

Electronic Supplementary Information

A versatile fluorescence sensor for DNA detection based on layered double hydroxides and exonuclease III

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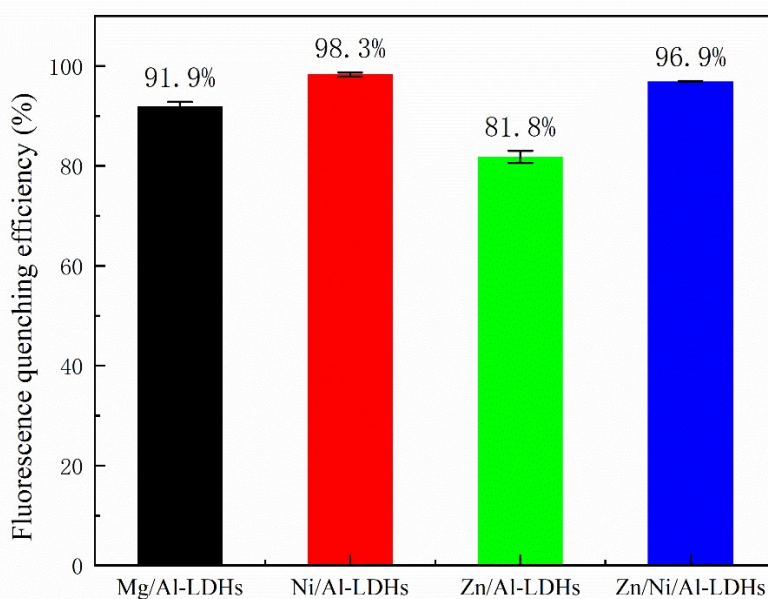


Fig. S1 Fluorescence quenching efficiencies of different types of LDHs on 20 nM P (P, 20 nM; LDHs, 0.2 mg/mL; adsorption time, 10 min; centrifugal time, 1 min).

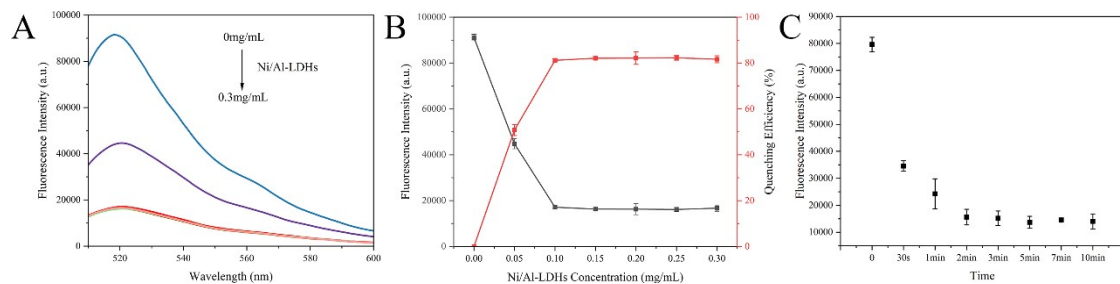


Fig. S2 (a) The fluorescence spectra of 20 nM P on different concentrations of Ni/Al-LDHs (Ni/Al-LDHs, 0.00, 0.05, 0.10, 0.15, 0.20, 0.25, 0.30 mg/mL; T, 20nM; Exo III, 20U; enzyme digestion time, 30 min; adsorption time, 10 min). **(b)** The fluorescence quenching ability of different concentrations of Ni/Al-LDHs on 20 nM P (Ni/Al-LDHs, 0.00, 0.05, 0.10, 0.15, 0.20, 0.25, 0.30 mg/mL; T, 20nM; Exo III, 20U; enzyme digestion time, 30 min; adsorption time, 10 min). **(c)** The effect of adsorption time on the fluorescence quenching (P, 20 nM; T, 20nM; Ni/Al-LDHs, 0.1 mg/mL; Exo III, 20U; enzyme digestion time, 30 min; adsorption time, 0~10 min).

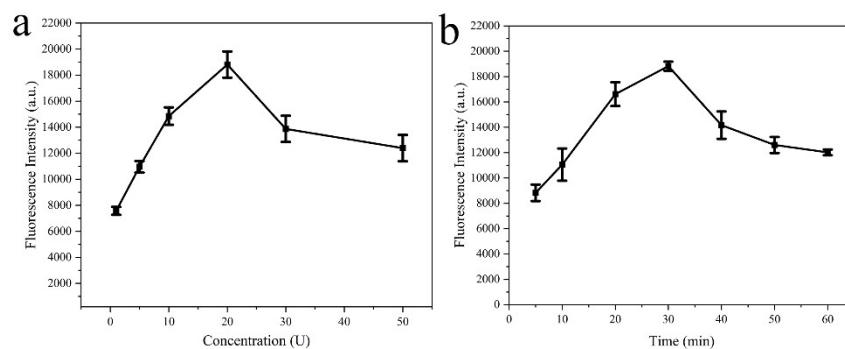


Fig. S3 (a) The effect of different concentrations of Exo III on the measured fluorescence intensities (P, 20 nM; T, 20 nM; Ni/Al-LDHs, 0.1 mg/mL; adsorption time, 2 min; enzyme digestion time, 30 min; Exo III concentration, 0-50 U). **(b)** The effect of enzyme digestion time on the measured fluorescence intensity (P, 20 nM; T, 20 nM; Ni/Al-LDHs, 0.1 mg/mL; adsorption time, 2 min; Exo III concentration, 20 U; enzyme digestion time, 5-60 min).