

PROFILE



Name : **R. MARY MATHELANE**
Designation : Vice - Principal & Associate Professor
Department : PHYSICS
Date of Birth : 12.03.1964
Date of Appointment : 06.11.1987

CONTACT DETAILS

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ACADEMIC

S. No.	Degree	University / Institution	Year of Completion
1.	M.Sc.	Holy Cross College	1986
2.	M.Phil.	Alagappa University	2001
3.	M.Ed.	Madurai Kamaraj University	2002
4.	Ph.D.	Mother Teresa Women's University	2014

5	M. Sc (Yoga)	Bharathidasan University	2019
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Total

Experience UG 31

 PG 14

Area of

Specialization/Interest : THIN FILM SOLAR CELLS

Academic Affiliation :

- Vice – Principal
- HOD, Discipline Committee (2013-2018)
- Academic Council Member (2013-2018)
- Planning and Evaluation committee Member (2013-2018)
- Member of Staff Council (2013-2018)
- Member of Research Committee (2013-2018)
- Finance committee member (2013-till date)
- Staff Council Secretary (2015- 2016)
- Staff Club Secretary (2016-2018)

RESEARCH EXPERIENCE

Projects Undertaken : Minor Project

1. Title of the Project : State of the art technology of Solar Air Heaters
Funding Agency : UGC
Period : 2007-2009
Amount Sanctioned : Rs. 60,000/-

2. Title of the Project : Comparative study of Aluminum and Silver Thin films
Funding Agency : UGC
Period : 2013-2015
Amount Sanctioned : Rs. 2,00,000/-

3. Title of the Project : Preparation and characterization of Aluminum thin films
Funding Agency : TNSCST
Period : 2012-2013
Amount Sanctioned : Rs. 10,000

4. Title of the Project : Domestic waste water management removal of fluoride
Funding Agency : TNSCST
Period : 2017-2018
Amount Sanctioned : Rs. 10,000

RESEARCH GUIDANCE :

M.Phil. (guided) – 4

PUBLICATIONS :

- ¹ Paper entitled, Characteristics of CdTe Nano crystalline thinfilm, International Journal of applied Engineering, 1(2011), 125-128.
- ² Optical properties of CdS_xTe_{1-x} nanocrystalline thin films, International Journal of Engineering Sciences, 2 (2013), ISSN 2319-1813.
- ³ Design Development and deployment of Distributed Solar Dryer, International Journal of power Engineering, 2.1(2010) P-89-93 ISSN 2161-6442.
- ⁴ Synthesis and Characterization of Cadmium Sulfide nano particles, International Journal of Engineering Sciences, 2 (2013), 108-110, ISSN 2319-1813.
- ⁵ Characteristics of Brush electrodeposited CdS films, Chalcogenide letters, Vol.6, No.9, p.483-490, 2009.
- ⁶ Photo electrochemical Properties of Brush plated CdSTe films, doi: 10.1149/1.4718395 ECS Trans.2012 Vol.41, Issue 44, 87-92.
- ⁷ Effect of Annealing temperature on the Structural, Morphological, Optical and Electrical properties of Co₃O₄ thin films by nebulizer spray pyrolysis technique, Journal of Materials science (ISSN:0957-4522), 2016, Volume 27, Issue 4, page no:3860-3866.
- ⁸ Preparations, Characterizations and Oligodynamic effect of robust silver nano particles over bacterial pathogens, 2016, Vol.3, No.1, ISSN:2347-9868, Page 64-71.

Seminars/Conferences/Workshops Participated: - 19

PRESENTATIONS

- **Optical properties of materials of components and their influence of thermal performance of solar thermalgadgets** in the National Seminar at PSN College of engineering & Technology, Tirunelveli in 2010-11.
- **Characteristic studies of potassium penta borate single crystals** in the International Seminar at Navarasam Arts and Science College for Women on 18-08-2011.
- **Influence of potassium penta borate single crystals** in the National Conference at Jayaram College of engineering and technology on 19 & 20-08-2011.
- **Optical studies of Potassium penta borate single crystals** in the National Conference at N.P.R. Arts and Science College, Natham on 30-09-2011.
- **Characteristics of CdTe nano crystalline thin films** in the International Conference at M.T.Women's University, Kodaikanal on 28 & 29.02.2012.
- Presented a paper on "Synthesis and Ultrasonic characterization of Copper Nano fluid by one step method " in a two day national level conference on Nanoscience and Nanotechnologies in the Livelihood Enhancement of common man sponsored by BRNS and TNSTC ,Chennai and organized by Department of Physics,Arul Anandar College,Karumathur,Madurai on 8th &9th Feb.2017.
- Presented a paper on "Synthesis and Experimental Technique for the study of Acoustical,Mechanical,Electrical and Optical studies of Copper Nanofluid using a novel one step method" in the International Conference at M.T.Women's University, Kodaikanal on 4.07.2017 .
- Presented a paper on "A Study of Physiochemical Parameters to evaluate the drinking water quality Vaigaidam" in the UGC Sponsered National conference on "Recent Advancements in Materials science " at PG and Research centre of Physics,J.A.College for Women ,Periyakulam on 10th Feb.2017.
- Presented a paper on "A Study of water pollution in Varaga river at periyakulam" in the UGC Sponsered National conference on "Recent Advancements in Materials science " at PG and Research centre of Physics,J.A.College for Women ,Periyakulam on 10th

