Characterization of ZnO NPs

Figure 5 shows the SEM, the corresponding energy dispersive X-ray spectroscopy (EDAX) and XRD pattern for ZnO nanoparticles (NPs).

The SEM images of ZnO NPs indicates that the particles are spherical in shape with a diameter of ≈65 nm. The elemental compositions of the ZnO NPs were observed using energy dispersive X-ray spectroscopy (EDAX) (see Figure 3A and 3B). Figure 3C represents EDAX pattern that indicated that ZnO nanoparticles were composed of only Zn and O. Figure 3D represents the XRD pattern of ZnO nanoparticles. It is clear from the XRD pattern that it shows hexagonal phase of ZnO. The recorded X-ray diffraction patterns were compared with the standard ZnO pattern (JCPDS: 80-0075 card ICSD#: 067849).

![Figure 5](image_url)

**Figure 5**: (A) and (B) FE-SEM images for ZnO nanoparticles with magnification 2500 X and 12000 X, respectively. (C) The corresponding Energy-dispersive analysis X-ray (EDAX). (D) XRD pattern for ZnO nanoparticles.