Supporting Information

## Dual-mode fluorescence and magnetic resonance imaging nanoprobe based on aromatic amphiphilic copolymer encapsulated CdSe@CdS and Fe<sub>3</sub>O<sub>4</sub>

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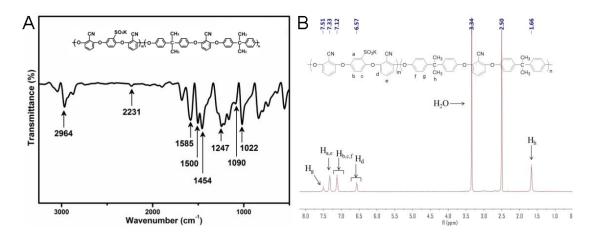
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**Figure S1.** The FTIR spectrum (A) and the <sup>1</sup>H NMR spectrum (B) of the synthesized amphiphilic polyarylene ether nitrile.

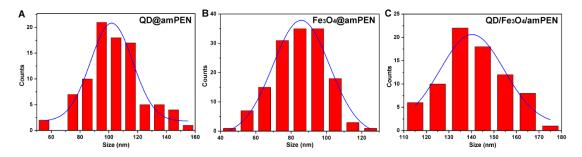


Figure S2. The size distribution histograms of the prepared QD@amPEN (A),

 $Fe_{3}O_{4}@PEN\ (B)$  and  $QD/Fe_{3}O_{4}/amPEN\ (C)$  nanospheres.

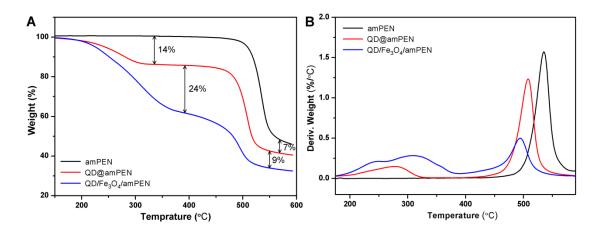


Figure S3. The TGA curves (A) and corresponding differential TGA curves (B) of the synthesized amPEN, QD@amPEN as well as QD/Fe<sub>3</sub>O<sub>4</sub>/amPEN nanospheres.

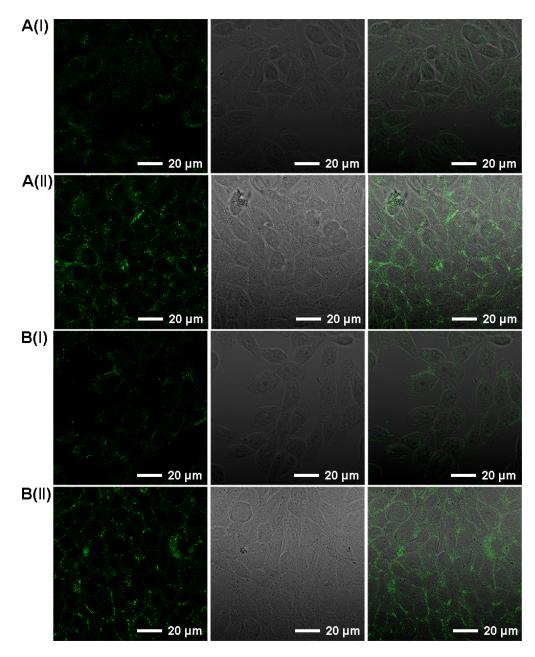


Figure S4. The confocal images of EMT6 cells labeled with QD@amPEN (A) and QD/Fe<sub>3</sub>O<sub>4</sub>/amPEN (B) nanospheres at a concentration of 60  $\mu$ g/mL and incubated for 3 h (I) and 12 h (II) under green channel, bright field, and merged images, respectively.