**Facile green synthesis of semiconductive ZnO Nanoparticles for photocatalytic degradation of dyes from the textile industry: A kinetic approach**

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# Characterization

The as-prepared ZnO NPs was characterized by X-ray diffraction, UV–Vis, FT-IR, FESEM and EDX analyses. The XRD characterization is performed using Bruker diffractometer (Cu Kα (λ = 1.5406 Å) X-ray source). The spectral characterization was carried out by PerkinElmer UV-Vis spectrometer and Bruker IFS 66 v/S spectrometer are utilized for UV-Vis and FT-IR spectral analysis, respectively. The microscopic analysis such as SEM is carried to comprehend the surface morphology is carried out by Field emission scanning electron microscope (FESEM).