Electronic Supplementary Materials

A sensitive plasmonic probe based on in-situ growth of Ag shell on the Au@N-CD nanocomposite for detection of isoniazid in environmental and biological samples

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Preparation procedure of pharmaceutical sample

Five isoniazid tablets were weighed to find the average mass of each tablet and then powdered and mixed. An accurately weighed portion of homogenized powder containing about 274 mg isoniazid was dissolved in about 20 ml deionized water. The solution was filtered into a 200 ml volumetric flask and the residue was washed several times with water, then diluted to the mark. An appropriate portion of this sample solution was taken for determination of isoniazid according to the general procedure.

Fig. S1. (a) Fluorescence emission spectra of N-CDs excited at 350–475 nm wavelength range, with increments of 25 nm.

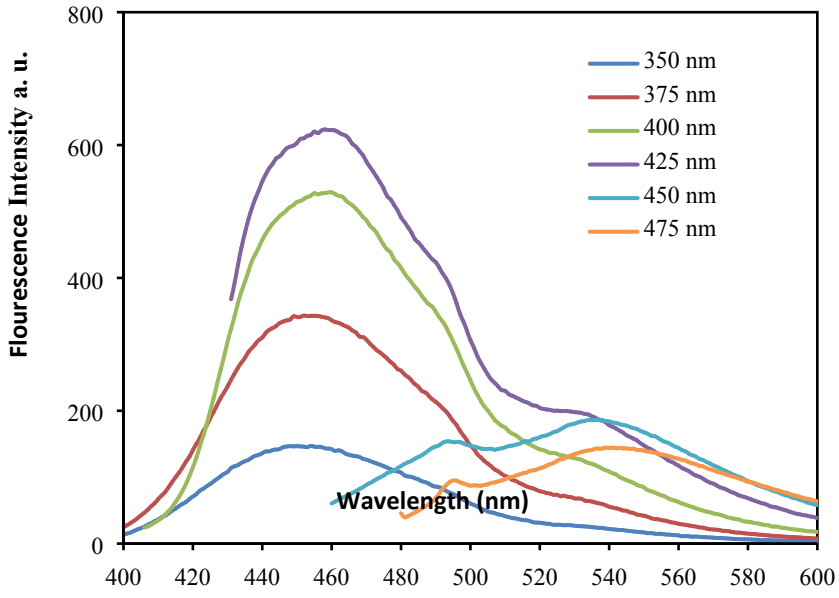

Fig. S1

Fig S2. FT-IR spectra of N-CDs and Au@N-CDs.

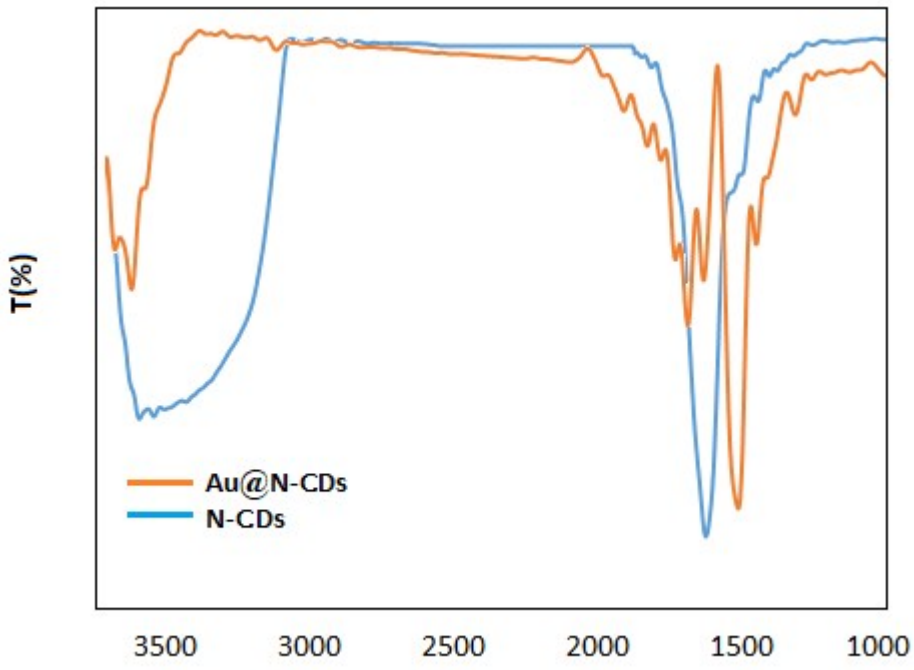

Fig. S2

Fig. S3. Optimization of conditions: (a) Effect of pH value; (b) Effect of buffer concentration. (c) Effect of Ag^{+} concentration. (d) Effect of amount of Au@N-CDs. (e) Effect of temperature (f) Effect of time.

