

Dr T E MANJULAVALLI M.Sc., M.Phil., Ph.D.,

Assistant Professor

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EDUCATION

❖ B.Sc. - Physics	Madurai Kamaraj University	1991
❖ M.Sc. - Physics	Madurai Kamaraj University	1993
❖ M.Phil. - Physics	Bharathiar University	1994
❖ Ph.D. - Physics	Bharathiar University	2009

TEACHING EXPERIENCE

UG: 25 Years

PG: 16 Years

RESEARCH EXPERIENCE

18 Years

AREA OF INTEREST

Thin film Physics, Nanoscience and Solar Cells

Papers published in journals: 13

Referee in Journal of nanostructure in chemistry: 02

Faculty development program attended: 03

Short term programme: 02

Major/Minor project:

Completed: 01

Minor: Preparation and characterization of CdS/ZnS thin film for solar cell application
(MRP -3398/10 dated 2010)

Research guidance

M.Phil.

i). Completed : 13

ii). Ongoing :

Ph.D

i). Completed : 01

ii). Ongoing : 03

Seminar, Workshop, Conference Attended:

Participated and presented a paper: 11 International

Participated: 06

MEMBERSHIP IN PROFESSIONAL BODIES

- ❖ Member of the Board of Studies for UG and PG at Kongu Arts and Science College, Nanjanapuram, Erode.
- ❖ Life member in the Indian Society for Technical Education.
- ❖ Life member in Indian science congress association.

LIST OF PUBLICATIONS

1. A G Kannan, **T E Manjulavalli**, M. Thambidurai, Photoconversion efficiency of CZTS solar cells fabricated using ZnO as a buffer layer, Int.J. ChemTech Res. 2017, 10(6), pp 598-604
2. A. R. Arul, **T. E. Manjulavalli**, R. Venckatesh, G. Rajkumar, Antibacterial efficiency of modal fabric treated with oxides of Ti/Si/ZN nanocomposites, Rasayan journal of chemistry, 10 (4) (2017) 1455-1461
3. A G Kannan, **T E Manjulavalli**, J Chandrasekaran, Influence of solvent on the properties of CZTS nanoparticles, Procedia Engineering, 141 (2016) 15–22
4. Annapoornam Ganesan Kannan, **Thirumalaisamy Esvaramoorthy Manjulavalli**, Synthesis and characterization of $\text{Cu}_2\text{ZnSnS}_4$ nanoparticles, Nanomaterials and Energy, Volume 4 Issue 2, December, 2015, pp. 118-123
5. A G Kannan, **T E Manjulavalli**, Characterization of CZTS Nanoparticles Synthesized by Solvothermal Method for Solar Cell Application, Int.J. ChemTech Res.2014-2015, 7(3), pp 1167-1171
6. **T E Manjulavalli**, A G Kannan, Thickness dependent structural, optical and electrical properties of chemical bath deposited Cu_2SnS_3 thin films, Int.J. ChemTech Res. 2015, 8(10), pp 259-265
7. A G Kannan, **T E Manjulavalli**, Structural, optical and electrical properties of Bi_2Se_3 thin films prepared by spray pyrolysis technique, Int.J. ChemTech Res. 2015, Vol.8, No.11 pp 599-606
8. **T E Manjulavalli**, A G Kannan, Effects of deposition time on structural, optical and electrical properties of chemically deposited Cu_2S thin films, Int.J. ChemTech Res. 2015, Vol.8, No.11 pp 607-616
9. **T E Manjulavalli**, A G Kannan, Structural and optical properties of ZnS thin films prepared by chemical bath deposition method, Int.J. ChemTech Res. 2015, Vol.8, No.11 pp 396-402
10. R Nithya, A G Kannan, **T E Manjulavalli**, Investigation of Pure and Transition Metal Doped ZnO Nanoparticles for Photovoltaic Applications, Int.J. ChemTech Res. 2014-2015, 7(3), pp 1178-1184

