Supporting Information

A NOVEL ACETYLCHOLINESTERASE BIOSENSOR: CORE-SHELL MAGNETIC NANOPARTICLES INCORPORATING A CONJUGATED POLYMER FOR THE DETECTION OF ORGANOPHOSPHORUS PESTICIDES

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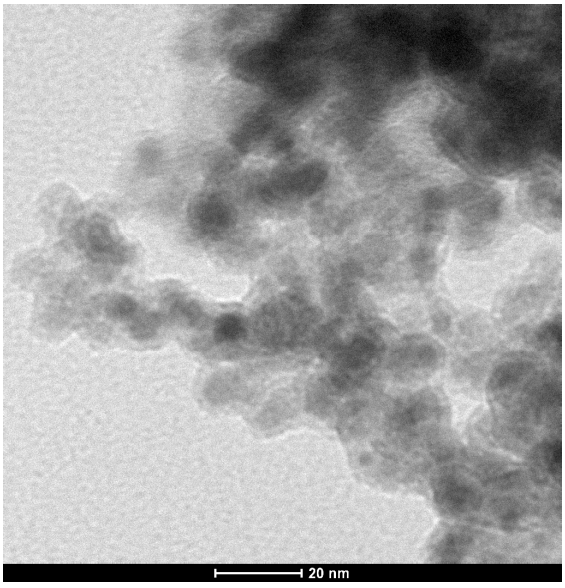

Figure S1. TEM image of Fe_3O_4 @SiO_2 nanoparticles. The light gray area is the thin silica shell around Fe_3O_4 nanoparticles.

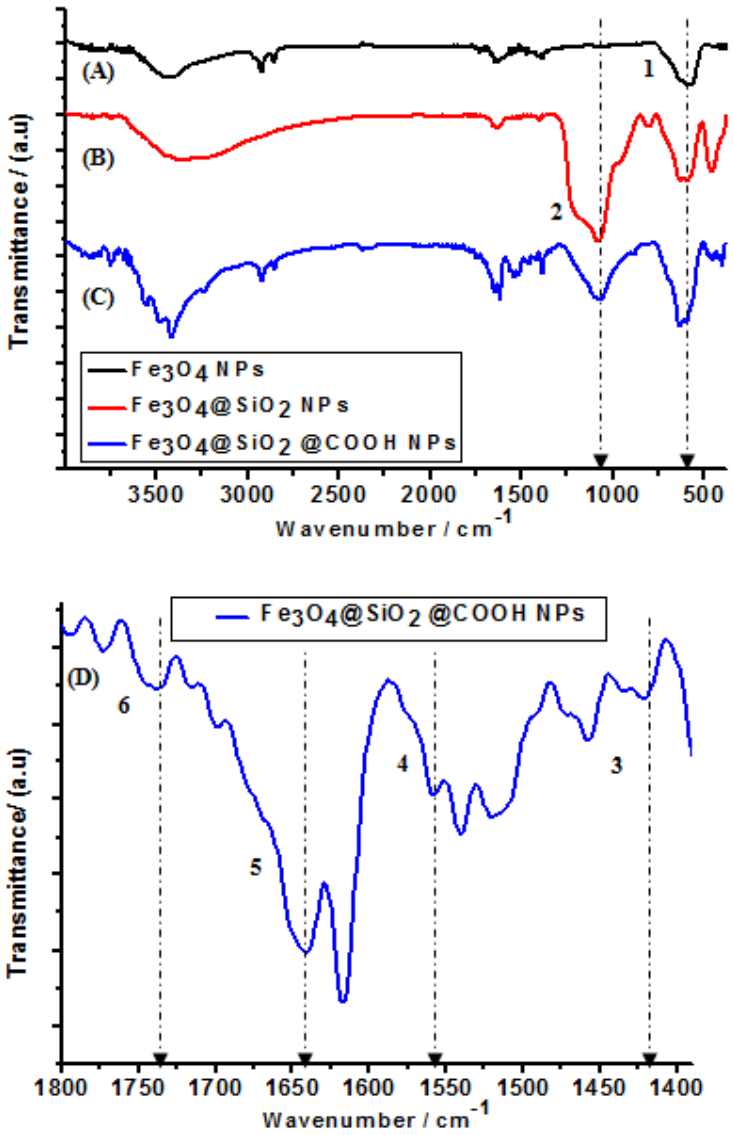

Figure S2. FTIR spectra of (A) MNPs, (B) SiO_2-MNPs, (C) f-MNPs and (D) 1390–1800 cm^{-1} interval for f-MNPs.

