

## PROFILE

**Name** : Dr. S. THAMBIDURAI  
**Qualification** : M.Sc., B.Ed., M.Phil., Ph.D,  
**Designation** : Assistant Professor  
**Department** : Physics  
**Experience**  
Teaching : 12 Years 11 Months  
Research : 12 Years



**E-mail:** [thambiphysics@gmail.com](mailto:thambiphysics@gmail.com)

### **Academic Qualification**

Education Degree	Name of the Institution	Board / University	Year of Passing	% Obtained
Ph.D (Physics)	Erode Arts and Science College (autonomous), Erode.	Bharathiar University	March 2022	Highly Commended
M.Phil (Physics)	Erode Arts and Science College (autonomous), Erode.	Bharathiar University	December 2012	Highly Commended
M.Sc (Physics)	Nandha Arts and Science College, Erode	Bharathiar University	April 2010	76
B.Ed (Physical science)	Nandha College of Education, Erode	Bharathiar University	April 2008	70
B.Sc (Physics)	Erode Arts and Science College (autonomous), Erode.	Bharathiar University	April 2006	54
H. S. C	Govt. Hr. Sec. School,	State Board	March 2002	53
S. S. L. C	Govt. Hr. Sec. School,	State Board	March 2000	56

### **Area of Specialization**

- Thin Film
- Metal Oxide Semiconductor Nanomaterials
- Low temperature solution growth
- Dye Sensitized Solar Cells
- Photocatalysis
- Antibacterial activity

## Instruments Handled

- UV-Vis Spectrophotometer (UH5300 HITACHI)
- FTIR (Perkin Elmer – Spectrum Two)

## Reviewer

- Journal of Alloys and Compounds, Nanotechnology for Environmental Engineering.

## Guidance

Guided – 44 M.Sc Students

## Citations

**Google Scholar Citations - 202**

**h-index - 7**

**i10 index - 7**

Google Scholar : <https://scholar.google.com/citations?user=hvvglhYAAAAJ&hl=en>

Orcid ID : <https://orcid.org/0000-0002-9379-0245>

## List of Publication

- 1] S. Venkatesan, S. Suresh, P. Ramu, J. Arumugam, **S. Thambidurai**, N. Pugazhenthiran, “*Methylene Blue Dye Degradation Potential of Zinc Oxide Nanoparticles Bio-reduced using Solanum trilobatum Leaf Extract*”, **Results in Chemistry**, January 2022, Volume 4, 100637.
- 2] S. Kanimozhi, S. Suresh, **S. Thambidurai**, N. Suresh, K.M. Prabu, “*Facile Co-Precipitation Assisted Synthesis and Characterization of Zinc Oxide-Tin Oxide Nanocomposites and their Performance Evaluation as Photoanodes in Dye-Sensitized Solar Cell*”, **Results in Chemistry**, January 2022, Volume 4, 100615.
- 3] S. Venkatesan, S. Suresh, P. Ramu, M. Kandasamy, J. Arumugam, **S. Thambidurai**, K.M. Prabu, N. Pugazhenthiran, “*Biosynthesis of Zinc Oxide Nanoparticles using Euphorbia milii Leaf Constituents: Characterization and Improved Photocatalytic Degradation of Methylene Blue Dye under Natural Sunlight*”, **Journal of the Indian Chemical Society**, March 2022, Volume 99, Issue 5, 100436.
- 4] S. Suresh, **S. Thambidurai**, J. Arumugama, M. Kandasamy, N. Pugazhenthiran, D. Balaji, Bandar Ali Al-Asbahi, N. Ramesh Reddy, A. Arunkumar, T. Muneeswaran, “*Antibacterial Activity and Photocatalytic Oxidative Performance of Zinc Oxide Nanorods Biosynthesized using*

*Aerva lanata Leaf Extract*”, **Inorganic Chemistry Communications**, March 2022, Volume 139, 109398.

