## **Supplemental Information (SI)**

XRD spectrum confirmed that the prepared SPIONs were  $Fe_3O_4$ , as the characteristic peaks at 30.2 °, 35.6 °, 43.0 °, 53.4 °, 57.1 °, and 62.5 °, matched to those of the standard  $Fe_3O_4$  powder diffraction data (PDF #79-0419).

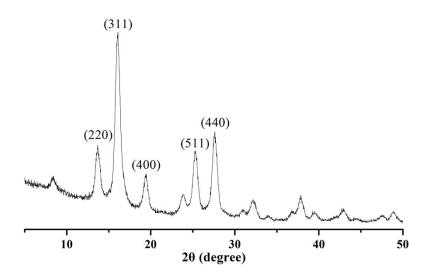


Figure S1. X-ray diffraction pattern of the prepared SPIONs

TEM image showed that the prepared SPIONs were spherical and monodisperse, with an average particle size of 8 nm and a PDI of  $0.202 \pm 0.012$ .

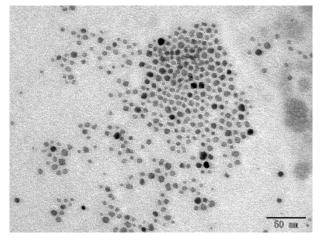


Figure S2. TEM images of the prepared SPIONs