(1) Fe-O

(2) Si-O

(3) COH

(4) , (5) Amide

(6) C=O

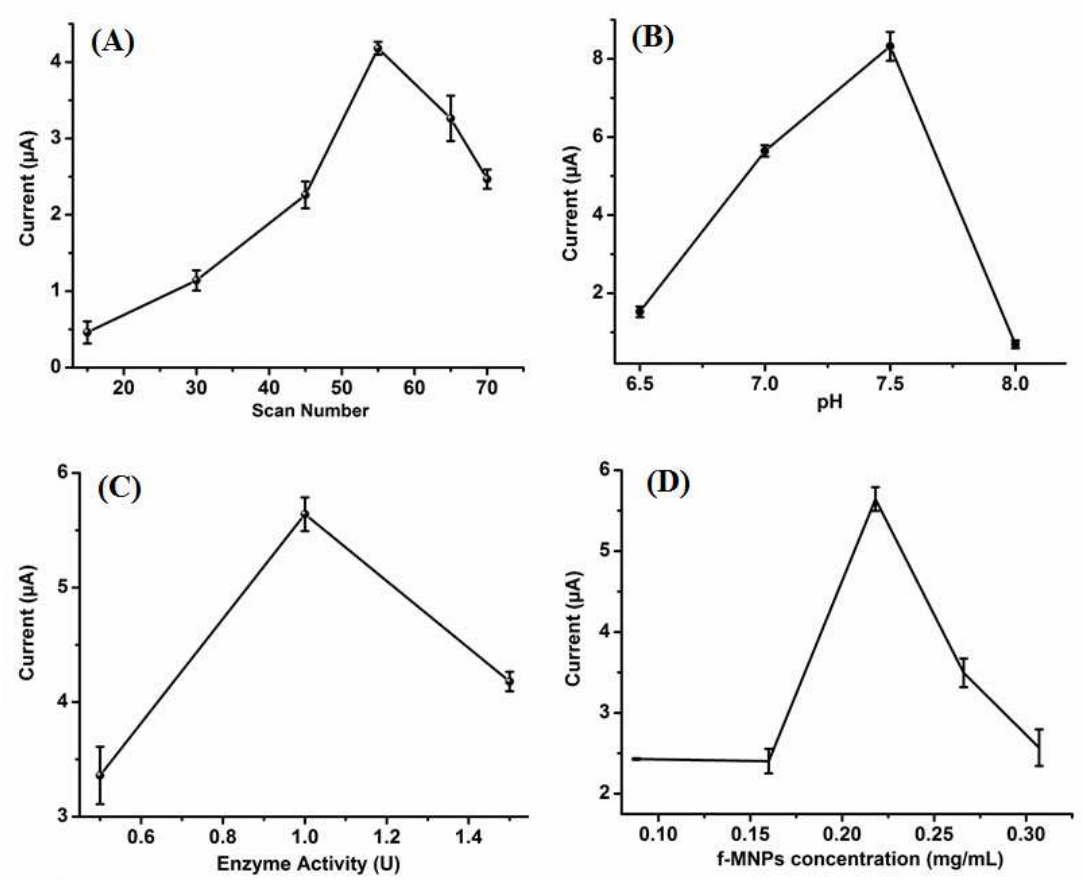

Figure S3. Effect of **(A)** scan number **(B)** pH (50 mM phosphate buffer at pH 6.5, 7.0, 7.5 and 50 mM sodium bicarbonate buffer at pH 8.0), **(C)** enzyme activity and **(D)** f-MNPs amounts on the biosensor response. Error bars show standard deviation (SD) of three measurements.