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Detection of trace leucomalachite green with a nanoprobe of CdTe quantum dots coated with molecularly imprinted silica via synchronous fluorescence quenching

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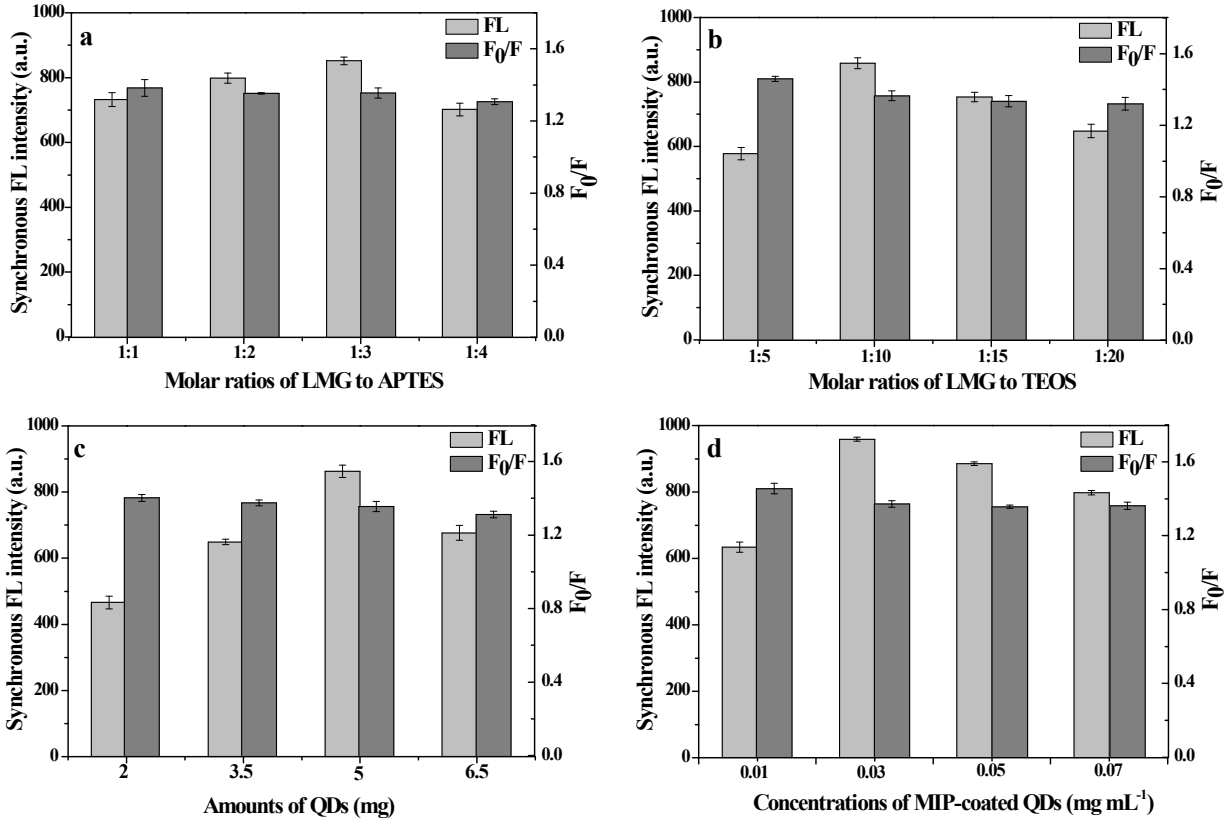

Fig. S1 Effects of synthesis conditions and different concentrations of MIP-coated QDs on the synchronous fluorescence intensities and quenching efficiencies. (a) Molar ratios of LMG to APTES, (b) molar ratios of LMG to TEOS, (c) amounts of QDs, (d) concentrations of MIP-coated QDs in detection system. The concentration of LMG (as quencher) was 5 μmol L^{-1}.

