

Supplementary Materials:

A facile approach for fabrication of core-shell magnetic molecularly imprinted nanospheres toward hypericin

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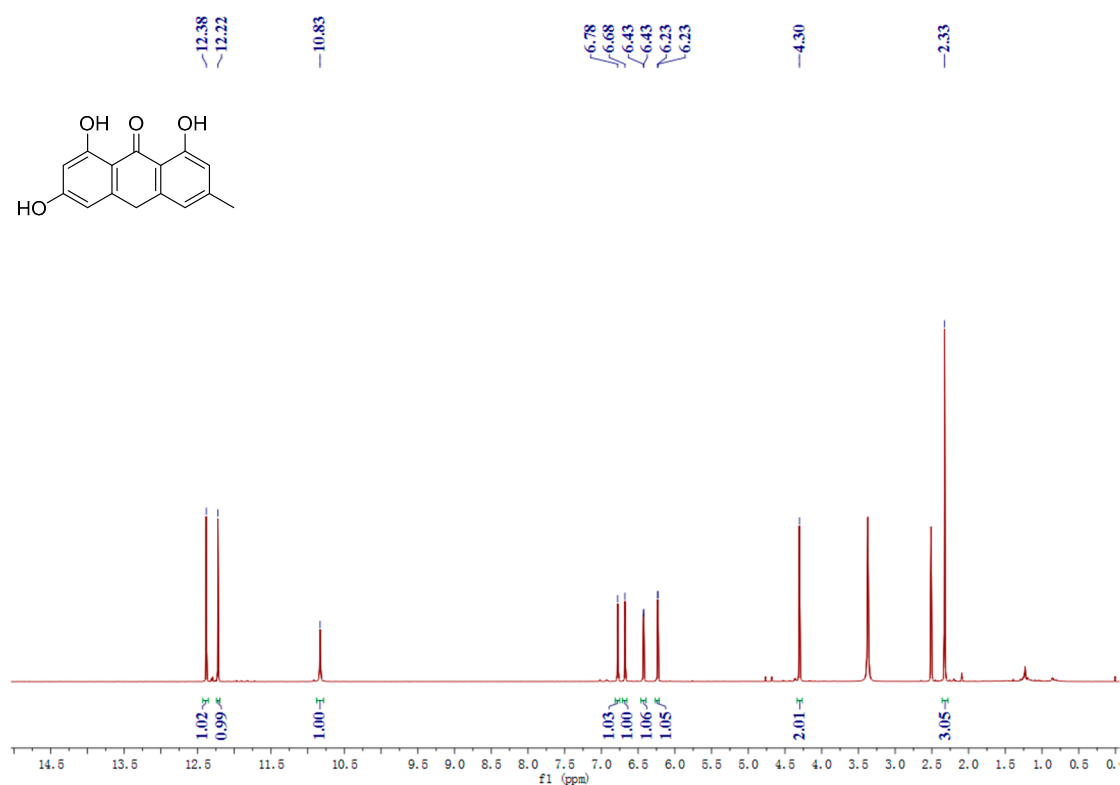


Figure S1. The ¹H-NMR spectrum of emodin anthrone.

Emodin anthrone: ¹H-NMR (500 MHz, DMSO-d₆) δ 12.38 (s, 1H), 12.22 (s, 1H), 10.83 (s, 1H), 6.78 (s, 1H), 6.68 (s, 1H), 6.44 (d, J = 1.8 Hz, 1H), 6.24 (d, J = 2.1 Hz, 1H), 4.30 (s, 2H), 2.33 (s, 3H).

