List of publications

1. **E.S. Kadir**, R.N. Gayen, R. Paul, S. Biswas, Interfacial effects on ferroelectric and dielectric properties of GO reinforced free-standing and flexible PVDF/ZnO composite membranes: Bias dependent impedance spectroscopy, **Journal of Alloys and Compounds**. 843 (2020) 155974, https://doi.org/10.1016/j.jallcom.2020.155974

2. **E. S. Kadir,** R. N. Gayen, DC Bias Dependent Impedance Spectroscopic Study of Pollycrystalline Copper Oxide Thin Films, **AIP Conference Proceedings**. 2369 (2021) 020056, https://doi.org/10.1063/5.0060929

3. **E. S. Kadir**, R. N. Gayen, Graphene oxide incorporated flexible and free-standing PVDF/ZnO composite membrane for mechanical energy harvesting, **Sensors and Actuators A: Physical**. 333 (2022) 113305, https://doi.org/10.1016/j.sna.2021.113305

4. M. Chakraborty, **E. S. Kadir**, R. N. Gayen, GO Induced Grain-boundary Modification in Transparent TiO_2-GO Nanocomposite Thin Films: Study by DC Bias dependent Impedance Spectroscopy, **Chemical Physics Letters**. 808 (2022) 140116, https://doi.org/10.1016/j.cplett.2022.140116

5. **E. S. Kadir**, R. N. Gayen, M. Pal Chowdhury, Enhanced photodetection properties of GO incorporated flexible PVDF membranes under solar spectrum, **Journal of Polymer Research**. 29 (2022) 529, https://doi.org/10.1007/s10965-022-03364-0

List of attended conferences

1. “Recent Trends in Basic and Applied Sciences” Jointly organized by Department of Physics, Bhairab Ganguly College in association with Department of Physics, Dum Dum Motijheel College.

Oral presentation titled

“Complex impedance spectroscopic study of ferroelectric PVDF/ZnO/GO membrane”, **E. S. Kadir**, R. N. Gayen

2. “National conference on Physics and Chemistry of Materials” organized by Department of Physics, Government Holkar Science College, Indore.

Oral presentation titled

“DC Bias Dependent Impedance Spectroscopic Study of Polycrystalline Copper Oxide Thin Films”, **E. S. Kadir**, R. N. Gayen

3. “International Conference on Advanced Materials and Mechanical Characterization” organized by SRM Institute of Science and Technology.

Poster presentation titled

“Flexible UV photodetector based on PVDF/ZnO nanocomposite”, **E. S. Kadir**, R. N. Gayen

List of Abbreviations

Binding energy……BE

Chemical vapor deposition……..…..……CVD

Diethanolamine…….DEA

Dimethylformamide…….……...……..DMF

Electrochemical impedance spectroscopy……...……EIS

Electromagnetic……...EM

Fourier transformed infrared…….FTIR

Fluorine doped tin oxide……..……...FTO

Full width at half maxima…….……FWHM

Graphene oxide……....GO

Infrared……...……IR

Organosilicate……...……OS

Polyethylene terephthalate……..……PET

Polyvinylidene fluoride…….……..PVDF

Reduced graphene oxide……...……..rGO

Scanning electron microscopy……..…….SEM

Source measure unit……..……SMU

Ultraviolet……...…….UV

Visible…….……VIS

X-ray photoelectron spectroscopy……..XPS

X-ray diffraction……XRD

Zinc oxide……..…….ZnO

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