

Supporting Information

Graphene oxide chemically decorated with Ag-Ru/chitosan nanoparticles:

Fabrication, Electrode Processing and Immunosensing Property

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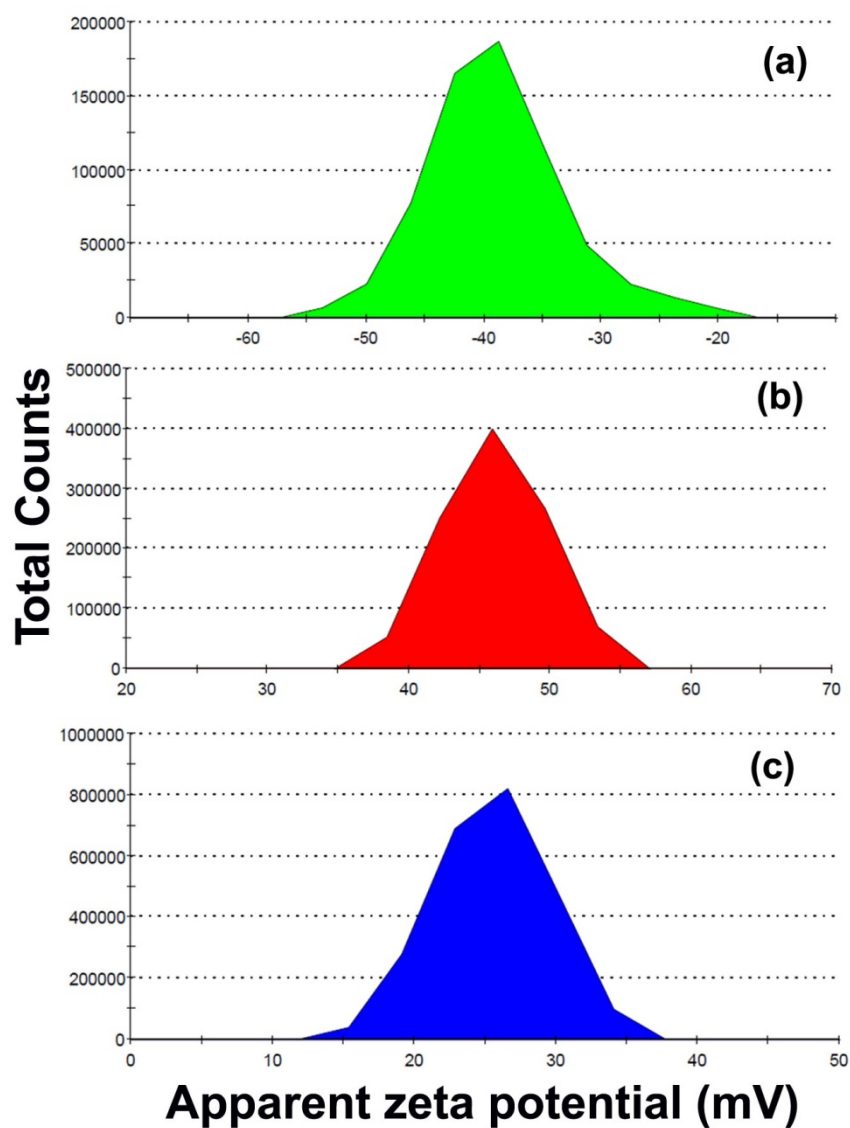


Fig. S1 Zeta potential distribution recorded in DI water. Each measurement was averaged by ten scans and the mean zeta potential for (a) GO, (b) HNPs and (c) HNPs-GO are -39 , $+46.1$ and $+26.6$ mV, respectively.

Table S1 Characteristic detection limit of the proposed HNPs-GO/anti-*Lm* immunosensor, summarized along with relevant results reported in literature.

Materials/Methods		Detection limit
Electrochemical immunoassay	HNPs-GO ^{This study}	2 cells/mL
	TiO ₂ nanowire bundle microelectrode ¹	470 cells/mL
	Planar Au ²	9 cells/mL
	Screen-printed Au ³	1.1×10 ⁴ cells/mL
	Planary polypyrrole ⁴	10 ⁶ cells/mL
	Planar Au ⁵	5 cells/mL
Immunoassay	Chemiluminescence ⁶	10 ⁴ to 10 ⁵ CFU/mL
	Sandwich or indirect ELISA ⁷⁻¹⁰	10 ⁶ to 10 ⁸ CFU/mL
	Dot blot analysis ¹	2.2 × 10 ⁵ CFU/mL
	Quartz crystal microbalance ¹¹	10 ⁷ cells/mL
	Fiber optic Immunosensor ¹²	4.3 × 10 ³ CFu/mL
	Surface Plasmon resonance ^{13,14}	10 ⁵ and 10 ⁶ cells/mL

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