**Abstract**

Molybdenum disulfide (MoS2 ) is a layered transition metal dichalcogenides (TMDs) and is anistropic in nature. It has remarkable physio-chemical properties such as large surface-to-volume ratio, distinctive electronic characteristic, tunable band gap, high carrier mobility, friction, catalytic and optical properties. Zinc oxide is one of the most versatile materials due to its excellent inherent properties of wide band gap, large exciton binding energy and high chemical stability. Molybdenum disulfide doped zinc oxide nanocomposites exhibited high stability, good repeatability and high sensitivity. These nanocomposites are synthesized by Microwave assisted method. The prepared nanocomposites are characterized by Field Emission Scanning Electron Microscopy (FESEM), X-ray Diffraction Analysis (XRD) and Fourier- Transform Infrared (FT-IR) spectral analysis for its morphological, structural and spectral studies. These nanocomposites are one of the prominent materials with prospective application in the field of energy storage.