

Supporting information

Microwave-Assisted Synthesis of Bovine Serum Albumin-Gold Nanoclusters and Their Fluorescence-Quenched Sensing of Hg²⁺ ions

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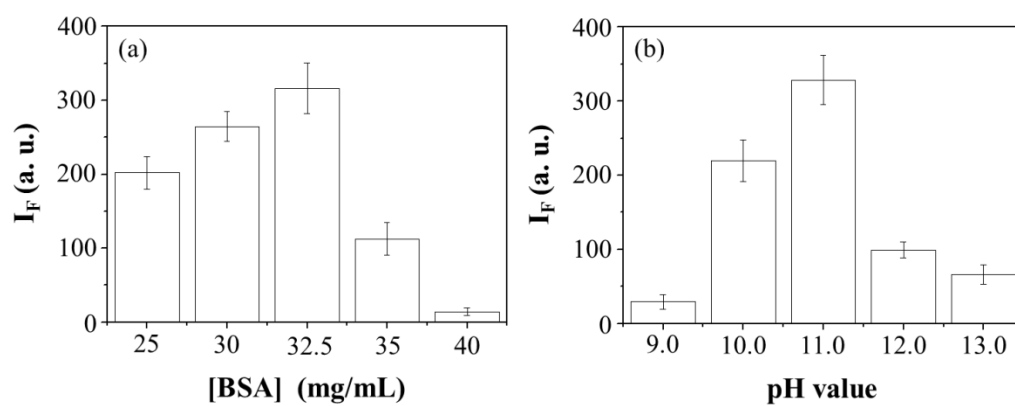


Figure S1. Fluorescence intensities of BSA-Au NCs prepared using (a) various BSA concentrations and (b) pH.

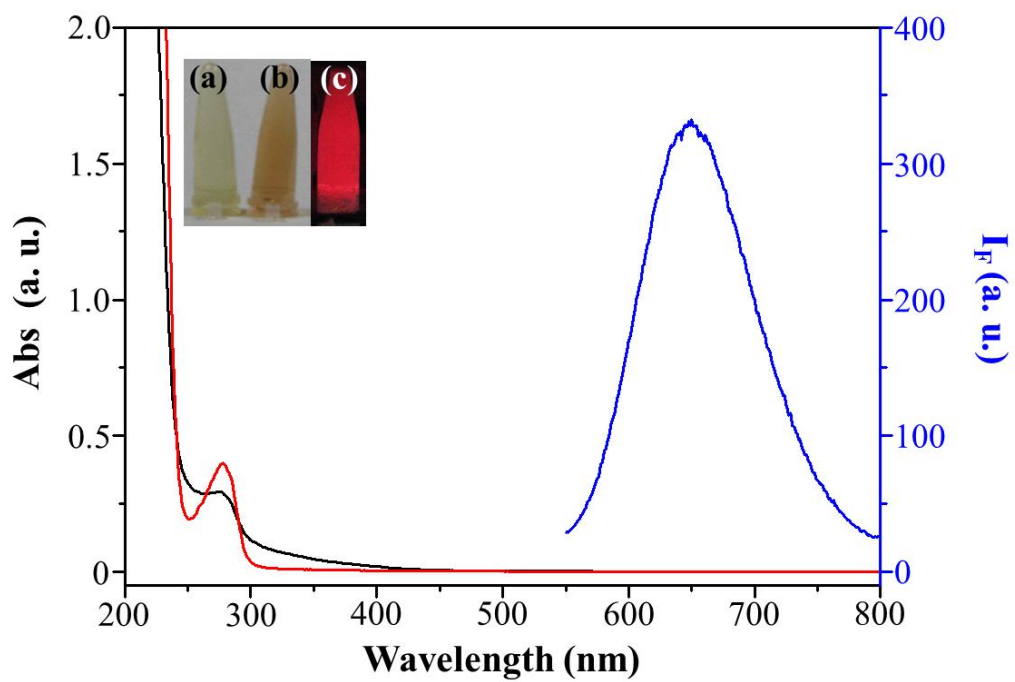


Figure S2. Absorption spectra of BSA (red line) and BSA-Au NCs (black line). Fluorescence spectrum of BSA-Au NCs prepared under optimal conditions. The inset displays the images of (a) BSA and (b) BSA-Au NCs under broad daylight and (c) BSA-Au NCs under UV light (λ_{ex} : 365 nm).

