

Faculty Profile



Dr. M.METTILDA , M.Sc., M.Phil., Ph.D.,
HoD – Chemistry

HIGHLIGHTS:

- Number of Journal Publications: 9
- H-Index : 2
- Project Funding Received : Nil
- Patents Published : 02
- Patents Granted : Nil

PROFESSIONAL LINKS:

- Scopus ID: 57564107200
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=57564107200>
- Google Scholar ID:
<https://scholar.google.com/citations?user=q1LqvTYAAAAJ&hl=en&oi=ao>
- Anna University Faculty ID: 3103015
- AICTE Faculty ID: 1-3585073208
- LinkedIn: <https://www.linkedin.com/in/dr-m-mettilda-45812a348/>

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 30 Years 5 months
- Industrial Experience: Nil

INTERNATIONAL EXPOSURE:

- Presented a paper on Mechanical and thermal properties of Sisal/cotton fibres reinforced polypropylene Hybrid nanocomposites in ICATEM '19 at MDIS **Singapore** conducted by Saveetha Engineering College on 10/15/02/19.
- Presented a paper on Optimum Design Technique through Quasistudy performance on medium temperature, Non tracking external compound Parabolic concentrator(xcpc integrated with stratified thermal storage tank for Solar refrigeration system using trnsys. ICATEM '24 at 21st March 2024 at DE MONTFORT Univesity, **Dubai**.

AREA OF SPECIALIZATION:

- Polymer Chemistry

- Composites
- Physical Chemistry
- Organic Chemistry

Ph.Ds AWARDED WITH DETAILS: Nil

Ph.Ds GUIDING:

- **Full Time Scholars: Nil**
- **Part Time Scholars : Nil**

SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY:

- **Nil**

Papers Published

1. **M.Mettilda**, Menaka, Dr.V.Subramaniam, Dr.B.Kothandaraman, Effect of Cellulase Enzyme on the Mechanical and Surface Properties of Regular and Compact Yarns, Journal of Engineered Fibers and Fabrics, 2014, 69-74
2. K.Mohan Babu, **M.Mettilda**, Studies on Mechanical, thermal and morphological properties of Glass fibre reinforced polyoxymethylene Nanocomposite, Journal of Applied Chemistry, Volume, November 2014, 1-8.
3. **M.Mettilda**, Prasanna, Selvapandi, Komathy, Development of Photodegradable Environment Friendly LDPE Nano films, International Journal of Innovations in Engineering and Technology, July 2018.
4. Srimanickam Baskaran, Christopher Sathiya Satchi, Saranya, **Metilda Manuel Swami Durai**, Modeling and optimization of photovoltaic serpentine type thermal solar collector with thermal energy storage system for hot water and electricity generation for single Residential building. Environmental Science and Pollution Research 2022, 29(39), pp. 59575–59591.
5. **M Mettilda**, B Kothandaraman, V Subramaniam, S Sathiyamurthy, Mechanical and Thermal Properties of Sisal-Cotton Fibres Reinforced Polypropylene Hybrid Nanocomposites. International Journal of Vehicle Structures & Systems (IJVSS) 16 (4)
6. S.Anand, R.Bharathi Raja, **M.Mettilda**, Enhancement of glucose transport by Cassia fistula ethyl acetate extract through activation of IRTK, Phosphatidylinositol 3 kinase and GLUT4 on 3T3LI adipocytes AK Huazhong University of Science and Technology, 1-14.
7. **Mettilda,M.**, Chrisona.S., Anand.S., Kavitha.,S. Design and implementation of a standalone photovoltaic system with zeta converter for efficient energy conversion and voltage regulation. Recent innovation in Sciences and Humanities:2025, pp139-146.
8. Anand Singaravelu, Kalaivani Arumugam, **Mettilda Manuel Swami Dorai**, In vitro assessment of a methanolic extract from Coccinia indica enhancing glucose uptake via the phosphoinositide 3-kinase dependent pathway Recent innovation in Sciences and Humanities:2025, pp 147-151.

9. Anand Singaravelu, **Mettilda Manuel Swami Dorai**, Kalaivani Arumugam, Quantitative analysis and optimization of aloe emodin glycosides using HPLC and HPTLC techniques. Recent innovation in Sciences and Humanities:2025, pp 157-161.

PATENTS PUBLISHED/GRANTED:

- M.Thirumavalavan, S. Kalpana, S. Sharmila Queenthly, M. Mettilda, S. Shanthi “Analysis of Bagasse Fibre Based Gel as Quasi Electrolyte for Aluminium-Air Battery”, Indian patent (Published).
- M.Thirumavalavan, S. Sharmila Queenthly, M. Mettilda, S. Shanthi, H. Dolli, S.Anand, B. Yamini, G. Lavanya, M. Sasikala, A. Anancia Grace, “Lipid Nanoparticles for Delivery of Nucleic Acids and its performance analysis”, Indian patent (Published).

COURSES CERTIFIED:

- ❖ Completed Online certificate course in Introduction of Molecular Spectroscopy and Nanotechnology, A maker’s course from Coursera.
- ❖ Completed Online certificate course in Nanotechnology from Coursera.
- ❖ IIT FDP201X on Pedagogy for online and blended Teaching-Learning process, IIT, Mumbai .
- ❖ Completed Phase II and III in IUCEEE Engineering Educator.
- ❖ Completed Online course On HPLC in Karunya University.

