



MANIKANDAN GUNASEKARAN

CONTACT

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D.O.B: 07.03.1996
Nationality: Indian

Research Area

Organic Semiconductor
Organic Spin Valve
Magnetic Thin Film
Metal-Oxide

Research Area

Number of Publication-4

Paper Presented on Conferences

International Conferences-1

EDUCATION

Ph.D. (Physics): PSG College of Technology, Coimbatore, India.

Jan 2020 – Dec 2023 -Thesis Submitted

Thesis Title: INVESTIGATION OF SPIN-DEPENDENT TRANSPORT IN ORGANIC SEMICONDUCTORS

M.Sc. (Physics): SRKV CAS, Coimbatore, India.

Jun 2016 – Apr 2018 (79%)

B.Sc. (Physics): SRKV CAS, Coimbatore, India.

Jun 2013 – Apr 2016 (74%)

WORK EXPERIENCE

Project Assistant: Applied Science, PSG College of Technology

Dec 2018 – Aug 2022

Project Title: STUDY ON ORGANIC SPINVALVE STRUCTURE FOR SENSOR APPLICATION.

Research Assistant: Physics and Nanoscience, SRMIST

Sep 2018 – Dec 2018

Research Article Collection, Instrument Operation (Spin Coater, Autoclave, High-Temperature Furnace).

Testing Assistant: Physics, SITRA

Jun 2018 – Sep 2018

Yarn Testing (Diameter, and Quality of Yarn).

RESEARCH LABS VISITED

- Tata Institute of Fundamental Research, Hyderabad.
- Defense Material Research Laboratory, Hyderabad.

List of Publications (Journal)

1. **Manikandan, G**, Dhanalakshmi, D, Devi, R. Ilari Angervo 2023, Synthesis and Study of Reactive Mesogen in a Spin Valve Structure'. Journal of Superconductivity and Novel Magnetism, vol. 36, pp. 1511–1520, Impact Factor: 1.8.
2. **Manikandan, G**, Dhanalakshmi, D & Manivel Raja, M 2023, 'Simple solution processed spin switching in FeCo/Rubrene/NiFe spin valve device'. Indian Journal of Physics, DOI: 10.1007/s12648-023-02937-z. Impact Factor: 2.0.
3. **Gunasekaran, M**, Dhandapani, D & Muthuvel, MR 2023, 'Spin Route Flipping in FeCo/RR-P3HT/ NiFe Organic Spin-Valve Device'. Electronic Materials Letter. DOI: 10.1007/s13391-023-00460-1, Impact Factor: 2.4.
4. Sivanesan, P., **Gunasekaran, M.** and Immanuel, S. (2023), "Investigation of structural, morphological, optical, elemental, and anticancer property of pure ZnO and PbO: ZnO nanocomposites prepared by flame synthesis method", Journal of the Mechanical Behavior of Biomedical Materials, Vol. 140, p. 105696, doi: <https://doi.org/10.1016/j.jmbbm.2023.105696>. Impact Factor: 3.9.

List of Publications (Conference)

- 1 D, D. and **GMK, M.** (2022), "Topographic Study of Fe₇₀co₃₀and Ni₈₀fe₂₀of Various Thickness for Spin Valve Application", Vol. 50, pp. 1–8, doi: 10.4108/eai.7-12-2021.2314738.
- 2 **GMK, M.** and D, D. (2022), "Magnetic, Surface And Elemental Characterization of FECO (50:50, 70:30) 50nm Thin Film Grown By Ultra High Vacuum DC Magnetron Sputtering on Silicon (001) Substrate", Vol. 50 No. 001, doi: 10.4108/eai.7-12-2021.2314739.

Instrumental Acquaintance

- Thin Film (Vacuum) Instrument: UHV DC/RF Magnetron Sputtering, E-Beam Evaporation, Hot Wall Evaporation,
- Thin Film (Solution-Processed) Instrument: Spray Pyrolysis, Spin-Coating, Single Zone Furnace (CVD)
- Experienced in most chemical synthesis (Sol-Gel, Hydrothermal, Co-Precipitation)
- Familiar with working in a Clean Room Environment
- DC Plasma Chamber
- High-temperature Furnace
- Wire-Bonder

Characterization Instruments

- FTIR Spectrometer
- UV Visible Spectrometer
- Nano-MOKE
- Vibrating Sample Magnetometer

Software Proficiency

- Expert in Origin Pro for graphical representation
- X'pert High Score for (Structural Analysis)
- ImageJ software
- Solid works, Paint 3D for schematic illustrations
- Mendeley, End-Note for reference manager
- MS Office, Lat-Tex

References

Dr. Dhanalakshmi,
Assistant Professor,
Department of Applied Science,
PSG College of Technology,
Coimbatore-641 004, Tamilnadu
dgd.apsc@psgtech.ac.in

Dr. Balaji Gururajan,
Assistant Professor,
Department of Electrical
Engineering, Yuan Ze University,
Taoyuan City-32003, Taiwan,
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Declaration

I do hereby confirm that the information furnished above is true to the best of my knowledge and belief.

G. MANIKANDAN

