Supporting information

Microwave-Assisted Synthesis of Bovine Serum Albumin-Gold Nanoclusters and
Their Fluorescence-Quenched Sensing of Hg^{2+} ions

Nai-Yue Hsu and Yang-Wei Lin*

Department of Chemistry, National Changhua University of Education, Changhua, Taiwan

Address correspondence to these authors at Department of Chemistry, National Changhua University of Education, Changhua City, PO Box 500, Taiwan; Fax: +886-4-721-1190; E-mail: linywjerry@cc.ncue.edu.tw
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 ($\lambda_{ex}$: 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 μM).
**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.