JAVAD SHOAE GHAREHBAGH

Education

Ph.D. Candidate in Advance System Engineering
Faculty of Engineering, Free University of Bozen/Bolzano, Italy
2023-2026
M.Sc. in Solid State Physics
Department of Physics, Shahid Beheshti University, Iran
2015 - 2018
Thesis: Fabrication, Characterization, and Magneto-resistance of Magnetic/Non-magnetic Multilayer Nanowires
B.Sc. in Physics (Solid-state and Electronics)
Department of Physics, University of Tabriz, Iran
2011 - 2015
Project: Review the Prediction of the Earthquake by the VAN method

Research Interests

- OLEDs and Organic Electronics
- Magnetic Materials and Spintronics
- Printed Electronics

Publications

1. L. Jamilpanah, S. Azadian, **J. Shoa e Gharehbagh**, S. Haghniaz Jahromi, Z. Sheykhifard, S. Hosseinzadeh, S. Erfanifam, M. R. Hajiali, M. M. Tehranchi, S. M. Mohseni, et al. (2018). Electrophoretic deposition of graphene oxide on magnetic ribbon: Toward high sensitive and selectable magnetoimpedance response. *J. Phys. D. Applied Surface Science*, Volume(447), 423-429.

2. S. Hosseinzadeh, L. Jamilpanah, **J. Shoa e Gharehbagh**, M. Behboudnia, Ashutosh Tiwari, S. M. Mohseni. (2019). Effect of YIG nanoparticle size and clustering in proximity-induced magnetism in graphene/YIG composite probed with magnetoimpedance sensors: Towards improved functionality, sensitivity and proximity detection. *Composites Part B: Engineering*, Volume(173), 106992.

3. Mohammadreza Hajiali*, Loghman Jamilpanah, Zahra Sheykhifard, Mahsa Mokhtarzadeh, Hossein Yazdi, Behnam Tork, **Javad Shoa e Gharehbagh**, Behnam Azizi, Ehsan Roozmeh, Gholam Reza Jafari, and Seyed Majid Mohseni*. (2019). Controlling Magnetization of Gr/Ni Composite for Application in High Performance Magnetic Sensors. *ACS Applied Electronic Materials*, Vol 1/Issue 12.

4. S. Hosseinzadeh, L. Jamilpanah, **J. Shoa e Gharehbagh** , M. Behboudnia, Ashutosh Tiwari, S. M. Mohseni. (2020). Promising memristive behavior in MoS2–MoO2–MoO3 scalable composite thin films *Journal of Alloys and Compounds* , Volume(835), 155291.

5. Parnia Bastani, Seyed Majid Mohseni, Loghman Jamilpanah, Behnam Azizi, **Javad Shoa e Gharehbagh** . (2022). Interface-induced negative differential resistance and memristive behavior in Gr/MoSe2 heterostructure. *Journal of Materials Science: Materials in Electronics* , Volume (33),pages 6403–6410.

Academic Experience

Physics I Lab, Teaching Assistant
Faculty of Engineering, Free University of Bozen/Bolzano, Italy
2024 – 2025
Physics II Lab, Teaching Assistant
Faculty of Engineering, Free University of Bozen/Bolzano, Italy
2023 – 2024
Senior Lab Assistant
Nano-Physics and Spintronics Group, Department of Physics, Shahid Beheshti University, Iran
2018 - 2023
Junior Researcher
Nano-Physics and Spintronics Group, Department of Physics, Shahid Beheshti University, Iran
2017 – 2023

- I received my B.Sc. in Physics (Solid-state and Electronics) from the University of Tabriz (2011–2015) and M.Sc. in Solid-state Physics from Shahid Beheshti University (2015–2018). During my Master's studies, I worked on the fabrication, characterization, and magnetoresistance of magnetic/non-magnetic multilayer nanowires. After graduation, I worked as a junior researcher in the Nano-Physics and Spintronics Group at Shahid Beheshti University's Department of Physics and later as a lab assistant until 2023. Beyond my academic pursuits, I have significant experience in mechanical design and 3D printing. I have applied this expertise to design and create lab instruments, such as the mechanical components of an ellipsometer. Currently, I am pursuing a Ph.D. under the supervision of Professor Franco Cacialli at the Faculty of Engineering at the Free University of Bozen-Bolzano. my Ph.D. project focuses on developing biocompatible, biodegradable, and bioresorbable infrared and near-infrared organic light-emitting diodes (OLEDs).

Skills

Technical Skills:
3D Printing, 3D Design with Solid-works and Auto-CAD, COMSOL Simulation

Programming Languages:
Python, C++

Laboratory Equipment:
Thickness measurement whit Dektak, Photolithography, CVD, Electro-deposition, Sputtering, Semiconductive, and Metallic Nanowires Growth, Ferromagnetic Resonance Measurement, Magneto-transport Measurements (AMR, GMR, AHE, PHE, GMI), Magneto-optical Kerr effect Measurement

Languages:
English (Advanced), Turkish (Native), Persian (Native)