5] J. Arumugam, **S. Thambidurai**, S. Suresh, M. Selvapandiyan, M. Kandasamy, N. Pugazhenthiran S. Karthick Kumar, T. Muneeswaran, Franck Quero, “*Green Synthesis of Zinc Oxide Nanoparticles using Ficus carica Leaf Extract and their Bactericidal and Photocatalytic Performance Evaluation*”, **Chemical Physics Letters**, September 2021, Vol. 783 & PP. 139040.

6] S. Kanimozhi, K. M. Prabu, **S. Thambidurai**, S. Suresh, “*Dye-sensitized solar cell performance and photocatalytic activity enhancement using binary zinc oxide-copper oxide nanocomposites prepared via co-precipitation route*”, **Ceramics International**, November 2021, Vol. 47 & PP. 30234-30246.

7] P. Agalya, S. Suresh, K. M. Prabu, **S. Thambidurai**, M. Kandasamy, S. Karthick Kumar, N. Pugazhenthiran, “*Facile and low-cost synthesis of diverse copper oxide nanostructures for solar to thermal energy conversion*”, **Optik**, October 2021, Vol. 244 & PP. 167499.

8] G. Kalaiyan, S. Suresh, K. M. Prabu, **S. Thambidurai**, M. Kandasamy, N. Pugazhenthiran, S. Karthick Kumar, T. Muneeswaran, “*Bactericidal activity of Moringa oleifera leaf extract assisted green synthesis of hierarchical copper oxide microspheres against pathogenic bacterial strains*”, **Journal of Environmental Chemical Engineering**, February 2021, Vol. 9 & PP. 104847.

9] **S. Thambidurai**, P. Gowthaman, M. Venkatachalam, S. Suresh, M. Kandasamy, “*Morphology dependent photovoltaic performance of zinc oxide-cobalt oxide nanoparticle/nanorod composites synthesized by simple chemical co-precipitation method*”, **Journal of Alloys and Compounds**, January 2021, Vol. 852 & PP. 156997.

10] G. Kalaiyan, S. Suresh, **S. Thambidurai**, K. M. Prabu, S. Karthick Kumar, N. Pugazhenthiran, M. Kandasamy, “*Green synthesis of hierarchical copper oxide microleaf bundles using Hibiscus cannabinus leaf extract for antibacterial application*”, **Journal of Molecular Structure**, October 2020, Vol. 1217 & PP. 128379.

11] **S. Thambidurai**, P. Gowthaman, M. Venkatachalam, S. Suresh, “*Enhanced bactericidal performance of nickel oxide-zinc oxide nanocomposites synthesized by facile chemical co-precipitation method*”, **Journal of Alloys and Compounds**, July 2020, Vol. 830 & PP. 154642.

12] S. Suresh, R. Ilakiya, G. Kalaiyan, **S. Thambidurai**, P. Kannan, K. M. Prabu, N. Suresh,

R. Jothilakshmi, S. Karthick Kumar, M. Kandasamy, “*Green Synthesis of Copper Oxide Nanostructures using Cynodon dactylon and Cyperus rotundus Grass Extracts for Antibacterial Applications*”, **Ceramics International**, June 2020, Vol.46 & PP. 12525-12537.

13] **S. Thambidurai**, P. Gowthaman, M. Venkatachalam, S. Suresh, “Natural Sunlight Assisted Photocatalytic Degradation of Methylene Blue by Spherical Zinc Oxide Nanoparticles Prepared by Facile Chemical Co-Precipitation Method”, *Optik*, April 2020, Vol.207 & PP. 163865.

