A dual sensor of fluorescent and colorimetric for lead instantly detecting

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Supporting Information.

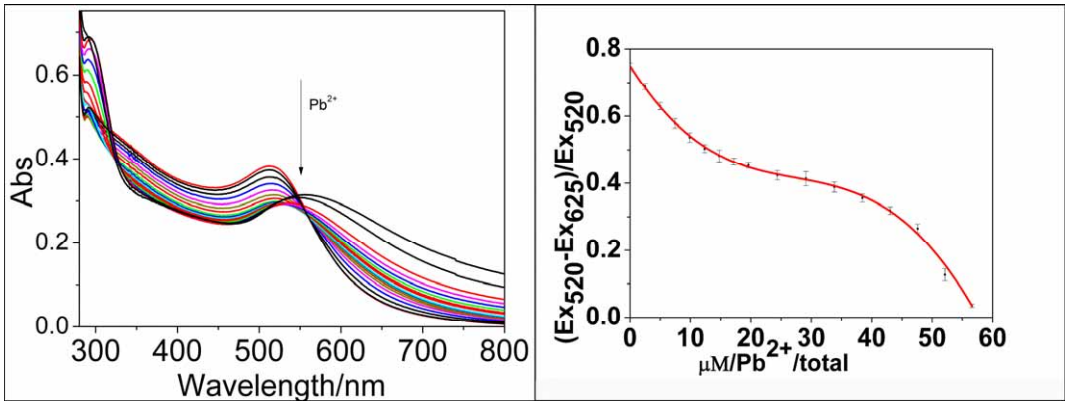

Fig. S1. Analyses of river water samples using the gold nanoparticles probe. The samples were spiked with Pb^{2+} ions at concentrations of 0-60 μM .Error bars represent standard deviations from five repeated experiments. Other conditions were the same as those used to obtain Fig.1.

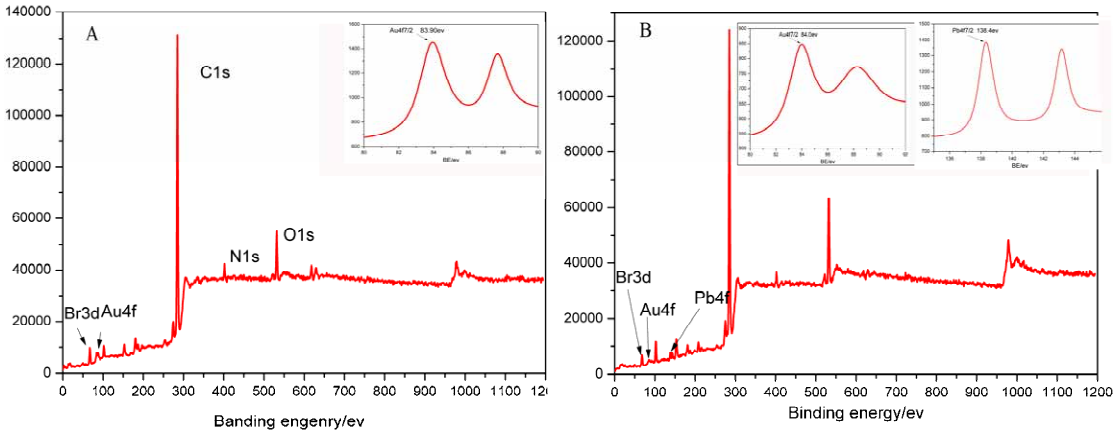

Fig S2. X-ray photoelectron spectroscopy. The samples were prepared by casting a drop of gold nanoparticles solution on glass and evaporated the solvent. (A) XPS of gold nanoparticles solution; (B) XPS of gold nanoparticles interact with Pb^{2+}. The inset figures are corresponding fine XPS signals of gold and lead.

