abraham Memorial College, Kerala, 2-4 September 2014, 115-124
5. Vidya Lohi, Sruthi.T, Sathyan T.V., K.V.Murali, T.L. Remadevi, "Fabrication of mesoporous nanosheets of zinc oxide using two-step chemical methods", **National Seminar on Present and future scope of Nanoscience and Nanotechnology**, Bishop Abraham Memorial College, Kerala, 2-4 September 2014, 125-132
6. **K.V. Murali, T.L. Remadevi**, "Electrical, optical and porosity studies of wet chemical synthesized zinc oxide films", **National Seminar on Present and future scope of Nanoscience and Nanotechnology**, Bishop Abraham Memorial College, Kerala, 2-4 September 2014, 218-225
7. **K. V. Murali**, A. J. Ragina, K. C. Preetha, K. Deepa, T. L. Remadevi, "*Nanostructured tin oxide thin films by environmentally benign wet chemical route*", **Third International Conference on Frontiers in Nanoscience and Technology, Cochin Nano-2011**, CUSAT, India, **2011**
8. **K. V. Murali**, K. C. Preetha, A. J. Ragina, K. Deepa, T. L. Remadevi, "*Optical red shift in ZnO nanoflowers fabricated on non-seeded substrates by soft wet chemical route*", **International conference on light, OPTICS'11**, NIT Calicut, India, **2011**.
9. **K. V. Murali**, A. J. Ragina, K. C. Preetha, K. Deepa, T. L. Remadevi, "*Structural and morphological characterization of tin oxide thin films synthesized at room temperature by SILAR technique*", **National Seminar (EOSN-2011)**, PRNSS College Mattannur, India, **2011**.
10. **K. V. Murali**, A. J. Ragina, K. C. Preetha, K. Deepa, T. L. Remadevi, "*Mesoporous zinc oxide nanoflowers by environmentally benign soft chemical route*", **23<sup>rd</sup> Kerala Science Congress**, Thiruvananthapuram, India, **2011**
11. **K. V. Murali**, Ragina A. J., Preetha K. C., Deepa K., Remadevi T. L., "*Structural and morphological characterization of nanostructured ZnO synthesized by wet chemical methods*", **International conference on Nanomaterials and Nanotechnology (NANO 2010)**, Macmillan publishers India Ltd ISBN:023-033-193-9:159, **2010**.
12. **K. V. Murali**, Ragina A. J., Preetha K. C., Deepa K., Remadevi T. L., "*Zinc oxide nanostructures by SILAR technique*", **Nanotechnology and Environment, 20<sup>th</sup> Swadeshi Science Congress**, CMFRI, Kerala, India, **2010**.
13. **K. V. Murali**, Ragina A. J., Preetha K. C., Pradeep V. S, Remadevi T.L., "*Synthesis of high purity zinc hydroxide thin film precursors for converting in to semiconductor zinc oxide thin films*", **Proceedings of NANOTECH INDIA 2009 International Conference**, 14-16 August 2009, Gokulam Park, Cochin

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## Contributions in Book

1. **K. V. Murali**, K. C. Preetha, A. J. Ragina, K. Deepa, T. L. Remadevi, "*Structural and Morphological characterizations of Nano structured Zinc Oxide Films Synthesized By Wet chemical Methods*", **Synthesis and Characterizations of Nanostructured Materials** 159-164 (2010), **Macmillan Advanced Research Series, Macmillan Publishers India Ltd**, ISBN: 10:0230-33193-9, ISBN 13:978-0230-33193-8
2. A. J. Ragina, **K. V. Murali**, K. C. Preetha, K. Deepa, T. L. Remadevi, "*Structural and Morphological studies of Chemical Bath Deposited Tin Sulphide thin films*", **Synthesis and Characterizations of Nanostructured Materials** 183-188(2010) Macmillan Advanced Research Series; **Macmillan Advanced Research Series, Macmillan Publishers India Ltd**, ISBN: 10:0230-33193-9, ISBN 13:978-0230-33193-8
3. K. C. Preetha, **K. V. Murali**, A. J. Ragina, K. Deepa, T. L. Remadevi, "*Effect of Post Deposition Annealing On Structural, Morphological and Optical Properties of Chemically Deposited PbS Thin films*", **Nanostructured Materials** 255-260 (2010); **Macmillan Advanced Research Series, Macmillan Publishers India Ltd**, ISBN: ISBN 10:0230-33200-5, ISBN 13:978-0230-33200-3
4. K. C. Preetha, **K. V. Murali**, A. J. Ragina, K. Deepa, T. L. Remadevi, "*Structural, Morphological and Optical Properties of polycrystalline CBD PbS Thin films synthesized from various metal ion sources*", **Processes and Characterization Of Advanced Nano structured Materials** 215-220(2010); **Macmillan Advanced Research Series, Macmillan Publishers India Ltd**, ISBN: ISBN 10:0230-33199-8, ISBN 13:978-0230-33199-0

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