Dr. M. Marikkannan
Assistant Professor
Department of Physics
Yadava College, Tiruppalai
Madurai- 625 014
Mobile: +91- 9786393553
E-Mail: marikannan.mku@gmail.com

EDUCATIONAL QUALIFICATIONS

Doctor of Philosophy (Ph.D.,) - Physics (2012-2018)

Thesis	: Role of ambient gases on the properties of indium tin oxide thin films for solar cell applications
University	: Dept. of Materials Science, School of Chemistry, Madurai Kamaraj University, Madurai, Tamil Nadu.

Master of Science (M.Sc.,) - Physics (2007-2009)

Project	: Synthesis and Characterization of nano Zinc Sulphide
University	: Madurai Kamaraj University, Madurai, Tamil Nadu.
Percentage	: 73.09% (I class)

Bachelor of Science (B.Sc.,) - Physics (2004-2007)

Institute	: Yadava College, Thiruppalai, Madurai - 14,
University	: Madurai Kamaraj University, Madurai.
Percentage	: 64.26% (I class)

TEACHING EXPERIENCE

Worked as a lecturer in SACS**. M.A.V.M.M. Engineering College, Madurai-625 301** from 1.02.2009 to 31.05.2009.

Working as an Assistant Professor in **Yadava College, Madurai-625 014** from 22.08.2017 to till now.

TECHNICAL EXPERTISE IN THE FIELDS OF

- UV-Visible spectroscopy
- Fluorescence spectroscopy
- X-Ray Diffraction
- Synthesis of semiconductor nanoparticles
- Transparent conducting oxides based thin film preparation

INSTRUMENTS HANDLED

- Spectrophotometer
- Spectrofluoro photometer
- Spin Coating Unit
- DC-RF Magnetron Sputtering
- Thermal Evaporation Unit
- Scanning Electron Microscope

GOOGLE SCHOLAR

Link : https://scholar.google.com/citations?user=dokp8s4AAAAJ&hl=en

PUBLICATIONS

1. **M. Marikkannan**, A. Dinesh, J. Mayandi, V. Vishnukanthan and J. M. Pearce, Properties of Al-Doped Zinc Oxide and In-Doped Zinc Oxide Bilayer Transparent Conducting Oxides for Solar Cell Applications, Material Letters Materials Letters 222, 50 (***2018***).

2.Ştefan Ţălu, Slawomir Kulesza, Miroslaw Bramowicz, Adam M. Pringle, Joshua M. Pearce, **M. Marikkannan**, V. Vishnukanthan and J. Mayandi, Micromorphology analysis of sputtered indium tin oxide fabricated with variable ambient combinations, Material Letters, 220, 169 (***2018***).

3. C. Abinaya, **M. Marikkannan**, M. Manikandan, J. Mayandi, P. Suresh, V. Shanmugaiah, C. Ekstrum, J.M. Pearce, Structural and optical characterization and efficacy of hydrothermal synthesized Cu and Ag doped zinc oxide nanoplate bactericides, Materials Chemistry and Physics, (***2016***).

4**.** Jephias Gwamuri, **Murugesan Marikkannan**, Jeyanthinath Mayandi, Patrick K. Bowen and Joshua M. Pearce, Influence of Oxygen Concentration on the Performance of Ultra-Thin RF Magnetron Sputter Deposited Indium Tin Oxide Films as a Top Electrode for Photovoltaic Devices, *Materials, 9, 63 (**2016**).*

5. **M. Marikkannan**, V. Vishnukanthan, A. Vijayshankar, J. Mayandi and J. M. Pearce, A novel synthesis of tin oxide thin films by the sol-gel process for optoelectronic applications, *AIP Advances 5, 027122 (**2015**).*

6. **M. Marikkannan**, M. Subramanian, J. Mayandi, M. Tanemura, V. Vishnukanthan, and J. M. Pearce, Effect of ambient combinations of argon, oxygen, and hydrogen on the properties of DC magnetron sputtered indium tin oxide films, *AIP Advances5, 017128 (**2015**).*

7. M. Prabhu, **M. Marikkannan**, J. Mayandi, N. Soundararajan, and K. Ramachandran, *AIP Conference Proceedings, 1591, 930 (**2014**).*

8. J. Mayandi, **M. Marikkannan**, V. Ragavendran, P. Jayabal, Hydrothermally Synthesized Sb and Zn Doped SnO_2 Nanoparticles, Journal of Nano Science and Nano Technology, Vol 2, Issue 6, *Spring Edition (**2014**). ISSN 2279 – 0381.*

PRESENTATIONS & PARTICIPATIONS:

1.Participated in the online course on "Learning Physics Through Simple Experiments" organized by Centre for Continuing Education, IIT Kanpur, held on April 2nd -June 10th (***2020***).

