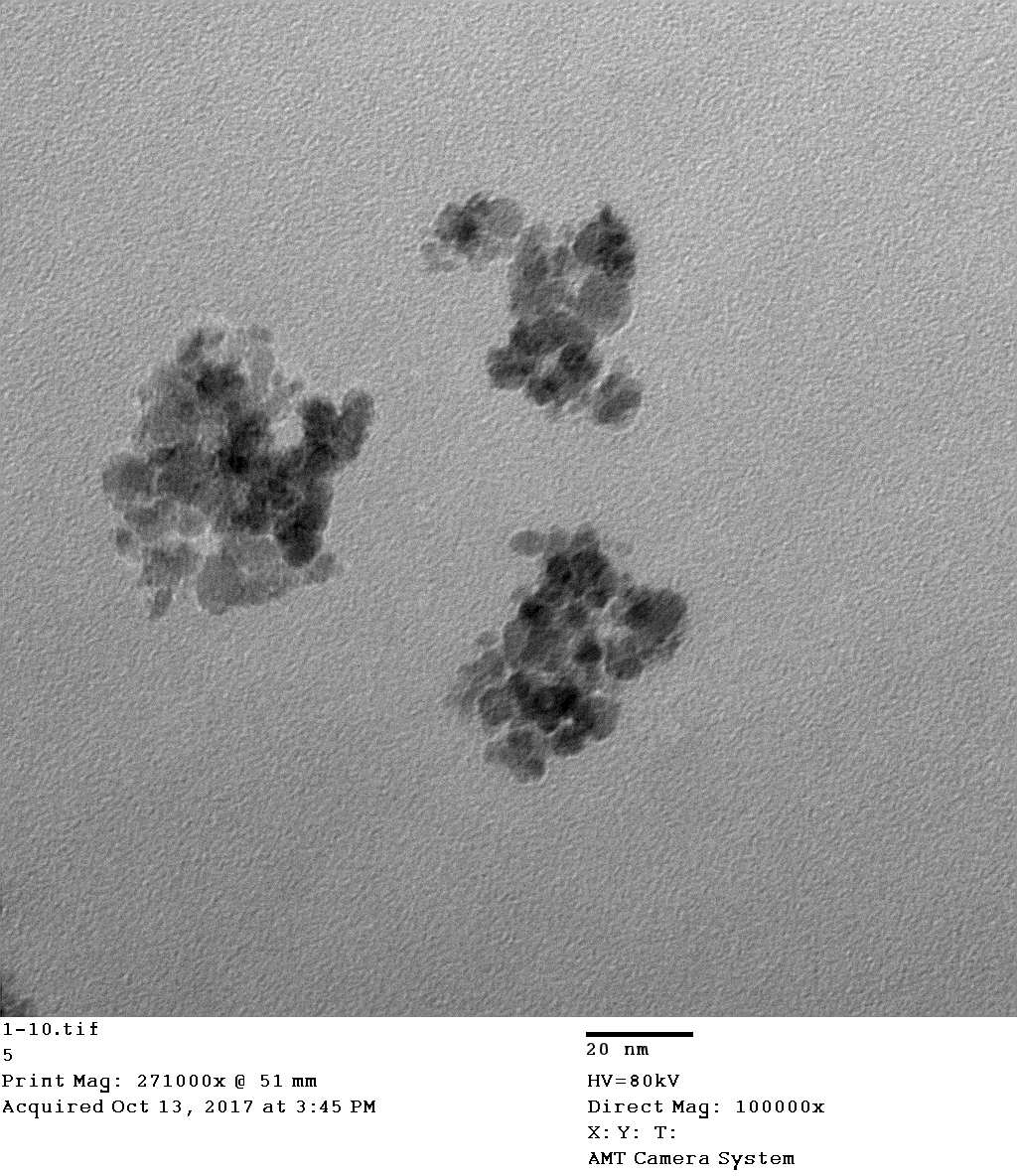
**Facile synthesis of boronic acid-functionalized core-shell magnetic nanoparticles for efficient dopamine extraction**