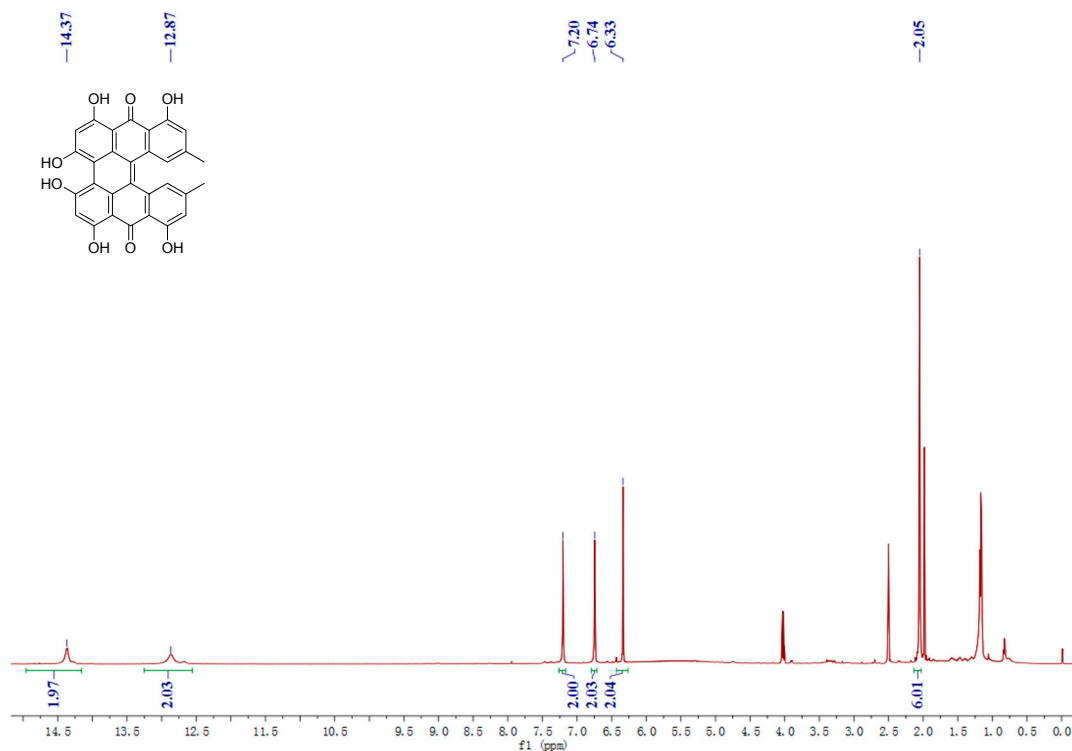


Figure S2. The ¹H-NMR spectrum of protohypericin.

Protohypericin: ¹H-NMR (500 MHz, DMSO-d₆) δ 14.37 (s, 2H), 12.87 (s, 2H), 7.20 (s, 2H), 6.74 (s, 2H), 6.33 (s, 2H), 2.06 (s, 6H).

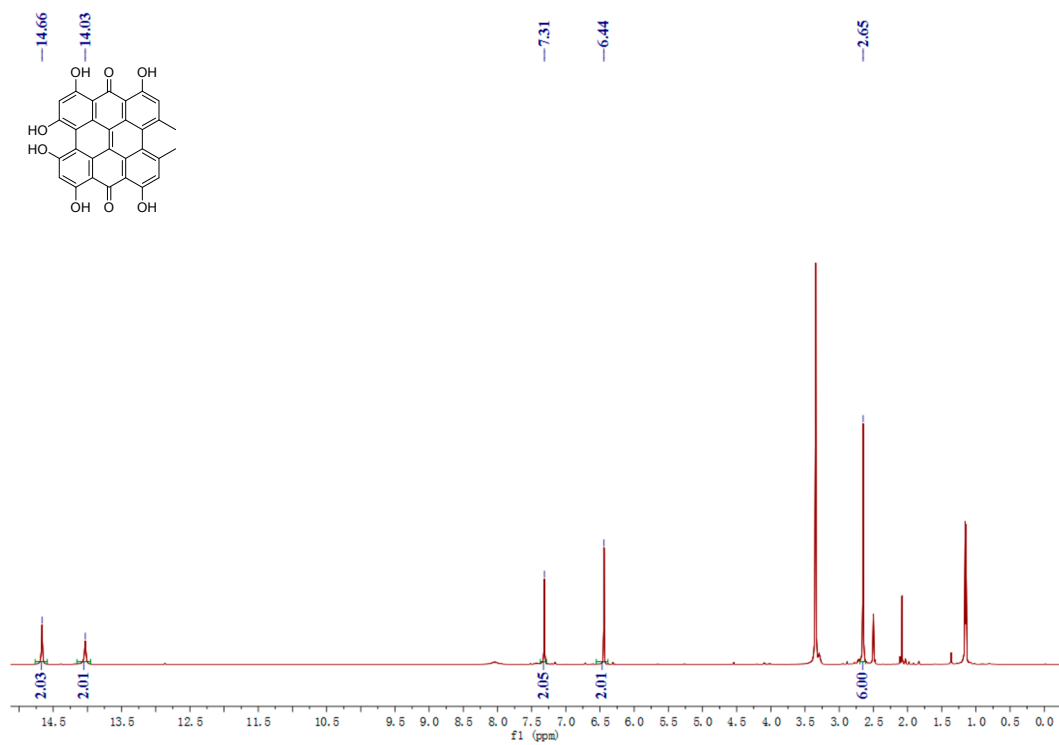


Figure S3. The ¹H-NMR spectrum of hypericin.