11. **T E Manjulavalli**, A G Kannan, Structural and Optical Characterization of Pure and Mn^{2+} -doped ZnS Nanoparticles Prepared by Solvothermal Method, Advanced Materials Research Vol. 678 (2013) pp 61-66
12. **T E Manjulavalli**, A G Kannan, Synthesis of ZnS Nanoparticles Using Different Solvents and its Characterization, Thin Films and Nanomaterials, Macmillan advanced research series, Macmillan Publishers India Ltd, (2014) pp 432-437, ISBN : 978-935-059-049-2
13. **T E Manjulavalli**, T Balasubramanian, D Nataraj, Structural and optical properties of thermally evaporated Bi_2Se_3 thin film, Chalcogenide Letters 5 (11) (2008) 297-302

PAPER PRESENTED IN INTERNATIONAL/ NATIONAL CONFERENCE

1. Presented a paper entitled “Structural and optical characterization of thermally evaporated ZnSe thin films” in the international conference on Electrochemical Power Systems (ICEPS-2) organized by SAEST, Central Electrochemical Research Institute, Karaikudi: 6th to 8th July 2011.
2. Presented a paper entitled “Synthesis and characterization of microwave irradiated luminescent semiconducting ZnS nanopowders for optoelectronic applications” in the International Conference on Materials and Technology (ICMAT 2005) organized by Materials Research Society of Singapore, Singapore: 3-8 July 2005.
3. Participated in the International Conference on Optoelectronic Materials and Thin Films for Advanced Technology, Department of Physics, Cochin University of Science and Technology, Kochi, India: 24th to 27th October 2005.
4. Presented a paper entitled “D.C.conduction studies on thermally evaporated Bi_2Se_3 thin film” in the national conference on novel materials and technologies (NCNMT-2006), organized by Department of Physics, Sri Venkateswara University, Tirupathi: 17-18 February 2006.
5. Participated in the Two Days Training Programme in LaTeX, Department of Physics and IQAC, P.S.G.R. Krishnammal College for women, Coimbatore: 31st March and 1st April 2006.

6. Participated in the NASCOM 2006 and presented a paper titled “Structure, Optical and Resistivity Studies of Vacuum Evaporated Bi_2Se_3 Thin Films”, Department of Physics, P.S.G.R. Krishnammal College for women, Coimbatore: 20th September 2006.
7. Presented a paper entitled “Structural and electrical properties of chemical bath deposited Bi_2Se_3 Thin films” in the National seminar on thin and bulk materials organized by Department of Physics, PSGR Krishnammal College for Women, Coimbatore: September 2006.
8. Presented a paper entitled “Resistivity properties of thermally evaporated Bi_2Se_3 thin films” in the National seminar on thin and bulk materials organized by Department of Physics, PSGR Krishnammal College for Women, Coimbatore: September 2006.
9. Participated in the one day conference “SANGAMAM 2006” inter religious meet on “Consumerism & Religion” held at Divyodaya Interreligious centre, Coimbatore: 18 October 2006.
10. Participated in the IUAC Acquaintance programme on “Accelerator Based Research”, jointly organized by Inter University Accelerator Centre, New Delhi and Kongunadu Arts and Science College, Coimbatore: 01.12.2006.
11. Presented a paper entitled “Photoluminescence properties of microwave prepared ZnS thin films” in the International Conference on Materials Science Research and Nanotechnology (ICMSRN-2008) organized by Mother Teresa Women’s University, Kodaikanal: 27-29 February 2008.
12. Presented a paper entitled “Effect of annealing on structural properties of thermally evaporated Bi_2Se_3 thin films” in the National Conference on Nanomaterials and Thin Films organized by Department of Physics, Cochin University of Science and Technology, Cochin: October 2008 (Best paper award).
13. Participated in the National Level Workshop on “Recent Advancements in Theoretical Physics and Quantum Computation”, sponsored by Theoretical Physics Seminar Circuit, Department of Science and Technology, Government of India at NGM College, Pollachi: 17-19 March 2009.