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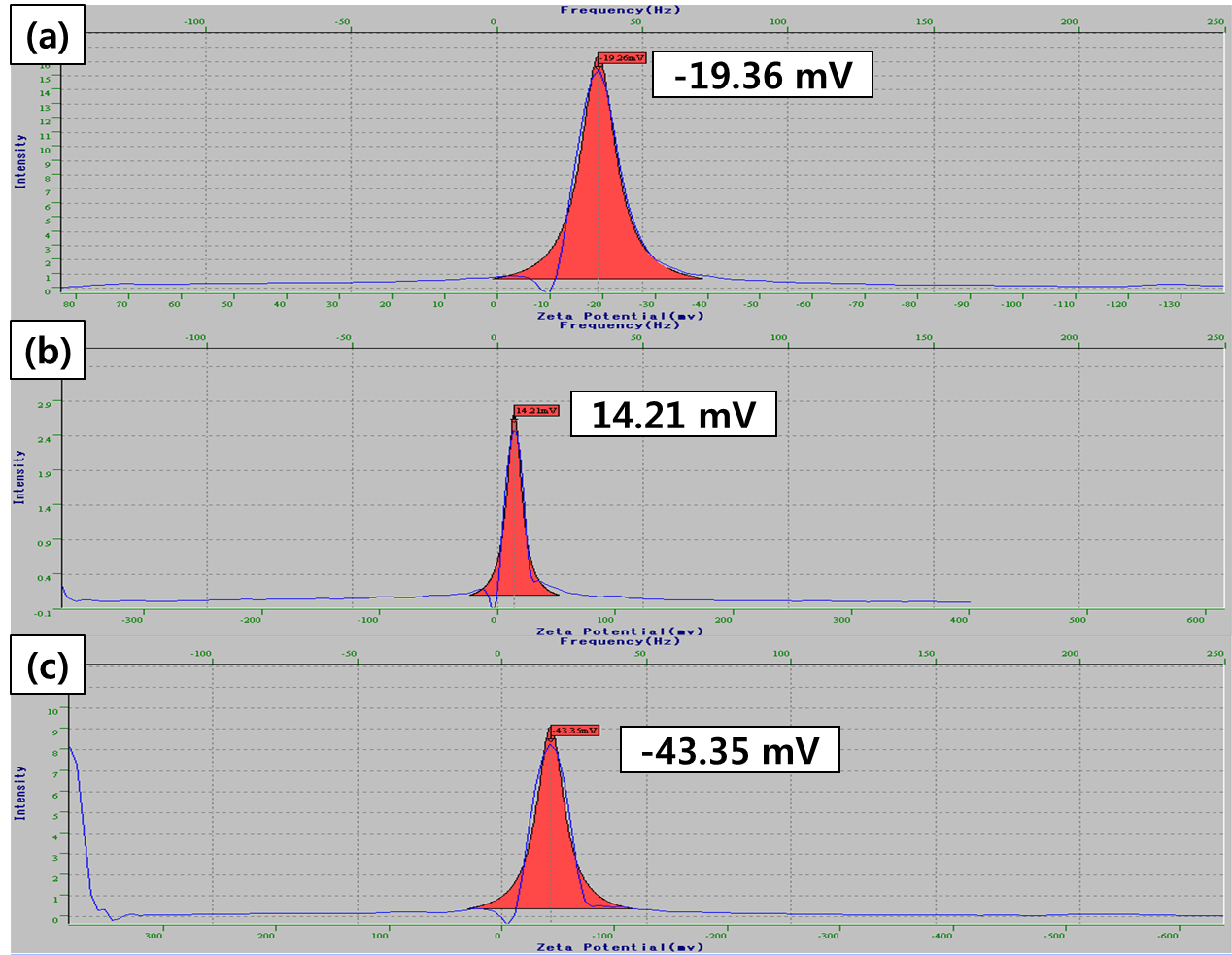