2. Participated in the online lecture series in Solid State Physics series I "Electrons in Solids" organized by Department of Theoretical Physics, University of Madras, held on 26-30th May (***2020***).

3. Participated Webinar series on "Conceptual and Applied Physics", organized by RK University and Sourastra University, Rajkot., held on 5th -8th May (***2020***).

4. Participated "Indian Summer School on crystal growth (ISSCG-2020)" organized by SSN Research Centre, SSN Institutions (Autonomous), Chennai-603 110, Tamilnadu, India, held on 14-23 May (***2020***)

5. Participated in "Smart Materials Sensor and Energy Devices (SMSED-2020)" organized SSN College of Engineering, Kalavakkam, Chennai, held on 25th -30th May (***2020***)

6. Paper presented in the title "Ambient Effects on Structural, Electrical and Optical properties of Indium Tin Oxide films for Solar Cell Applications" on India-UK Joint International conference on "Advanced Nanomaterials for Energy, Environment and Healthcare Applications (ANEH)" organized by K.S.R. College of Arts and Science for Women and Swansea University, UK, held on 31st August-1st September (***2018***).

7. Participated GIAN-2017 "Solar Cells, Materials and Modelling", Madurai Kamaraj University, Madurai held on May 29th – June 9th (***2017***).

8. Participated "International conference on Advanced Functional Materials for Energy, Environment and Biomedical Applications (AFNEEB-2017)" organized by Madurai Kamaraj University, Madurai during 11-12th December (***2017***).

9. Participated GIAN-2016 "Physics of Strongly Correlated Electron Systems" organized by Bharathidasan University, Trichy, on 19-23, December (***2016***).

10. Participated "Spectroscopic ellipsometry short term course" organized by Indian Institute of Technology, Chennai, on October 16 & 17th (***2014***).

11. Paper presented in the title "Hydrothermally Synthesised Sb and Zn doped SnO2 Nanoparticles, on International Conference on Nano Electronics Science and Technology (ICNEST-2014)" organized by Sri Vasavi College, Erode on 14th &15th February (***2014***).

12. Oral presentation in the title "Preparation and characterizations of SnO thin films towards photovoltaic applications" on International conference on Nano Materials for frontier Applications and Indo-Norwegian Workshop on Advanced Materials for solar cell applications (ICNFA-2013) at CIT Coimbatore held on July 10-12th (***2013***).

13. Participated "International conference on Advanced Materials, Processing and Devices (AMPD-2013) organized by Department of Materials Science, School of Chemistry, Madurai Kamaraj University, held on 15-16th July (***2013***).

14. Poster presentation in the title "Influence of sputtering Ambient on ITO thin films" on second international workshop on Advanced Functional Nanomaterials (SIWAN-2013) organized by Centre for Nano Science and Nano Technology, Anna University, Chennai held on January 28th-30th (***2013***).

15. Poster presentation in the title "Investigation of Structural and optical properties of SnO_2 thin films by sol-gel method using different colloidal solutions" on International conference on Recent trends in Advanced Materials Organized by school of Advanced Sciences (ICRAM-2012) at VIT University on Feb 20-22 (***2012***).

16. Indo-Norwegian Satellite Meeting on Advances in Solar Cell Materials & Technologies (SMASMT-2011) Department of Materials Science, School of Chemistry, Madurai Kamaraj University, Madurai, December 17 (***2011***).

17. International conference and workshop on New Materials and Devices For Photovoltaic Application (ICWNMDP-2011) School of Chemistry, Madurai Kamaraj University, Madurai, February 10-12 (***2011***).

PROFESSIONAL QUALIFICATION

Post Graduate Diploma in Computer Application (PGDCA)

Institute	:	Thiagarajar Arts and Science College, Madurai
University	:	Madurai Kamaraj University
Marks	:	First class with distinction

COMPUTER SKILLS

- Operating systems : MS-Windows
- Packages : Origin 8, 8.5, MATLAB

FIELDS OF INTEREST

- Semiconductor Physics
- Transparent Conducting Oxides Materials
- Optoelectronic Devices
- Nanomaterials for energy and environment applications

PERSONAL DETAILS

Fathers Name : Mr. M. Murugesan

D.O.B : 05.06.1986

Languages Known : Tamil & English

Address : 1/138 Kumaran Street
Thirumalpuram (P.O)
Thirumalpuram
Madurai- 625 014
Mobile No: +91 9786393553, +91 9894175779