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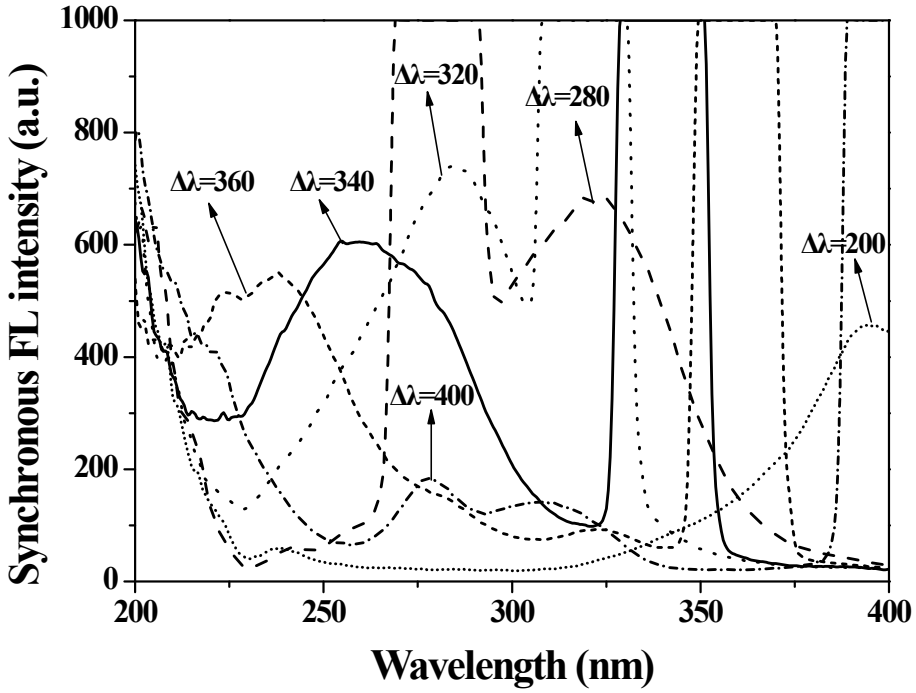

Fig. S2 Synchronous fluorescence spectra of MIP-coated QDs in acetonitrile at different wavelength intervals.

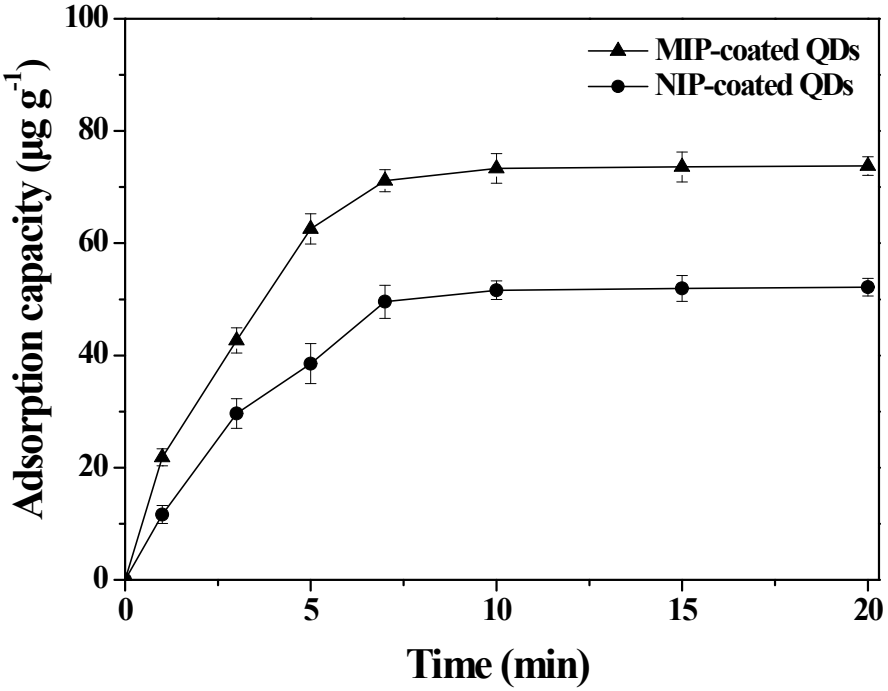

Fig. S3 Adsorption kinetic of MIP-coated QDs and NIPs-coated QDs (50 mg of MIPs/NIPs-coated QDs in 4 mL acetonitrile containing 150 μmol L^{-1} LMG).

