



Faculty Name: Dr. RAMARAJAN R

Designation: Assistant Professor (Grade-II)

Department: Physics

Detailed Bio-data

ACADEMIC QUALIFICATIONS

DSKPDF-Postdoctoral Fellow

Period: December 2021 to November 2024

Institute: Department of Physics, Indian Institute of Science [IISc], Bengaluru

Research Area: “Metal oxide-based thermoelectric gas fabrication and testing.

Postdoctoral Fellow

Period: April 2021 to December 2021

Institute: Material Research Center, Ariel University, ISRAEL.

Research Area: “Zn-Sn-O heterostructure based electron transport layer-based Perovskite solar cell fabrication and testing”

Doctoral Degree (Ph. D)

Degree: Ph.D. Material Physics (Thin Film Technology)

Period: July-2015 to September-2020

Institute: National Institute of Technology (NITW), Warangal

Ph.D. Thesis Title: “Investigation of Large-Area Spray Deposited Donor (Sb, Ba, Nb, Ta) Doped SnO₂ Thin Films for Transparent Conducting Electrode Applications”

Post-Graduation (M. Sc)

Degree: M. Sc Physics

Period: 2012-2014

University: University of Madras, Chennai, India- 600025 (Grade/class: First class)

Under Graduation (B. Sc)

Degree: B. Sc Physics

Period: 2009-2012

University: University of Madras, Institution: Presidency College, Chennai, India- 600005 (Grade / Class: First class with distinction).

AREAS OF RESEARCH INTEREST

Experimental Condensed Matter Physics: Thin film technology - Metal oxide based transparent conducting oxide (TCO)- Dye-Sensitized Solar Cells (DSSC)- Perovskite solar cell- Thin Film Solar cell, Metal oxide-based gas sensor, and Thermoelectric device fabrication.

Research Experience

I am Dr. Ramarajan R, Assistant Professor, Department of Physics, MANIT-Bhopal, India. I have research expertise on depositing and fine-tuning a thin film-based heterostructure-materials interface surface modification process for perovskite solar cell/ Gas sensor fabrication and testing. Hence, I am more confident about fine-tuning the metal oxide-based heterostructure materials by physical vacuum and/or chemical deposition techniques (Sputtering, Thermal Evaporation, Spray, Spin coating). I worked as a formal Postdoctoral researcher at the Department of Physics, IISc Bengaluru, and Material Research Centre, Ariel University, ISRAEL. I have carried out research extensively in the area of transparent conducting electrodes for solar cell applications (DSSC, Perovskite solar, thin film). I can work more confidently with thin film based heterostructure materials for Energy and gas sensor (Chemiresistive and Thermoelectric gas sensor) applications.