### **Research papers presented with details:**

1. **“Synthesis and Characterization of ZnO Nanoparticles with Excellent Performance for MB Dye Degradation under Natural Sunlight Illumination”**, International Virtual Conference on Physics of Emerging Materials and Molecules (IVCPMM), Sri Vidya Mandir Arts and Science College (Autonomous), Katteri, Uthangarai, 04<sup>th</sup> and 05<sup>th</sup> March 2021.
2. **“The effect of Cu and Co incorporation into ZnO nanoparticles prepared by chemical precipitation method”** International conference on innovations in physical sciences, information technology and social sciences (IC-IPIS2020), Sri Vidya Mandir Arts and Science College (Autonomous), Katteri, Uthangarai, on 14<sup>th</sup> and 15<sup>th</sup> February 2020.
3. **“Facial Synthesis of ZnO and Ni doped ZnO nanorods for the Photocatalytic degradation of Methyl Blue”** International Conference on Functional Materials for Engineering and Bio Applications (FMEBA2019), Dept. of Physics, Govt. Arts and Science College, Hosur, Tamil Nadu, on December 19-20 2019.
4. **“Comparative study of Cu substituted ZnO Nanoparticles: Synthesis, Structural and Optical Properties”**, International Conference on New Trends in Mathematical Modelling with Applications, Sri Vidya Mandir Arts and Science College, Uthangarai, on 29<sup>th</sup> and 30<sup>th</sup> July 2019.
5. **“Studies on Chemical Synthesis of Colloidal Cu<sub>2</sub>SnSnS<sub>4</sub> (CZTS) Nanoparticles”**, National Conference on Advances in Materials Research (NCAMR-2018), on April 27<sup>th</sup> and 28<sup>th</sup> 2018.
6. **“Comparison of Structural and Optical Properties of CdS and different Zn<sup>2+</sup> ion doped CdS Thin Film”**, National Conference on Emerging Trends in Material Science

(NCETMS – 2018), Erode Arts and Science College (Autonomous), Erode, on 7<sup>th</sup> February 2018.

7. International Conference on Material Science and Technology”(ICMAST-2017), Pachamuthu College of Arts and Science College for Women in Collaboration with Elavenil Science Association, Chennai, on 28<sup>th</sup> and 29<sup>th</sup> August-2017.
8. **“Direct Precipitation and Structural characterization of CuZnSnS Nanoparticles”**, International conference on Advanced Materials Science and Technology (ICAMST – 2017), Bannari Amman Institute of Technology, Sathiyamangalam, on 17-19 August - 2017.
9. One Day International Seminar on **“Materials Science and Technology”**(ISMST-2017), Department of Physics, Mother Teresa Women’s University, Kodaikannal, on 4<sup>th</sup> August -2017.
10. National Conference on **“Emerging Challenges in Material Science”** (SPEC – 2017), Muthayammal College of Arts & Science, Rasipuram on 27<sup>th</sup> & 28<sup>th</sup> January- 2017.
11. **“Effect on Structural and Optical Properties of Zn Doped CdS Thin Film by Simple Chemical Route”** International Conference on Modern Materials Research - 2016 (ICMMR - 2016), Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, on 19 -20 December - 2016.
12. **“Effect on Annealing Temperature on the Structural and Optical Properties of CdS Thin Film Deposited by Chemical Synthesis”** International Conference on Modern Materials Research - 2016 (ICMMR - 2016), Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, on 19 -20 December - 2016.
13. **“Structural and Optical Properties of CdS Thin Film by CBD Method”**, National Conference on Advanced Materials (NCAM – 2016), Periyar University, Salem on 25<sup>th</sup> – 26<sup>th</sup> February – 2016.
14. **“XRD, UV and PL Characterization of Cadmium Sulfide Thin Film by CBD Method”** International Conference on Recent Advances in Applied Sciences (ICRAAS 2016), St, Peter’s Institute of Higher Education and Research, St Peters University, Chennai, during 11- 13 February 2016.

