Hameem Habib

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OBJECTIVE

Enthusiastic and disciplined professional aspiring to thrive in a research-friendly setting, eager to assimilate and apply innovative concepts for advancing extensive research within the interdisciplinary domain.

ACADEMIC QUALIFICATIONS

Year	Qualification	Institution	Performance Index
2024	**Graphene Nano-sheet Composites as a Material for Supercapacitors** (Department of Metallurgical and Material Engineering)	National Institute of Technology (NIT), Srinagar	-
2018	**M.Tech** in Nanotechnology (Centre for Nanoscience and Nanotechnology)	Jamia Millia Islamia	9.44/10
2017	**B.Tech** in Electronics & Communication	Islamic University of Science and Technology	7.65/10

PUBLICATIONS

1. **Hameem Habib**, Irfan Samad Wani, Samina Husain, "High performance Nanostructured Symmetric Reduced Graphene Oxide/ Polyaniline Supercapacitor Electrode: Effect of Polyaniline" in **Journal of Energy Storage** 55 (2022) 105732, doi: 10.1016/j.est.2022.105732, Impact Factor: 9.4
2. **Hameem Habib**, Irfan Samad Wani, Samina Husain, "High Performance Symmetric Reduced Graphene Oxide/Polyaniline/Tellurium Supercapacitor Electrodes" in **Nanotechnology** doi:10.1088/1361-6528/ace3c7, Impact Factor: 3.953.

BOOK CHAPTER

1. **Hameem Habib**, Mashqoor Alam Monika Aggarwal, Irfan Samad Wani and Samina Husain, "Latest Fabrications Approaches for Surface Modified Carbon Materials in Carbon Nanotubes and Graphene", **American Chemical Society**, 2022.

TECHNICAL SKILLS

Optical lithography	CNT-FET fabrication of 5µm channel length Fabrication of CNT-FET (40 µm channel height) by Dielectrophoresis
Thin film deposition	LPCVD, PVD, Spin Coating, RF- Sputtering, Drop Casting.
Material Characterization and Analysis	SEM, TEM, XRD, TGA, FTIR, Raman spectroscopy,
Electrical and Electrochemical Characterization	Clarius Keithley SCS 4200, Cyclic voltammetry, Electrochemical Impedance spectroscopy, Galvano static Charge discharge
Electrolysis	Fabrication of porous alumina
Coding languages	C, C++

ACADEMIC PROJECTS

1. **Synthesis of Graphene-Based Carbon Composites for Device Application**:
   This project dealt with the synthesis of graphene by using the Micromechanical Cleavage Technique (Scotch tape), the chemical method (Hummers and Modified Hummers Method) and the physical method (LPCVD). Few layers of graphene were obtained, and it was possible to make a comparison to know the best method for synthesizing graphene. Various characterization techniques were performed, which included SEM, TEM, RAMAN SPECTROSCOPY, XRD, and OPTICAL MICROSCOPY. The Graphene obtained from the chemical method was used in the formation of the composites including Carbon nanotube as the reinforcement material and reduced graphene oxide as the matrix.

2. **Drowsiness Detector Alarm System**:
   This project dealt with detecting a person's drowsiness by measuring the frequency of various brain signals. The signals are captured using standard ECG electrodes and amplified by two-stage high-gain amplifiers. The necessary filtering is performed, and finally, the signal is fed to the MCU for frequency analysis and measurement, where the necessary actions are performed based on the frequency of captured signals.

SHORT TERM TECHNICAL COURSES

1. New Methods for the Production and Chemical Manipulation of 2D Nanomaterials and Carbon Nanotubes -*Global Initiative for Academic Networks*
2. Short-term course on Materials Characterization Techniques -*NIT Srinagar*.
3. Information technology and networking training program -*Data center, Audit and Vigilance Division, PDD, Kashmir*.

TEACHING EXPERIENCE

Guest lecturer at the National Institute of Technology (NIT), Srinagar (Sep. 2023 - Dec. 2023).

MEMBERSHIPS AND PARTICIPATION

1. **International Conference on Nanotechnology for Better Living (ICNBL) 2016** -*participant*
2. **Rigaku Thin Film Application workshop (2017)** -*participant*
3. **National Metallurgy Day (2023), NIT Srinagar** -*best poster presentation award*
4. **National Metallurgy Day (2023), NIT Srinagar** - *inaugural award in extempore*
5. International Conference in Advances in Nanomaterials and Nanotechnology (ICANN-2016) -*organizing member*