Hypericin: ¹H-NMR (500 MHz, CD₃OD) δ 14.66 (s, 2H), 14.03 (s, 2H), 7.31 (s, 2H), 6.44 (s, 2H), 2.65 (s, 6H).

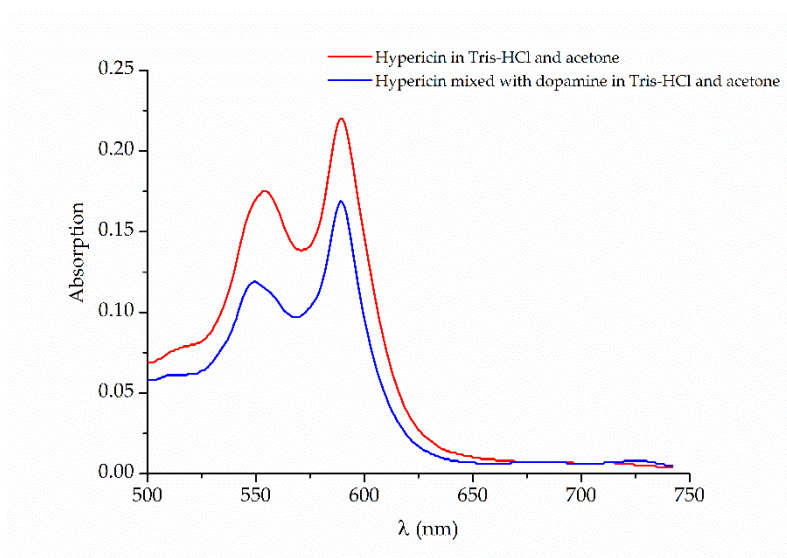


Figure S4. UV-Vis spectra of hypericin in Tris-HCl and acetone (v/v = 6:1, pH = 8.0) with (blue line), or without (red line) the presence of dopamine (2 mg/mL).

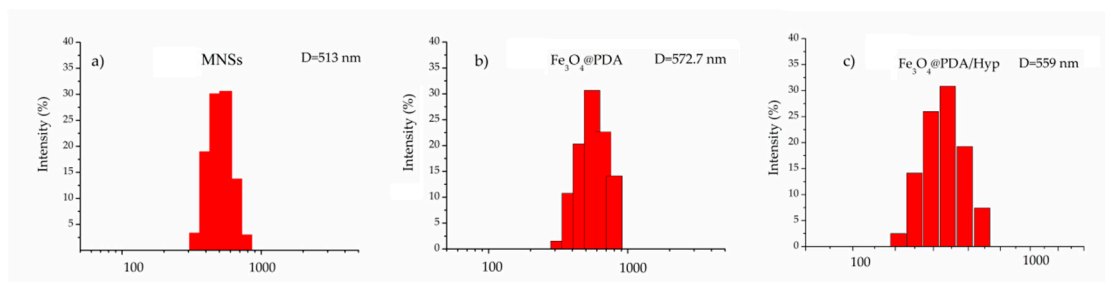


Figure S5. (a) DLS histogram of MNSs, PDI = 0.44; (b) DLS histogram of Fe₃O₄@PDA, PDI = 0.761; (c) DLS histogram of Fe₃O₄@PDA/Hyp, PDI = 0.385.