15. **“XRD and UV Studies on ZnO Thin Film Prepared by Dip Coating Technique”**, National Conference on Technical Advances in Textiles, Physical & Biological Sciences, Nandha Arts and Science College, Erode, on 5<sup>th</sup> and 6<sup>th</sup> February – 2015.
16. **“Preparation and characterization of ZnO Nanoparticles by sol gel method”**, National conference on advanced materials – 2014, Sri Vidya Mandir Arts and Science College, Uthangarai, on 18<sup>th</sup> and 19<sup>th</sup> July – 2014.
17. **“Preparation and characterization of Ni doped ZnO thin film by sol gel dip coating technique”**, International conference on nano Electronic science and technology (ICNEST-2014), Sri Vasavi College, Erode, on 14<sup>th</sup> and 15<sup>th</sup> February – 2014.
18. **“Influence of PH on the structural and optical properties of ZnO nano rods prepared by dip coating technique”**, International conference on nano Electronic science and technology (ICNEST-2014), Sri Vasavi College, Erode, on 14<sup>th</sup> and 15<sup>th</sup> February – 2014.
19. **“Preparation and characterization of ZnO thin film by dip coating technique”**, International conference on recent advanced in physics, (ICRAP-2013) Sri Vidya Mandir Arts and Science College, Uthangarai, on 12<sup>th</sup> and 13<sup>th</sup> August -2013.

### **Conference / Seminar / Workshop Participated with details:**

1. NAAC Sponsored a Two Day International Level Seminar on **“Role of NAAC in Enhancing Quality in Higher Educational Institutions”** Organized by IQAC, Sri Vidya Mandir Arts and Science College (Autonomous), Uthangarai, held on 7<sup>th</sup> and 8<sup>th</sup> July 2021.
2. **“Leadership Summit – 2020”** Organized by ICT Academy held on 25 February 2020 at IITM Research Park, Chennai.
3. **Neuro Tejas – NLP for teachers Peak Performance**, organized by Nehru College of Management, Coimbatore, on 9<sup>th</sup> and 10<sup>th</sup> August 2019.
4. **National Workshop on Recent Advances in Material Science and Biological Sciences**, Adhiyaman Arts and Science College for Women, on 10-12<sup>th</sup> July 2019.
5. **Faculty Development Programme - Physics** Organized by Periyar University held on 15<sup>th</sup> & 16<sup>th</sup> November 2018 at Bharathiyar Arts and Science College for Women, Deviyakurichi, Salem.

6. **“Bridge-18”**, organized by ICT Academy held on 26<sup>th</sup> September 2018 at Bangalore.
7. **“2<sup>nd</sup> International conference on Recent Trends in Applied Science and Technology” (ICRTAST-2018)**, Organized by Periyar University, Salem, in associated with Indian Science and Technology Association (ELAVENIL), during August 23-25.
8. **“Science Academics’s Lecture Workshop on Recent Trends in Applied Physics for Technology”(SALWRTAPT)**, Organized by PG and research department of Physics, Sri Vidya Mandir Arts and Science College, Uthangarai, on 21<sup>st</sup> and 22<sup>nd</sup> July 2017.
9. **“National Level Workshop on Advanced Materials – 2017” (NLWAM – 2017)** Organized by Department of Physics, Periyar University PG Extension Center, Dharmapuri, on 23<sup>rd</sup> February – 2017.
10. National workshop on **“Financial Education For Middle Income Group”** Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, on 19<sup>th</sup> January – 2017.
11. Workshop on **“Fundamental Materials and Spectroscopy (WFMS – 2016)”** organized by Sacred Heart College (Autonomous), Tirupattur, Vellore, on 23<sup>rd</sup> August 2016.
12. One day lecture workshop on **“Advanced Research in Physics (ARIP – 2016)”**, organized by Erode Arts and Science College (Autonomous), Erode, on 27<sup>th</sup> march 2016.
13. International workshop on **“Designing Enhanced Research Articles and Thesis”**, Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, on 2<sup>nd</sup> February 2016.
14. Science Academies Lecture Workshop on **“Recent Trends in Material Science”**, organized by Sri Vidya Mandir Arts and Science College, Uthangarai, on 2<sup>nd</sup> and 3<sup>rd</sup> January – 2015.
15. **National Conference in Advanced Materials and Its Applications (NCAMA – 2014)**, organized by Annamalai University, Annamalai nagar, on 4<sup>th</sup> and 5<sup>th</sup> April – 2014.
16. **“Workshop on Laser & Spectroscopy”**, organized by Sri Vidya Mandir Arts and Science College, Uthangarai, on 21<sup>st</sup> February – 2014.
17. **“Faculty Development Program”**, organized by Sri Vidya Mandir Arts and Science College, Uthangarai, on 13 and 14 September – 2013.
18. Workshop on **“Enhancing Teaching Skills”**, organized by Wipro, conducted by Vivekananda College of Arts and Science for Women, Truchengode, on 28<sup>th</sup> to 30<sup>th</sup> November – 2012.

