Supplementary information (ESI)

Convenient fluorescence detection of Cr(III) in aqueous solution based on the gold nanoparticle mediated release of acridine orange probe

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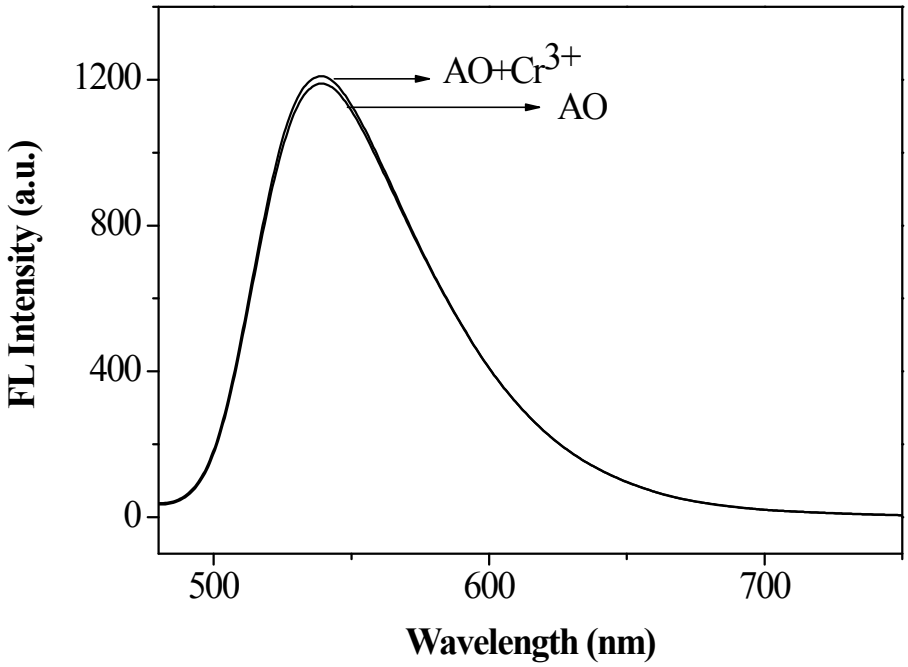

Fig. S1 Fluorescence emission spectra of 98 nM AO in the absence and presence of 5 nM Cr^{3+} ion.

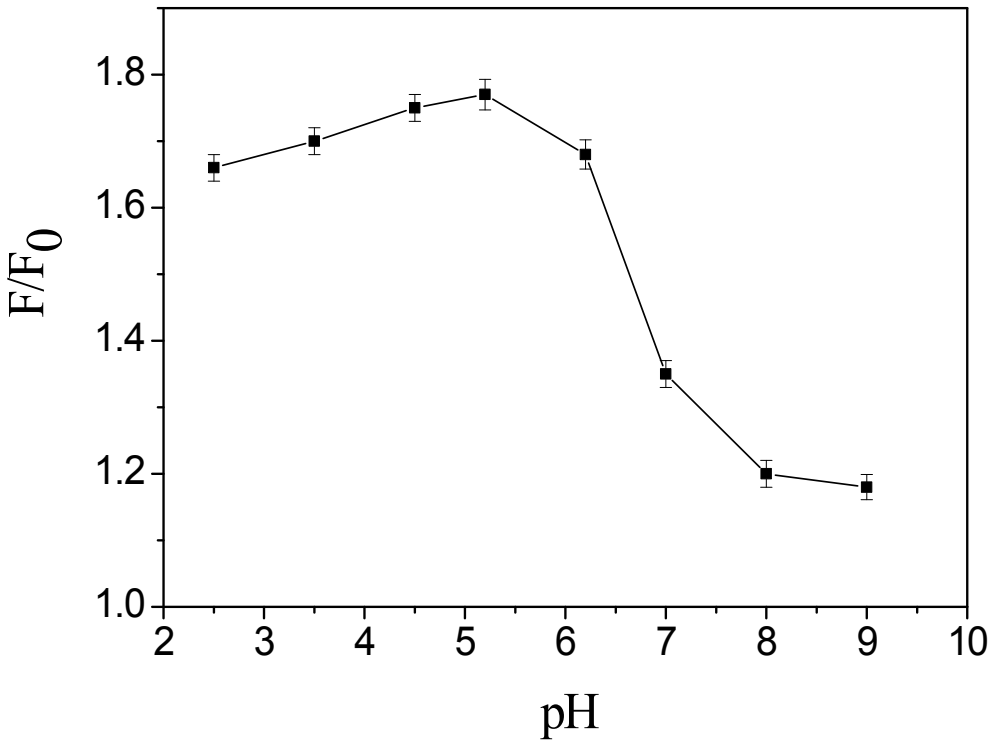

Fig. S2 Fluorescence intensity of the AO/AuNPs complex containing of 10 μM Cr^{3+} ion as a function of pH. The AO concentration was 98 nM, the AuNPs concentration was 3.5 nM.