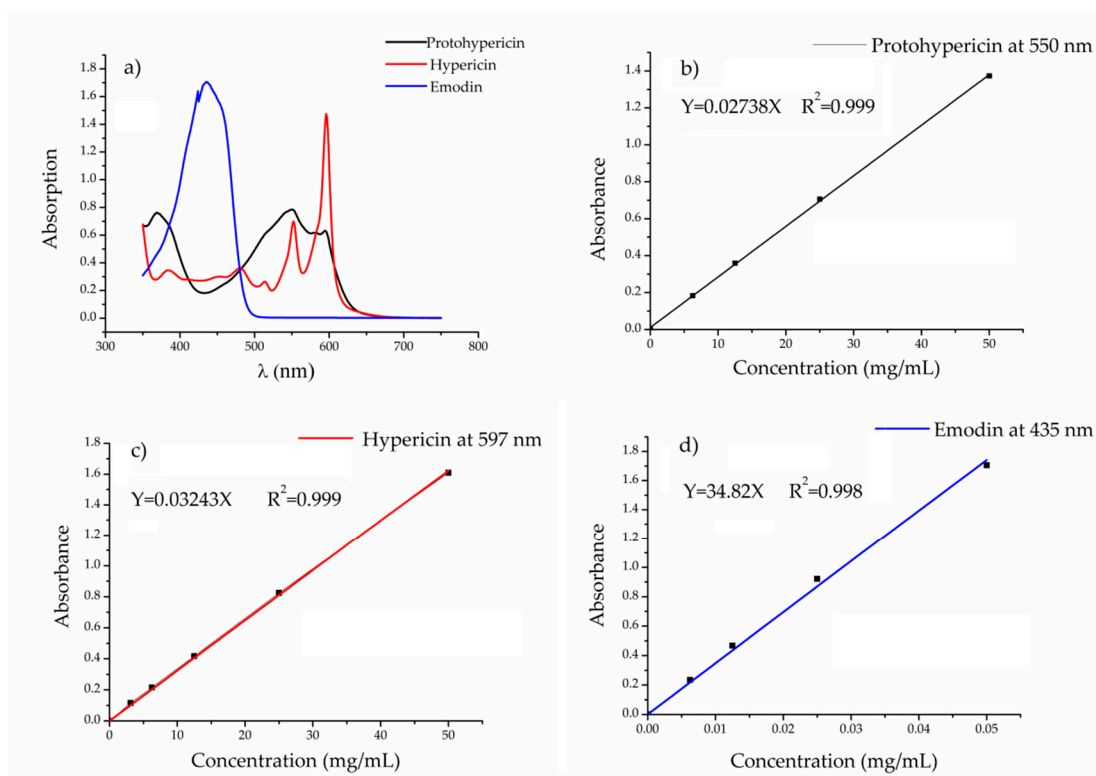


Figure S6. (a) UV-Vis spectra of hypericin, protohypericin, and emodin, respectively. (b) Standard curve of hypericin in acetone by UV-spectrophotometer at 597 nm. (c) Standard curve of protohypericin in acetone by UV-spectrophotometer at 550 nm. (d) Standard curve of emodin in acetone by UV-spectrophotometer at 435 nm.

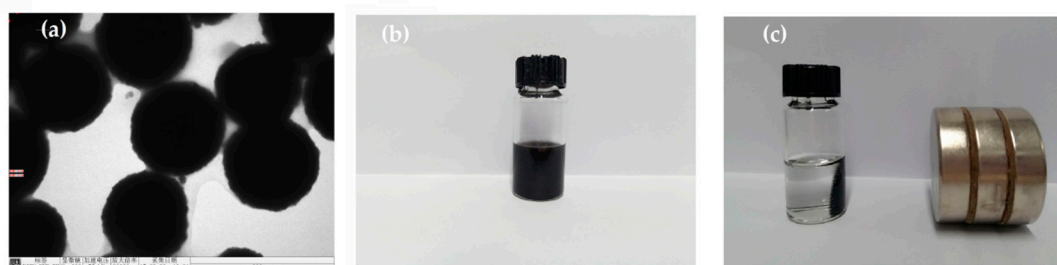


Figure S7. TEM images of MNSs (a) and their response to magnet in 10 s (b and c). Scale bar: 200 nm.

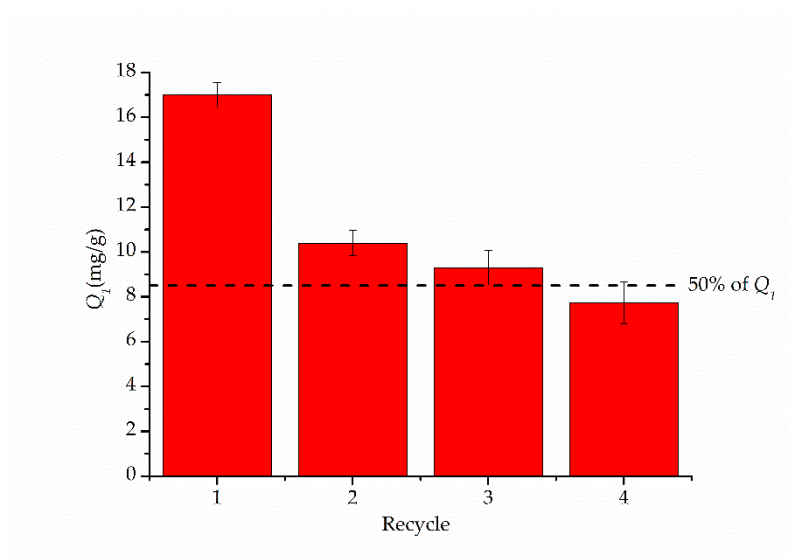


Figure S8. Reusability study of Fe₃O₄@PDA/Hyp NSs.