

## Supplementary Information (ESI) for:

# Ultrasensitive electrochemical detection of DNA hybridization using Au/Fe<sub>3</sub>O<sub>4</sub> magnetic composites combined with silver enhancement

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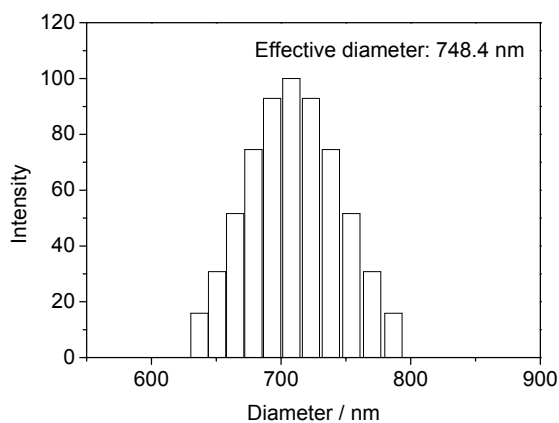


Figure S-1. The distribution of diameter of Fe<sub>3</sub>O<sub>4</sub>/PSS/PDDA/Au composites using DLS method. Liquid: water.

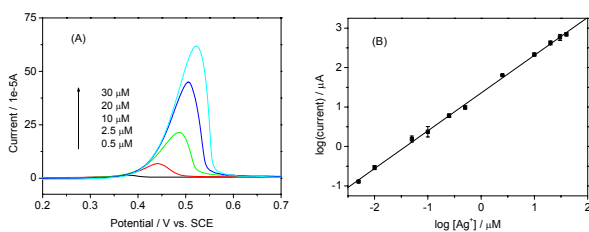


Figure S-2. (A) LSV of different concentrations of Ag<sup>+</sup> ions after pre-concentration at a GC electrode; (B) the calibration plots of the determination of Ag<sup>+</sup> ions. Error bars represent S. D., n=3.

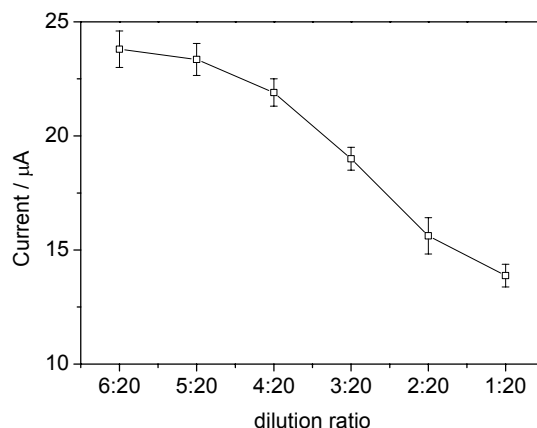


Figure S-3. Effect of the dilution ratio of Fe<sub>3</sub>O<sub>4</sub>/PSS/PDDA/Au-probe 2 conjugate upon the anodic stripping peak current. Other parameters of the assay: 1 μM probe 1, 5 fM target DNA. Error bars represent S. D., n=3.