19. National level seminar on “**Recent Trends in Solar Energy and its Applications**”, PKR Arts College for Women, Gobichettipalaya, 5<sup>th</sup> September 2012.
20. Seminar on “**Recent Trends and Development in the Emerging Field of New Transparent Conductor and Device Applications using Multidisciplinary Approach**” (RNTCDA-2012), Kongu Engineering College, Perundurai, on 19<sup>th</sup> June-2012.
21. Faculty development program in “**Entrepreneurship Development**” conducted by ITCOT consultancy and science ltd. Sponsored by department of science and technology, Ministry of science and technology. 05/12/2011 to 16/12/2011.
22. **Thin film Science and Technology**”, Conducted by Department of Physics, PSG center for non-formal and continuing education, PSG College of Technology, Coimbatore, 15<sup>th</sup> February 2010 to 27<sup>th</sup> February 2010.

### **Conferences / Workshops / Seminars Organized with details:**

1. Organizing Committee Member for “**Inspire Internship 2019**”, Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, Sponsored by *Department of Science and Technology (DST), Govt. of India, New Delhi*, on 24 – 28, September – 2019.
2. Deputy Co-ordinator for “**Young Student Scientist Programme**” (YSSP – 2019) Catalyzed & Supported by *TNSCST, Department of Higher Education, Govt. of Tamil Nadu*, Organized by Sri Vidya Mandir Arts and Science College, Katteri, Uthangarai, from 03.05.2019 to 17.05.2019.
3. Organizing Committee Member for *Science Academies’ Lecture Workshop on “Recent Trends in Applied Physics for Technology” (SALWRTAPT)*, Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, Sponsored by *“Indian Academy of Science(Bangalore), Indian National Science Academy (New Delhi), The Indian Academy of Science (Allahabad)* on 21<sup>st</sup> and 22<sup>nd</sup> July – 2017.
4. Organizing Committee Member for “**Inspire Internship 2016**”, Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, Sponsored by *Department of Science and Technology(DST), Govt. of India, New Delhi*, on 24 – 28, September – 2016.



5. Organizing Committee Member for ***“Inspire Internship 2015”***, Organized by Sri Vidya Mandir Arts and Science College, Uthangarai, Sponsored by ***Department of Science and Technology(DST), Govt. of India, New Delhi***, on 26 – 30, September - 2015.
6. Organizing Committee Member for ***“National Conference on Advanced Materials (NCAM-2014)”***, Organized by ***Sri Vidya Mandir Arts and Science College, Uthangarai, in collaboration with ISPA, Chennai***, 18-19 July – 2014.
7. Organizing Committee Member for ***“International Conference on Recent Advanced in Physics (ICRAP-2013)”***, Organized by ***Sri Vidya Mandir Arts and Science College, Uthangarai, in collaboration with ISPA, Chennai***, 12-13 August 2013.

### **Books published details:**

1. ***“A Text Book of Physics Practicals”*** – ISSN 978-93-91131-76-0
2. ***“Fundamentals of Microprocessor and its Applications”*** - ISSN 2321-788X.
3. ***“Electrical and Electronic Appliances”*** - ISSN 978-93-81992-23-4.