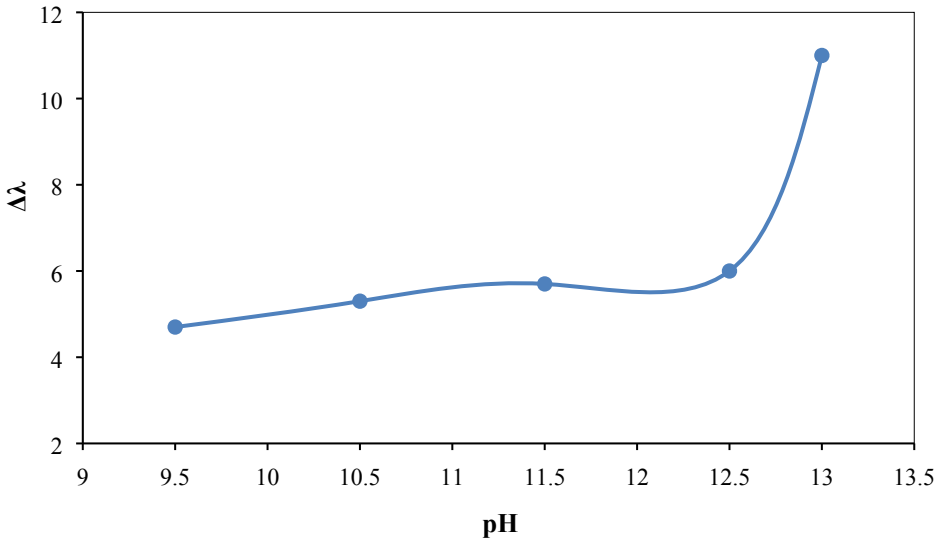

Fig. S3a

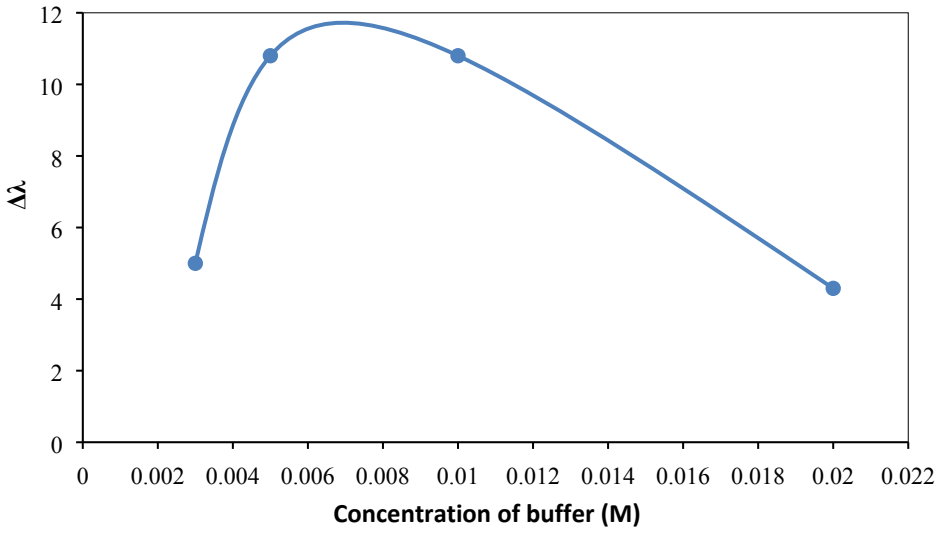

Fig. S3b

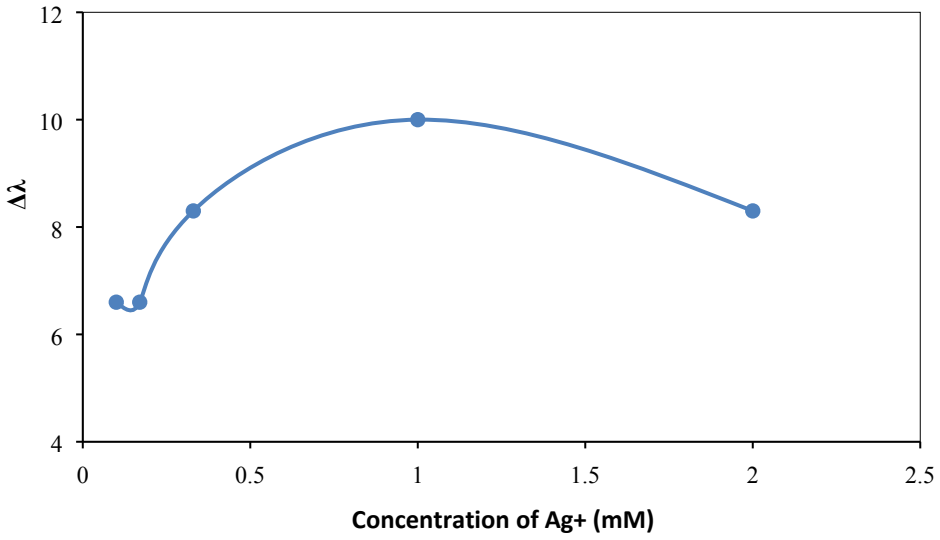

Fig. S3c

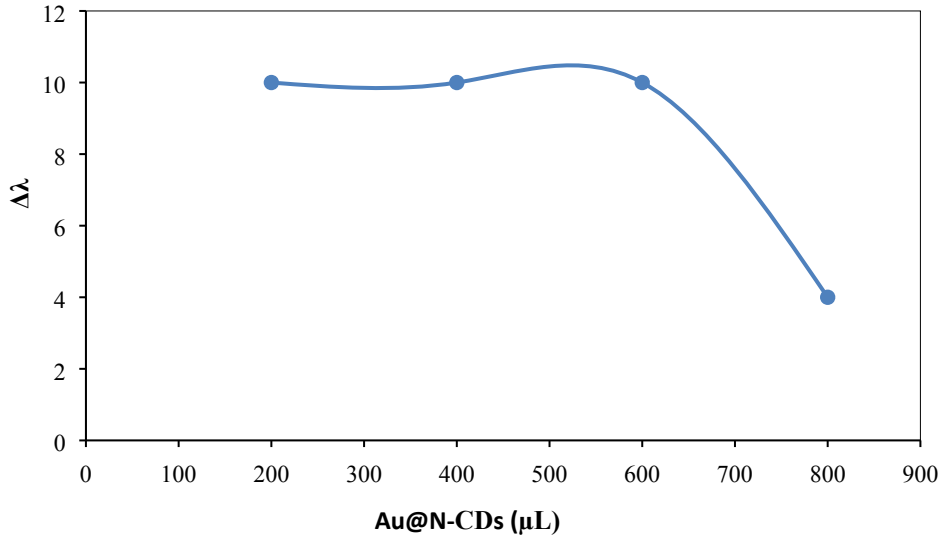

Fig. S3d