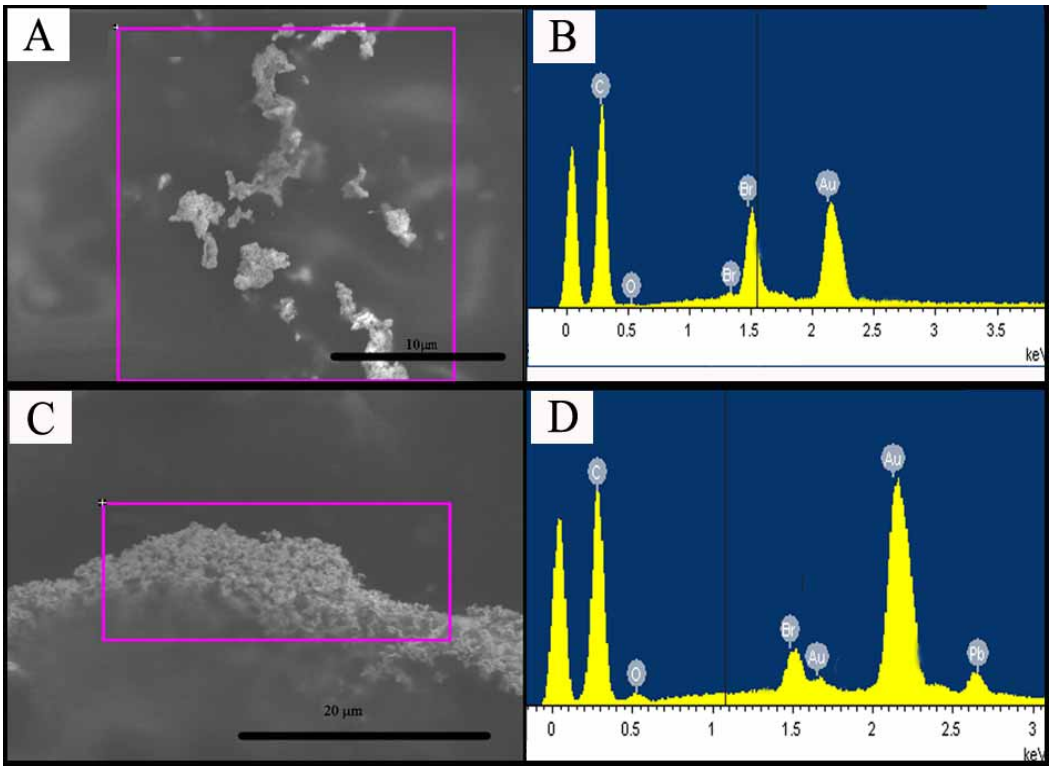

Fig S3. EDS of gold nanoparticles and the gold nanoparticles react with Pb^{2+}. (A, C) The SEM images of the samples corresponding to gold nanoparticles and gold nanoparticles react with Pb^{2+} respectively; (B, D) The EDS of the samples corresponding to gold nanoparticles and gold nanoparticles react with Pb^{2+} respectively. The samples were prepared by casting a drop of gold nanoparticles solution on glass and evaporated the solvent.

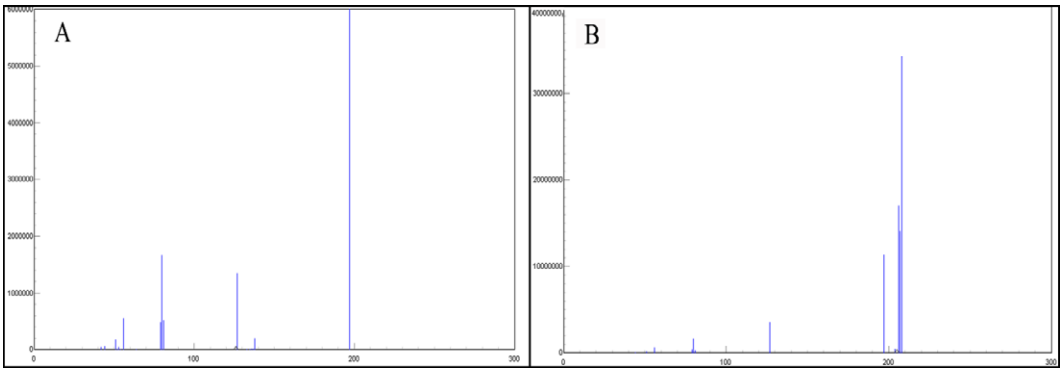

Fig. S4. ICP-MS. (A). ICP-MS of gold nanoparticles; (B) IPC-MS of gold nanoparticles after Pb^{2+} addition. Au at 197 and Pb at 206 with three isotope peaks.