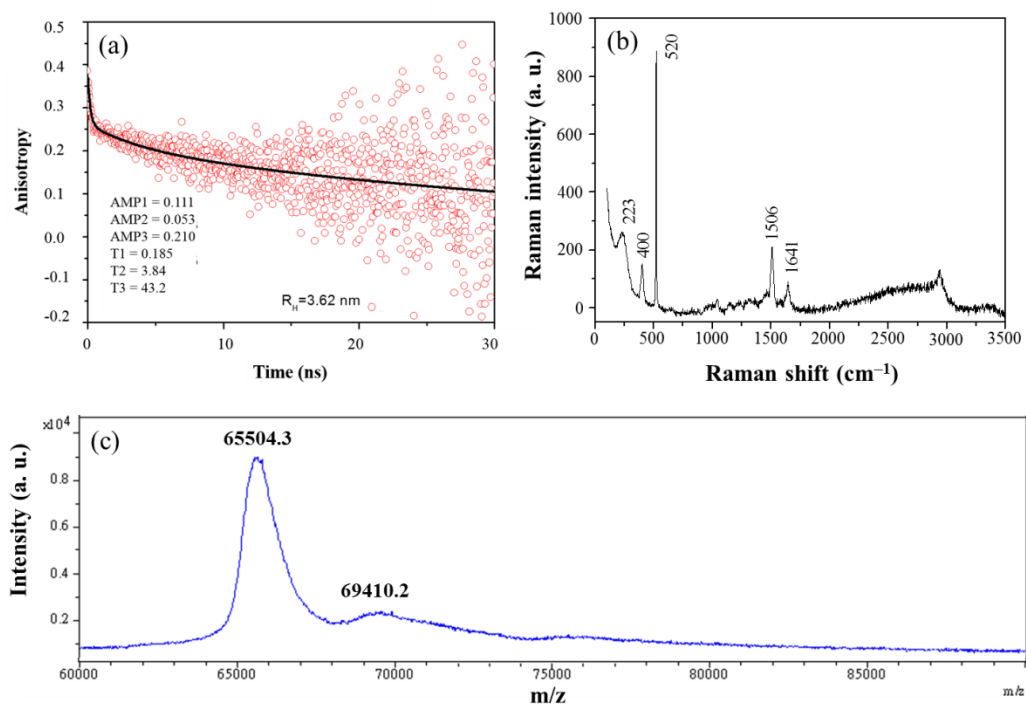


Figure S3. (a) Fluorescence anisotropy, (b) Raman, and (c) MALDI-MS spectra of BSA-Au NCs prepared under optimal conditions.

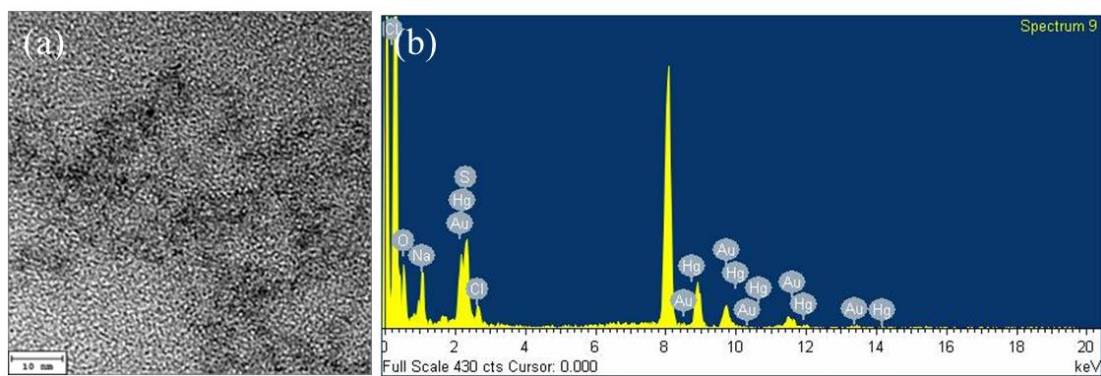


Figure S4. (a) TEM images and (b) EDS spectrum of BSA-Au NCs in the presence of Hg^{2+} ions ($1.0 \mu\text{M}$).