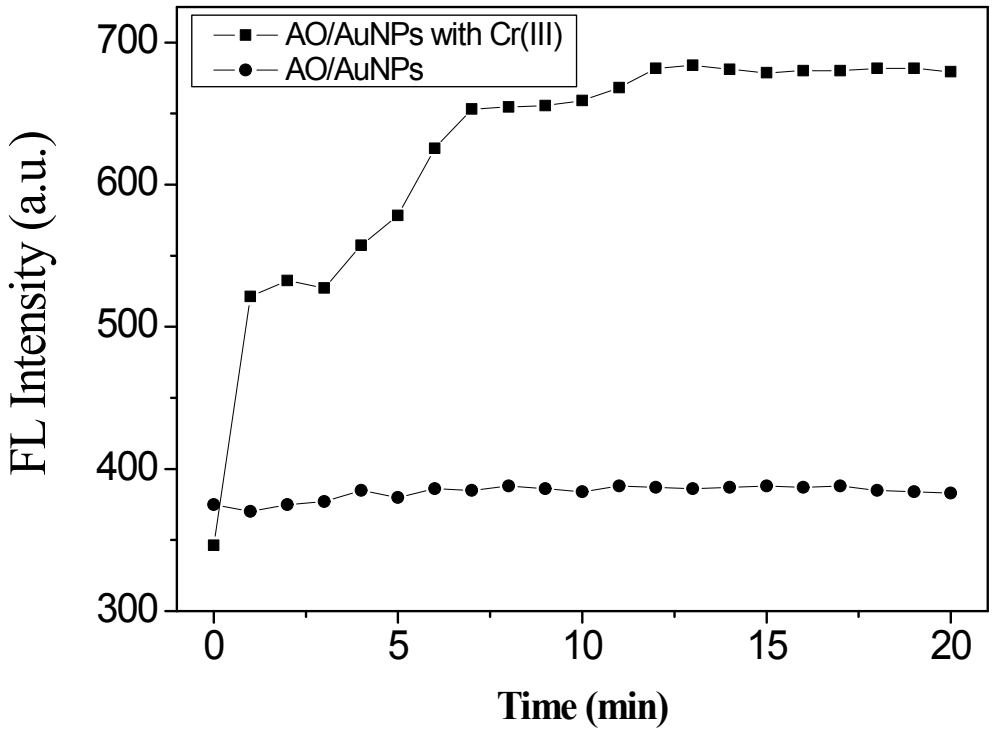

Fig. S3 Fluorescence recovery from the AO/AuNPs complex by Cr^{3+} ion as a function of time. A PBS buffer solution (pH 5.2) was used. The AOconcentration was 98 nM, the AuNPs concentration was 3.5 nM, the Cr^{3+} ion concentration was 10 μM.

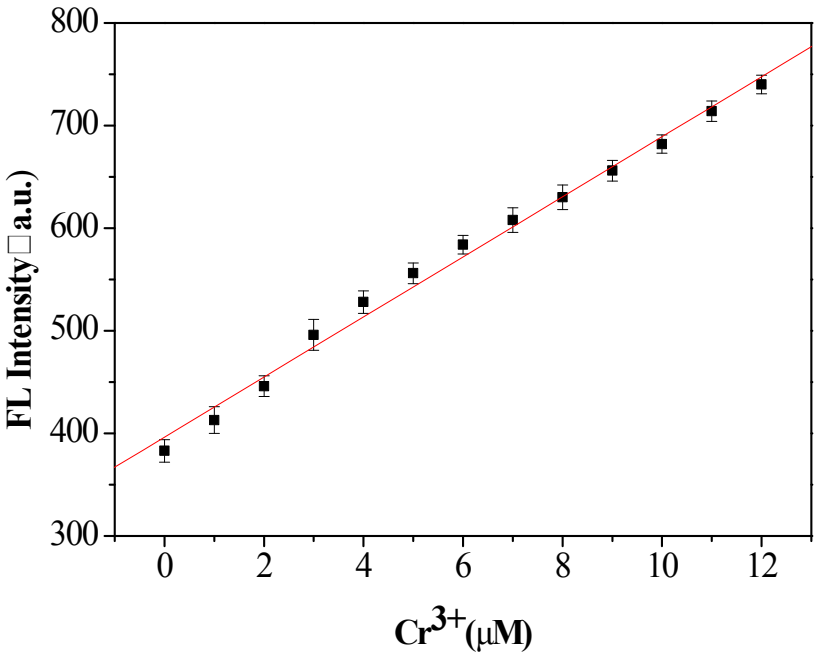

Fig. S4 Fluorescence intensity plotted against the Cr^{3+} ion concentration. The calibration equation was $F = 396.4 + 29.3C$, and the correlation coefficient (R^2) was 0.996.