Contact

tayyaba.malik16@gmail.com

www.linkedin.com/in/tmalik1606 (LinkedIn)

Top Skills

C++

Matlab

Nanotechnology

Languages

English (Professional Working)

Urdu (Native or Bilingual)

Punjabi (Professional Working)

Certifications

Quantum Optics 2: Two Photons and more

Nanotechnology and Nanosensors : Part 1

Nanotechnology and Nanosensors : Part 2

Quantum Mechanics

Quantum Optics 1 : Single Photon

Publications

Fabrication and Characterization of Laser Scribed Supercapacitor based on Polyimide for Energy Storage

A Laser Scribed Graphene Oxide and Polyimide Hybrid Strain Sensor

Antiferroelectric Behavior of P(VDF-TrFE) and P(VDF-TrFE-CTFE) Ferroelectric Domains for Energy Harvesting

Polystyrene adsorbed multi-walled carbon nanotubes incorporated polymethylmethacrylate composites with modified percolation phenomena

Tayyaba Malik

Lab Manager | Nanotechnology Specialist | Researcher

Pakistan

Summary

Keywords: Nanoscience | Nanotechnology | Nanoelectronics | Electronics | Electrochemistry | Physics | Semiconductor Devices |Flexible Electronics | Nanomaterials | Nanofabrication | Scanning Electron Microscopy | Transmission Electron Microscopy | Optical Microscopy |Atomic Force Microscopy | Fluorescence Spectroscopy | UV/Visible Light Spectroscopy | Clean Room | Electron Beam Lithography | Photolithography | Photonics | On-chip Energy Storage | Green Energy | Sensors | Microsensors | Supercapacitors | Electrodes | Electrolytes | Graphene |

Experience

National University of Sciences and Technology (NUST)

4 years 11 months

Lab Manager | Nanotechnology Specialist

January 2019 - Present (3 years 3 months)

Research Assistant

May 2017 - December 2018 (1 year 8 months)

Islamabad

• Design, Fabrication and Characterization of Flexible electronics and photonics devices.

• Developed Flexible Supercapacitor.

• Developed Flexible Strain sensor.

• Clean Room Experience, electron microscopy, photo-microscopy, nano-fabrication and nano lithography.

• Characterization of composite materials by UV-Vis and FTIR spectroscopy.

• Experimented with P(VDF-TrFE) copolymer and P(VDF-TrFE-CTFE) terpolymer to create a blend to study polarization, nano-polar regions and further evolution in properties of ferroelectric polymer blends from paraelectric to antiferroelectric behavior.

SINO-PAK Institute of Linguistics and Modern Technologies

Co-Founder and Lead Instructor

January 2016 - July 2018 (2 years 7 months)
Wah Cantt, Pakistan

Conducted Workshops and Training Sessions on Embedded Systems, Electronics, Robotics, and Arduino.
Preparing Course Material, Defining Prerequisites, and Skills/Competencies after course completion.
Programming in C++
Embedded Development.
PCB and Circuit Designing.
Scripting in Python.
Robot Movement Control.
Client Consultation

National Institute of Electronics
Graduate Electronics Engineer
August 2015 - December 2015 (5 months)
Islamabad

- Quality Testing and Certification of Electronics Products.
- Testing of electronics trainers and Oscilloscope
- Electromagnetic compatibility (EMC) design, testing and documentation.
- Electrostatic discharge (ESD) testing.
- Consultancy on diversified quality standards
- Liaison on services provided by CQTC lab (ISO:IEC 17025 Certified)

National Development Complex
Project Work
January 2015 - May 2015 (5 months)

PTCL
Student Intern
September 2014 - January 2015 (5 months)
Attock

- Studied Optical Fiber
- Main Distribution Frame
- Basic Exchange Structure
- Field Visit of ZTE and Huawei and briefing about their instruments

National Development Complex
Summer Internship
June 2014 - September 2014 (4 months)

Islamabad

• Studied Arduino (Open---source electronic prototyping platform allowing to create interactive electronic objects).
• Worked on Proportional Control of DC Motor using Feedback system.
• Worked on SCR and Thyristor.

Smart PCB Solutions
Summer Intern
July 2013 - September 2013 (3 months)
Rawalpindi

• Worked on Printed Circuit Boards design and layout using CAM tool.
• Worked on Circuit Schematics
.
• Worked on browsing footprints libraries and Setting up the PCB layers.
• Track width and Component selection; Track routing, Polygons and Output Generation.
• Gained an industrial exposure by visiting Manufacturing Plant for PCB Production and Assembling.

Education

National University of Sciences and Technology (NUST)
Master’s Degree, Nanoscience and Engineering · (2015 - 2018)

International Islamic University, Islamabad
Bachelor's Degree, Electronics Engineering · (2011 - 2015)