Feb.2017.

- Presented a paper on “Synthesis and Experimental Technique for the study of Acoustic, Mechanical, Electrical and optical studies of Copper nano fluid using a novel one-step method” in the International conference on “Materials Science and Technology (ISMST – 2017)” at Mother Teresa Women’s University,Kodaikanal.
- Presented a paper on “**Structural Spectroscopic Studies on EU³⁺ Doped Boro-Phosphate Glasses**” in the International conference on “**Advanced Nanomaterial for Energy, Environment and Healthcare Applications (ANEH -2018)**” at **K.S.R. College of Arts and Science for Women**31st August & 1st September 2018

RESOURCE PERSON:

- Delivered a special lecture on “THIN FILM TECHNIQUES AND APPLICATIONS OF SOLAR ENERGY” in the Department of Physics,Sri Adi Chunchanagiri Women’s College,Cumbum on 07.09.2011.
- Delivered a special lecture on “THIN FILM AND SOLAR APPLICATIONS” in the Department of Physics,Arul Anandar College ,Karumathur on 10.02.2011.
- Delivered a special lecture on “THIN FILM AND SOLAR APPLICATIONS” in the Department of Computer Science,Mother Teresa Women’s University ,Kodaikanal on 22.09.2011.
- Delivered a special lecture on “PREPARATION AND APPLICATIONS OF THIN FILMS” in the Department of Physics, Sri Adi Chunchanagiri Women’s college, Cumbum on 25.09.2015.
- Presented a guest lecture on “Solar Physics and its Applicatons” in the Department of Physics,M.V.Muthiah Government Arts College For Women”on 27.01.2016.

- Delivered a guest lecture on “PREPARATION AND APPLICATIONS OF THIN FILMS” in the Department of Physics, Thiravium college of Arts and Science for Women ,Kailasapatty on 30.01.2016.
- Delivered a guest lecture on “Exploration on Digital Electronics” in the Department of Physics, Nadar Saraswathi college of Arts and Science, Theni on 11.02.2017.
- Delivered a guest lecture on “Applications of Solar energy” in the JACEP, Jyaraj Annapackiam College for Women, Periyakulam on 13.07.2017.
- Delivered a guest lecture on “**Thermal Conduction**” in **In-service Training Programme for Science Teachers** at J.A.College for Women ,Periyakulam on **18th Feb 2019**.
- Delivered a guest lecture on “**Solar Energy and its impacts**” for the Physics and Chemistry students of Nadar Saraswathi College of Arts and Science, Theni on 14th August 2019.
- Delivered a guest lecture “**Self Esteem for Youth Development**” organized by Youth Red Cross Club at JAC on 28th August 2019.
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BOOK PUBLISHED

- Practical Physics, ACCA Publication, Periyakulam in 2007.

ANY OTHER :

1. Convener of the Awareness workshop on “Neutrinos and India Based Neutrino observation” in collaboration with IMSc, Chennai on 16th September 2013.
2. Convener of the UGC sponsored national conference on “Latest trends in Physics for interdisciplinary advancements” on 6th & 7th Feb 2014.
3. Coordinator of the Science Exhibition for School Students in collaboration with TEEDAP on 28th Feb 2015 .
4. Convener of the One day seminar on Energy Conservation sponsored by PCRA on 7th

September 2016.

5. Convener of the One day seminar on Nuclear Energy – A Source of Safe, Clean, and Green Energy on 27th September 2016.

6. Convener of the Two days International workshop on Statistics Using EXCEL and SPSS on 17th to 19th January 2018.

7. Convener of the one day seminar on “Emerging Trends in Physics” sponsored by IAPT on 13th December 2019.