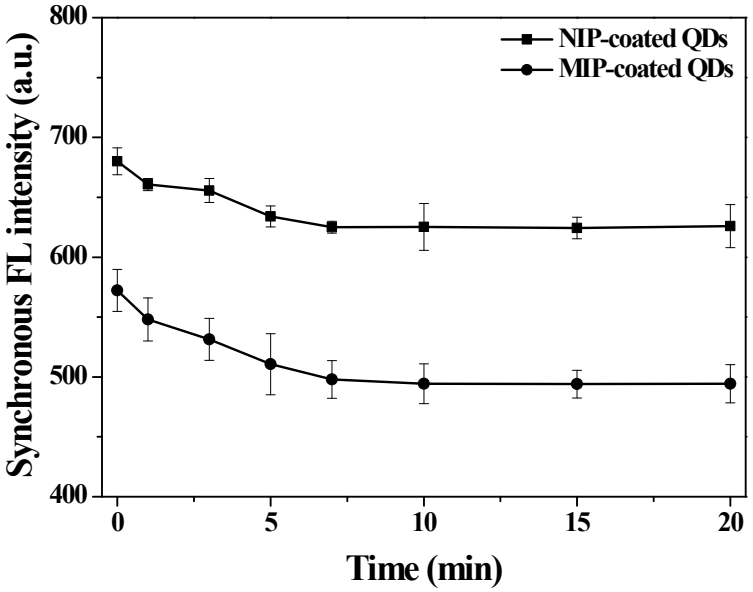

Fig. S4 Response time of the synchronous fluorescence quenching of MIP/NIP-coated QDs to LMG (5 μmol L^{-1} LMG in acetonitrile).

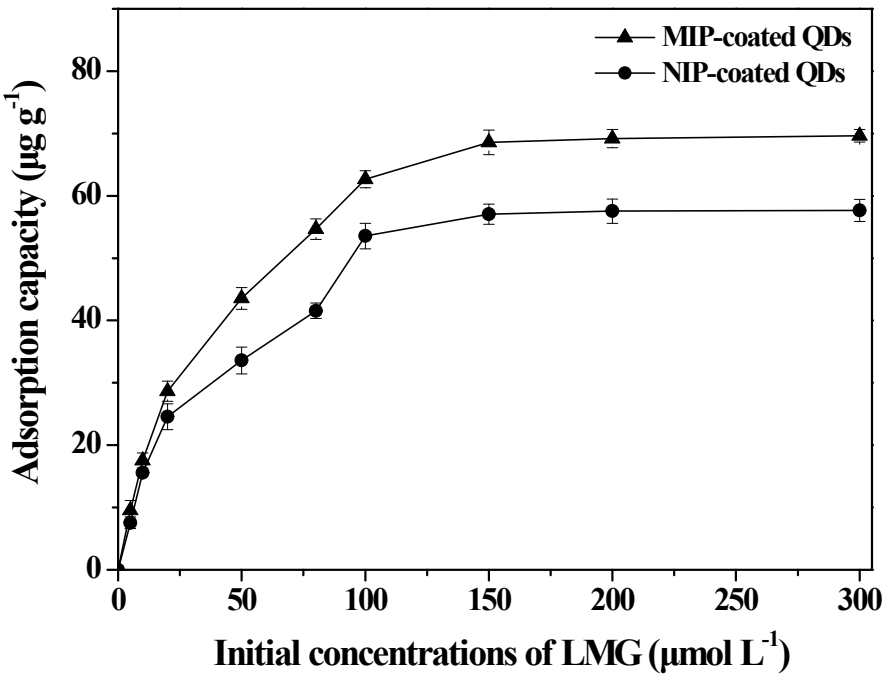

Fig. S5 Isothermal adsorption capacities of MIP/NIP-coated QDs.