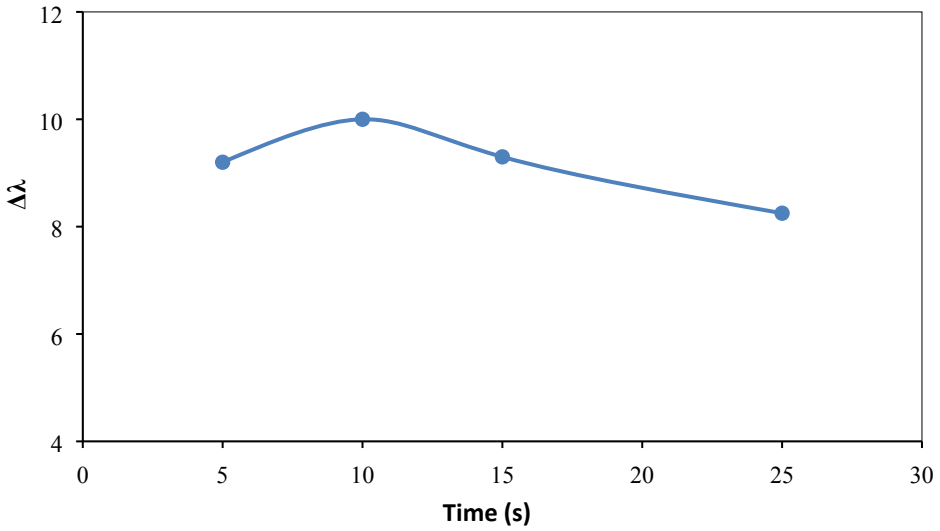

Fig. S3e

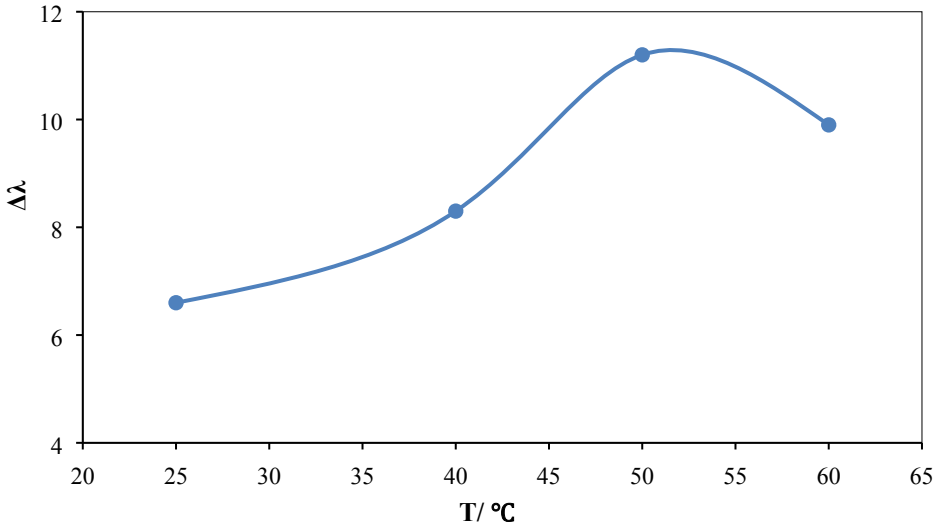

Fig. S3f

Fig. S4. Calibration curve AuNP/Ag^{+} in the presence of isoniazid.

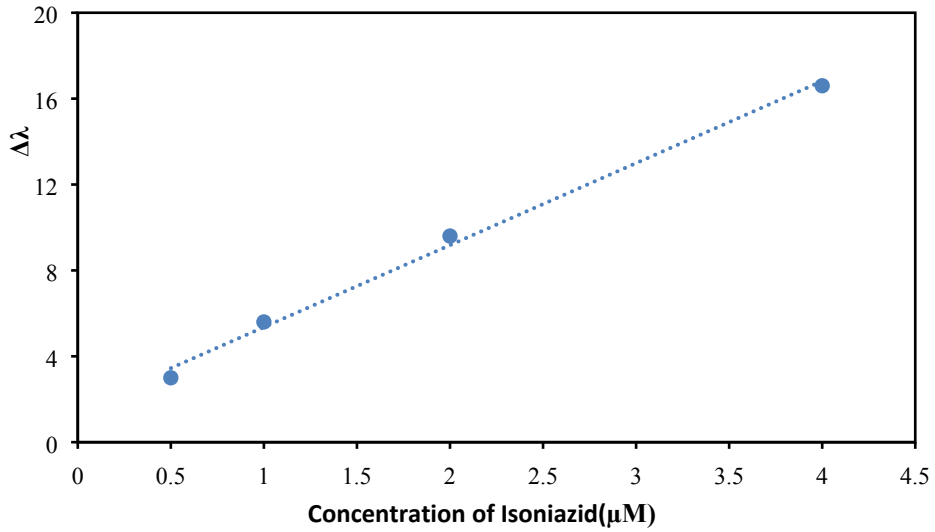

Fig. S4

Fig. S5. The influence of 50 µM Cu^{2+} on SPR spectrum of experimental solution including 1.0 µM isoniazid. Conditions: Au@N-CDs (400 µL), Ag^{+} (1 mM), Glycine buffer (5 mM, pH=13.5), T (50 °C), time (10 min).