Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

A plasmonic nanosensor for lipase based on enzyme-controlled gold nanoparticles growth in situ

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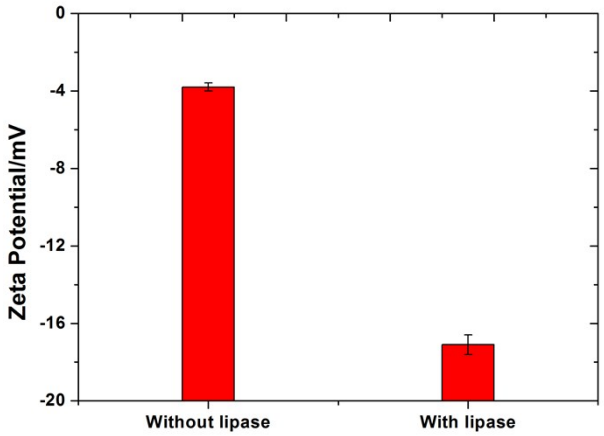

Fig. S1 Comparison of the zeta potentials in response to the AuNPs in the absence and presence of 2 mg lipase.

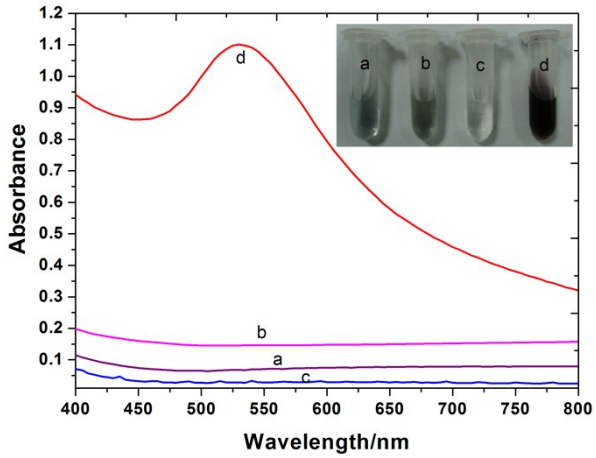

Fig. S2 Absorption spectra and photographs (inset) of solution: (a) Tween 20 + $HAuCl_4$ (b) Tween 40 + $HAuCl_4$ (c) Tween 60 + $HAuCl_4$ (d) Tween 80 + $HAuCl_4$.

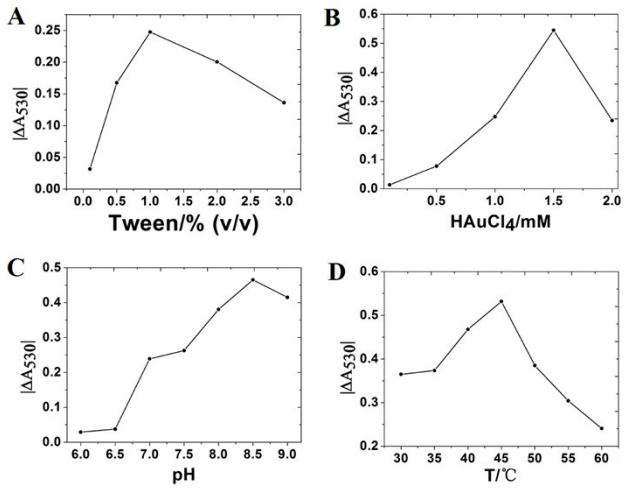

Fig. S3 Changes in absorbance at 530 nm as a function of (A) Tween 80 and (B) $HAuCl_4$ concentration; Effects of (C) pH and (D) temperature on lipase activity. All assays were performed with 2 mg mL^{-1} lipase.

Table S1 Use of Tween 80 as substrate in pH-stat method for detecting the hydrolytic activity of commercial lipases. All assays were performed with 2 mg mL^{-1} lipase at 45 ℃ and pH 8.5 for 10 min.

Lipase	SBE-01Li	RNL	PPL	CRL
Volume of NaOH consumed (mL)	0.16	0.88	1.55	2.89
Lipase activity (U mL^{-1})	0.07718	0.4245	0.7477	1.3941