ACHIEVEMENTS AND AWARDS:

- Received Bright Student Award from Tamil Nadu Govt (1985 -Scholarship for 6 years)

SPECIAL SESSIONS DELIVERED:

- ❖ Resource Person in FDP On Active Learning conducted by Saveetha Engineering College.
- Guest Lecture on Ecosystem and Biodiversity at Saveetha College of Nursing.

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- Presented a paper on Optimum Design Technique through Quasistudy performance on medium temperature, Non tracking external compound Parabolic concentrator (xpcp integrated with stratified thermal storage tank for Solar refrigeration system using trnsys. ICATEM ’24 at 21st March 2024 at DE MONTFORT Univesity , Dubai.
- ❖ Presented a paper on Development Of Hybrid Bio-Degradable LDPE Films For Food Packaging Applications in National Conference on Chemistry and Materials (NCCM-2019) at Saveetha Engineering College, Thandalam, Chennai on 22nd March 2019
- ❖ Presented a paper on Mechanical and thermal properties of Sisal/cotton fibres reinforced polypropylene Hybrid composites in National Conference on Chemistry and Materials (NCCM-2019) at Saveetha Engineering College, Thandalam, Chennai on 22nd March 2019
- ❖ Presented a paper on Mechanical and thermal properties of Sisal/cotton fibres reinforced polypropylene Hybrid nanocomposites in ICATEM ’19 at MDIS Singapore conducted by Saveetha Engineering College on 10 15/02/19.

- ❖ Presented a paper on Development of hybrid bio-degradable LDPE films for food packaging applications at ICACSS2018, by Pachiappas College on 02 & 03/02/2018.
- ❖ Presented a paper on Development of photodegradable environment friendly LDPE nano films at APM 2016, February 2016 by CIPET.
- ❖ Presented a paper on Development of bio-degradable hybrid nano films with enhanced barrier properties for food packaging, at, APM 2016, February 2016, by CIPET.
- ❖ Presented a paper on Metal to Plastics Conversion of Pressure Switch Cover at APM 2016, February 2016 by CIPET.
- ❖ Presented a paper on Mechanical and Thermal Properties of Sisal/ Cellulase Treated Cotton Fibres Reinforced Polypropylene Hybrid Composites at APM 2015, February 2015 conducted by CIPET.
- ❖ Presented a paper on Mechanical, Thermal and Morphological Properties of Glass Fibre Reinforced Polyoxymethylene nanocomposite at APM 2015, February 2015, conducted by CIPET. Presented a paper on Cellulase treatment of cotton yarns at TRS 2010 conducted by IIT DELHI on 16-18 /12/ 2010
- ❖ Presented a paper on Cellulase treatment of cotton yarns at ATNT 09 on 07-09 /12/ 2009.

Attended:

- ❖ Participated in International conference on Materials and spectroscopy on 11/12/19 & 12/12/19 conducted by Saveetha Engineering College
- ❖ IUCEE Phase 1 International Engineering Educator Pre certification Workshop, IUCEE, on 20-22 Nov 2019 at SEC.
- ❖ Participated in Workshop on Design Thinking, at Saveetha Engineering College on 07 Dec 2018
- ❖ Participated in FDTP on Research methodologies- Tools and Techniques in Engineering, FDTP conducted by Saveetha Engineering College on 26/11/18 & 27/11/18
- ❖ Attended FDTP on biopolymers and bioplastics, at Centre for faculty development, Anna University(MIT) from 04/06/18 to 10/06/18.
- ❖ Participated in IUCEE, International Engineering Educator Pre-certification workshop, at Saveetha Engineering College from 03/05/18 To 05/05/18 .
- ❖ Attended FDP on Designing research projects, proposal writing, Grants and funding agencies , at Saveetha Engineering College on 26/04/18 and 27/04/18.
- ❖ Actively participated in ,RINSNT -2K18, National seminar at Saveetha Engineering College on 21/04/18.
- ❖ Actively participated in FDP on Foundation program in ICT for Education, (FDP 101X), conducted by IIT BOMBAY between 8/03/18 and 12/04/18.
- ❖ Participated in FDP on Skill development on research projects and patent filing, conducted by Saveetha Engineering College on 17/02/18.

- ❖ Attended National seminar on Earth and environmental sciences in the context of climatic change, conducted by Dhanalakshmi college of Engineering on 24/01/18, 25/01/18.
- ❖ Actively participated in National workshop on Effective strategies in research project proposal writing and linking funding agencies organized by Loyola& CAAS research foundation on 23/10/17, 24/10/17.
- ❖ Attended FDP on Effective and assertive communication, conducted by University of Madras on 03/11/15.
- ❖ Participated in ,APM 2013, International conference, conducted by CIPET on 01/03/13 to 03/03/17.
- ❖ Participated in National Seminar on Green chemistry for Green Environment, organized by Velammal Engineering College on 18/02/10.
- ❖ Attended National workshop on Catalysts in environmental Applications, organized by National Institute of Technology, Trichy on 02/12/07, 03/12/07.
- ❖ Attended National workshop on Emerging trends in electrochemical science and technology organized by CECRI and Raja College of Engineering on 17/03/06, 18/03/06.
- ❖ Participated in National Seminar on Innovation in education, conducted by South Indian School Association on 1/02/97 & 02/02/97.

PROFESSIONAL MEMBERSHIPS:

- ❖ Indian Society of Technical Education, Life member, 2001, LM30775.