**50 nm**

**Fig. S1.** TEM image of A-Fe3O4.



**Fig. S2.** Particle size distribution of core-shell Fe3O4@SiO2 by DLS method.



**Fig. S3.** Zeta-potentials of as-prepared samples: a) Fe3O4@SiO2, b) Fe3O4@SiO2–NH2 c) Fe3O4@SiO2-COOH.



**Fig. S4.** X-ray diffraction (XRD) patterns of A-Fe3O4 and Fe3O4@SiO2.

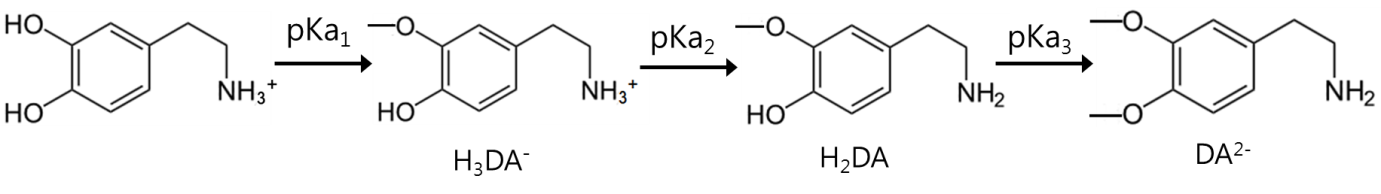


(a) (b) (c)

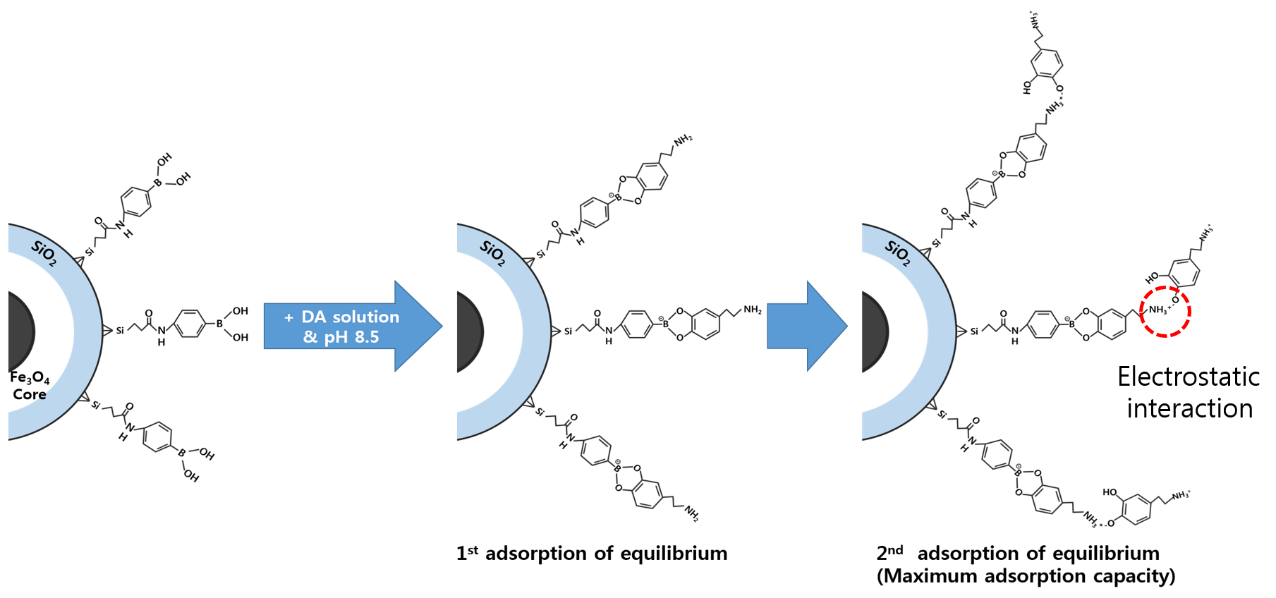
**Fig. S5.** Comparative dispersion/redispersion of Fe3O4@SiO2@APBA in various medias (**1.** Water, **2.** PBS (pH7.4), **3.** Tris-HCl buffer (pH8.0), **4.** Tris-HCl buffer (pH 9.0), **5.** Ethanol) at different times: a) 0 min, b) 3 hr, c) after re-dispersion .



**Fig. S6.** pH effect on the adsorption capacity of dopamine by Fe3O4@SiO2@APBA.



(a)



(b)

**Fig. S7.** Adsorption mechanism of dopamine by using boronic aicd-functionalized magnetic particles (Fe3O4@SiO2@APBA).