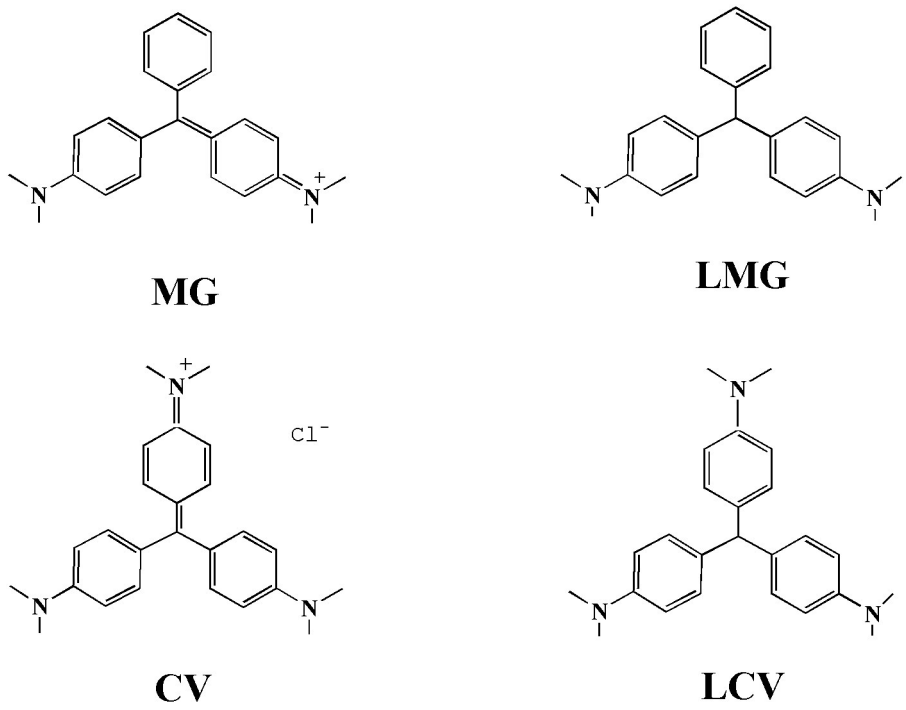

Fig. S6 The chemical structures of MG, LMG, CV and LCV.

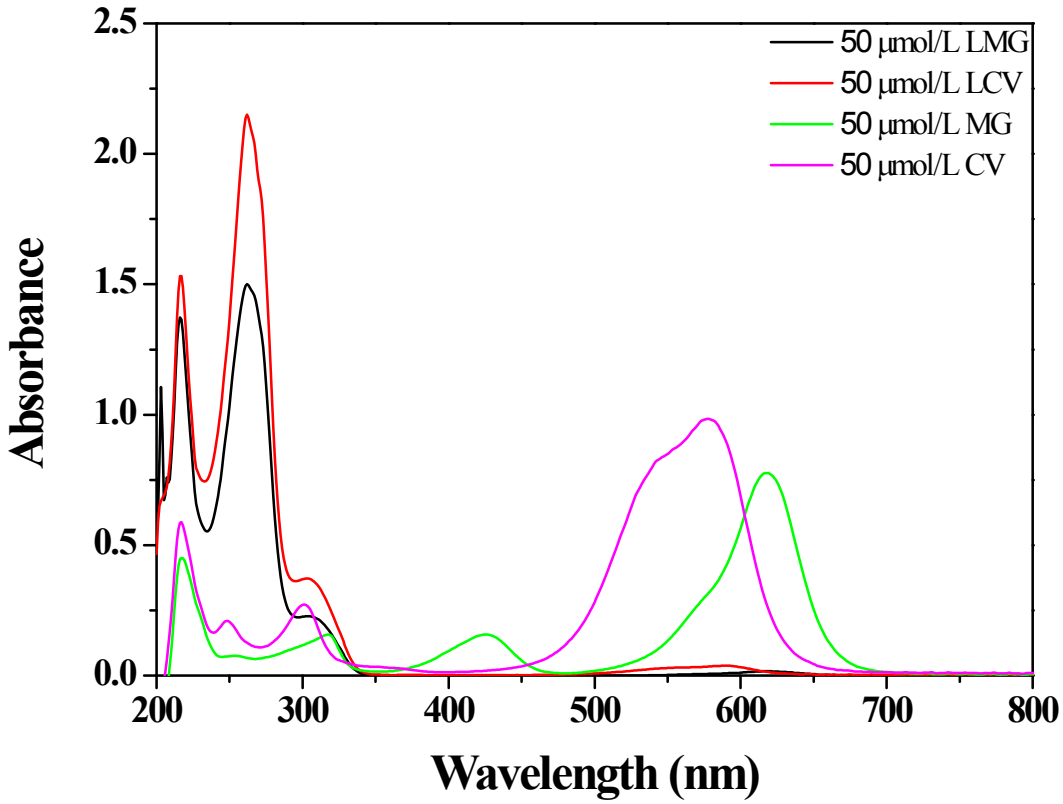

Fig. S7 The UV-Vis absorption spectra of LMG, LCV, MG and CV (each at 50 μmol L^{-1} in acetonitrile).