14. Presented a paper entitled “Microstructural Properties of Chemical Bath Deposited (CBD) thin films” in the National Conference on Material Science (MATS 2009) organized by Department of Chemistry, Annamalai University, Chidambaram: 9-10 October 2009.
15. Participated in the seminar on “Nuclear Energy for National Development(NEND) organized by Bhabha Atomic Research centre, Mumbai and the Department of Physics, NGM College, Pollachi: 3rd December 2009.
16. Presented a paper entitled “Synthesis and Characterization of ZnS and Mn²⁺ doped ZnS nanoparticles” in the international conference on Nanoscience and Nanotechnology (ICNN 2011) organized by Coimbatore Institute of Technology, Coimbatore jointly with Centre for Research and Advanced Studies of IPN – Mexico: 6th to 8th July 2011.
17. Participated in the National Level Workshop on Nanomeasurements – nanomeasure 2011, organized by Department of Physics, NGM College, Pollachi: 15&16 September 2011.
18. Presented a paper entitled “Synthesis and characterization of ZnS and Mn²⁺ doped ZnS nanoparticles” in the International Conference on Nanoscience and Nanotechnology (ICNN-2011) organized by Department of Physics, Coimbatore Institute of Technology, Coimbatore: 6-8 July 2011.
19. Presented a paper entitled “Synthesis of ZnS nanoparticles using different solvents and its characterization” in the International Conference on Advanced Materials (ICAM-2011) organized by Department of Physics, PSG College of Technology, Coimbatore: 12-16 December 2011.
20. Presented a paper entitled “Characterization of Bi₂Se₃ thin films prepared by spray pyrolysis technique” in the International Conference on Advanced Materials (ICAM-2012) organized by Department of Physics, Loyola College, Chennai: 5-7 January 2012.
21. Presented a paper entitled “Characterization of Bi₂Se₃ thin films prepared by spray pyrolysis technique” in the International Conference on Advanced Materials (ICAM-2012) organized by Department of Physics, Loyola College, Chennai: 5-7 January 2012.

22. Presented a paper entitled “Structural and optical properties of ZnS thin films prepared by chemical bath deposition” in the International Conference on Nanoscience and Nanotechnology (ICONN-2013) organized by Department of Physics and Nanotechnology, SRM University, Chennai: 18-20 March 2013.
23. Presented a paper entitled “Thickness dependent structural, optical and electrical properties of chemical bath deposited Cu_2SnS_3 thin films” in the International Conference on Nanomaterials for Frontier Applications (ICNFA-2013) organized by Department of Physics, Coimbatore Institute of Technology, Coimbatore: 10-12 July 2013.
24. Presented a paper entitled “Synthesize and characterization of pure and Sn doped ZnO nanoparticles” in the National Conference on Advanced Functional Materials (NCAFM-2014) organized by Department of Physics, Bharathiar University, Coimbatore: 30-31 January 2014.
25. Presented a paper entitled “Structural and optical properties of CZTS nanoparticles synthesized by solvothermal method” in the International Conference on Sustainable Energy (ICSET-2014) organized by Department of Physics, PSG College of Technology, Coimbatore: 11-13 December 2014.
26. Presented a paper entitled “Characterization of CZTS nanoparticles synthesized by solvothermal method for solar cell application” in the International Conference on Nanoscience and Nanotechnology (ICONN-2015) organized by Department of Physics, SRM University, Chennai: 04-06 February 2015.
27. Presented a paper entitled “Investigation of Pure and Transition Metal Doped ZnO Nanoparticles for Photovoltaic Applications” in the International Conference on Nanoscience and Nanotechnology (ICONN-2015) organized by Department of Physics, SRM University, Chennai: 04-06 February 2015.
28. Presented a paper entitled “Influence of solvents on the structural, morphological, compositional, optical and electrical properties of CZTS nanoparticles synthesized by solvothermal method” in the International Conference on Materials for Advanced Technologies (ICMAT-2015) organized by Materials Research Society of Singapore, Singapore: 28 June to 03 July 2015.

