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Supplementary information

Successive detection of glucose and bio-copper in human serum based on multiplex biosensor of gold nanorods

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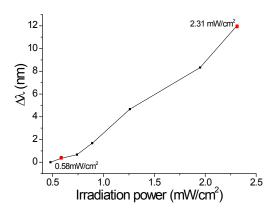
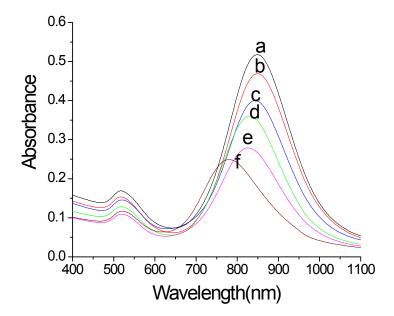
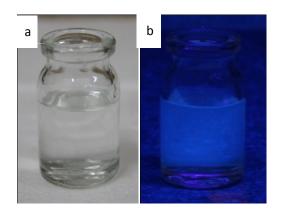


Figure S1. The relationship between degree of blue-shift of LPW and the intensity of UV light.



**Figure S2**. Absorption spectra obtained from the GNRs reacting with various concentration of  $Cu^{2+}$  in the presence of  $Na_2S_2O_3$ . (a: as-synthesized GNRs, b:1×10<sup>-10</sup>, c: 1×10<sup>-9</sup>, d: 1×10<sup>-8</sup>, e:1×10<sup>-7</sup>, f: 1×10<sup>-6</sup> M Cu<sup>2+</sup>)



**Figure S3.** Photographs of the copper nanoclusters under visible light (a) under UV light (b).