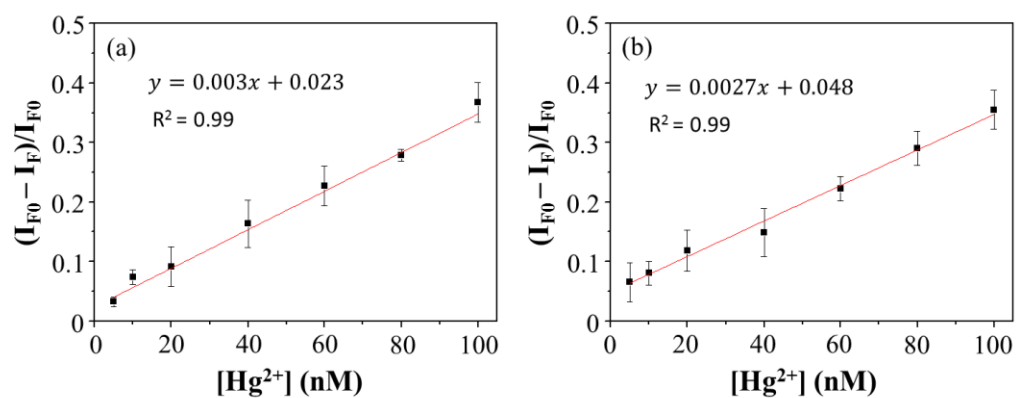


Figure S5. Standard addition analyses of (a) pond and (b) seawater samples examined using the BSA-Au NC probe. The aliquots of the samples were spiked with Hg^{2+} (5–100 nM).

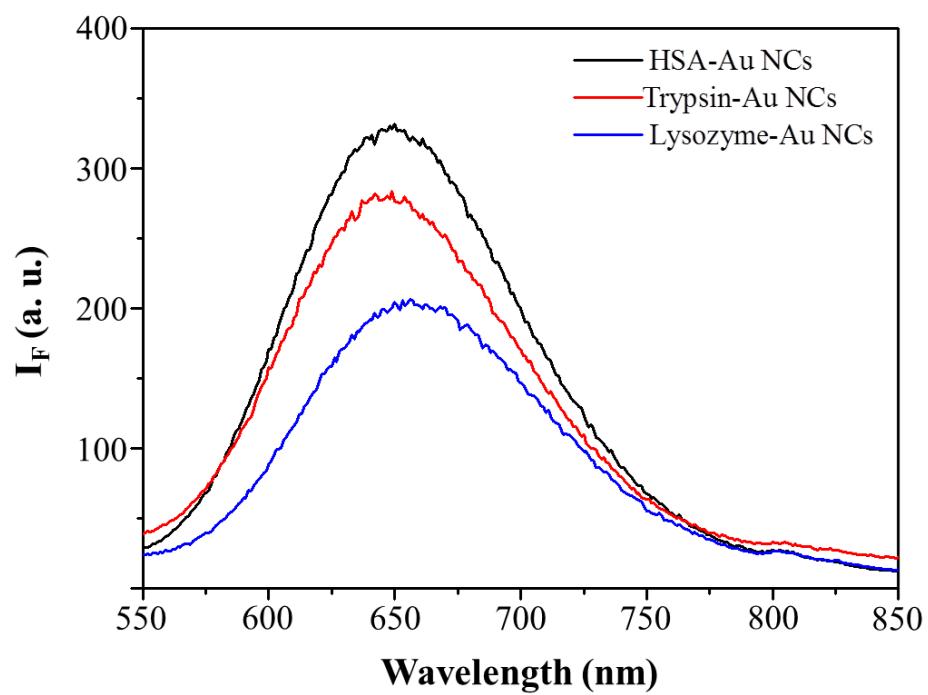


Figure S6. Fluorescence spectra of different kinds of protein-stabilized Au NCs. A MW programme consisting of 40 sec MW irradiation, 1.0 min pause, 40 sec MW irradiation, 1.0 min pause, and 40 sec MW irradiation was applied to prepare different kinds of protein-stabilized Au NCs.