29. Presented a paper entitled “Influence of Zn/Sn ratio on the properties of CZTS nanoparticles and its performance in solar cells” in the Joint India-UK International Conference on Advanced Nanomaterials for Energy, Environment and Healthcare Applications (ANEH-2018) organized by Department of Physics, K.S.R. College of Arts and Science for Women, Tiruchengode & Swansea University, United Kingdom: 31 August 2018 - 01 September 2018.

ORIENTATION/REFRESHER COURSES ATTENDED

1. UGC Sponsored Refresher course in Nanosciences from 3rd to 23rd Feb 2015 at National Centre for Nanosciences and Nanotechnology, University of Madras.
2. UGC sponsored Refresher courses in Women Studies at UGC-Academic Staff College, Bharathiar University, Coimbatore from 09.02.2011 to 01.03.2011.
3. UGC Sponsored Orientation course at UGC-Academic Staff College, Bharathiar University, Coimbatore from 15.04.2009 to 12.05.2009.
4. UGC Sponsored Capacity Building Workshop of Women Managers in Higher Education, Sensitivity/Awareness/Motivation workshop, Avinashilingam University for Women, Coimbatore from 14 to 18 December 2009.

SHORT TERM PROGRAMME

- ❖ Attended the AICTE-ISTE sponsored two week Short Term Training Programme on “Emerging Areas in Thin Film Science and Technology” organized by the department of Physics, PSG College of Technology Coimbatore: 31.05.2004 to 13.06.2004.

GUEST LECTURES

- ❖ Presented a Guest Lecture on the topic “Bulk to Nano” at SNMV College, Coimbatore on 24.01.2016

NSS PROGRAMME OFFICER FOR THE PERIOD 2010-2013

1. NSS of NGM and ‘Ahalia Eye Foundation’ Pollachi jointly organized ‘Free Eye Screening Camp’ for staff and college students on 20.08.2010.

2. Organized a Special Camp at Sulakkal village from 25.12.2010 to 31.12.2010. The Camp focused on the various awareness programmes related to Awareness on Human Values and Environment.
3. Conducted an Awareness Programme on Cervical Cancer on 28.07.11 in association with women centre, Coimbatore.
4. Conducted a Dental camp on 3.10.11 and 4.10.11 jointly with Vasan Dental Care Centre and NSS units of our College.
5. Organized an awareness programme on Breast cancer on 14.10.11 jointly with Sri Ramakrishna Hospital, Kovai and inner wheel club, Pollachi.
6. Organized a 7 days special camp at R. Ponnapuram Panchayat from 18th February to 24th February 2012. Camp was focused on Health and Legal awareness. Receive a rolling trophy for the best NSS unit from the President of Panchayat union.
7. Attended a one day work shop on “Working with Persons with Disabilities” organized by the Department of Social work, Bharathiar University, Coimbatore on 14.09.2012.
8. Organized a plastic eradication camp at different booths of Pollachi jointly with Pollachi municipality on 07.10.2012.
9. World Breast Cancer Awareness day was observed on 12.10.2012 and 3000 awareness pamphlets were distributed to the public at crowded areas of Pollachi jointly with Bharathiar University and Sri Ramakrishna Hospital, Coimbatore.
10. Conducted a free eye camp on 15.10.2012 in our campus jointly with Arvind Eye Hospital, Pollachi.
11. Conducted an awareness rally programme on “Human Rights” jointly with Tamil Nadu District Police, Coimbatore on 10.01.2013.
12. Celebrated “National Voters Day” on 24.01.2013 in Association with Sub-collector office, Pollachi. For the benefit of the public.