Electronic Supplementary Information (ESI)

Cyanobacterium metallothionein decorated graphene oxide nanosheets for highly selective adsorption of ultra-trace cadmium

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Figure S1. The vector map of pET29a-SmtA and agarose gel electrophoresis. Electrophoresis condition: agarose, 0.8%, voltage, 150V, supercoiled DNA ladder marker, plasmid was loaded without enzyme cleavage.

Figure S2. The SDS-PAGE of purified SmtA.
Lane M: molecular weight standards (marker in kDa); Lane 1: cell lysis solution of induced E. coli SmtA; Lane 2: effluent after purification by Ni-NTA affinity column; Lane 3: purified SmtA;

Figure S3. The effect of sampling flow rate on the cadmium sorption efficiency by SmtA-GO@cytopore. Sample: 200 μL, pH 6, 1.0 μg L^{-1} Cd^{2+}; Eluent (0.1 mol L^{-1} HNO_3): 50 μL; Elution flow rate: 2 μL s^{-1}.

Figure S4. The effect of eluent concentration on the cadmium elution efficiency. Sample: 500 μL, pH 6, 0.1 μg L^{-1} Cd^{2+}; Sample loading flow rate: 5 μL s^{-1}; Eluent: 50 μL; Elution flow rate: 2 μL s^{-1}.

Figure S5. The effect of elution flow rate on the cadmium elution efficiency. Sample: 500 μL, pH 6, 0.1 μg L^{-1} Cd^{2+}; Sample loading flow rate: 5 μL s^{-1}; Eluent (0.1 mol L^{-1} HNO_3): 50 μL.

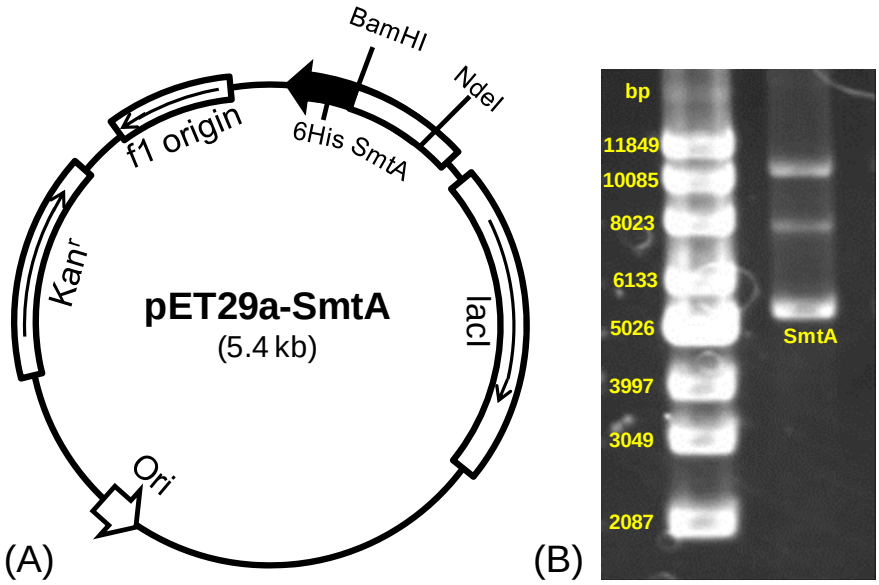

Figure S1

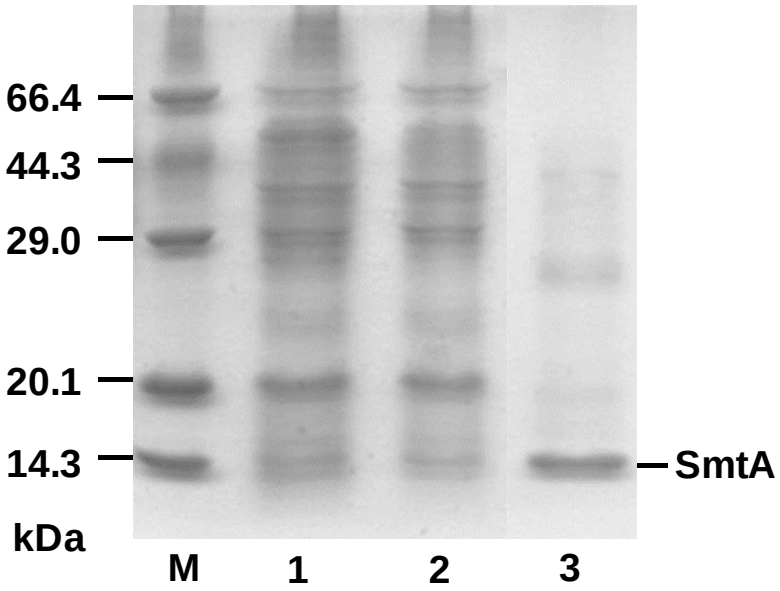

Figure S2

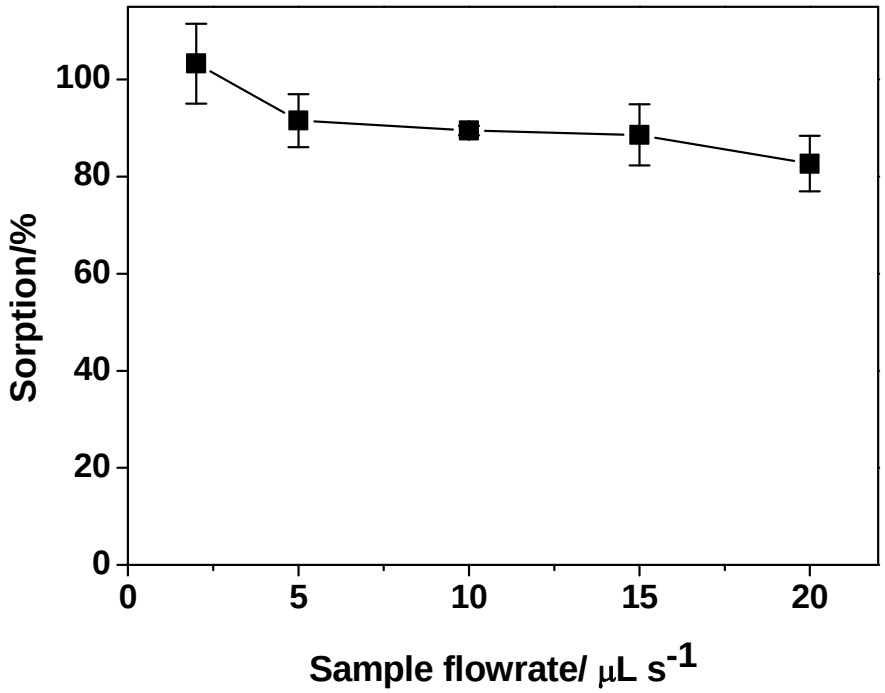

Figure S3

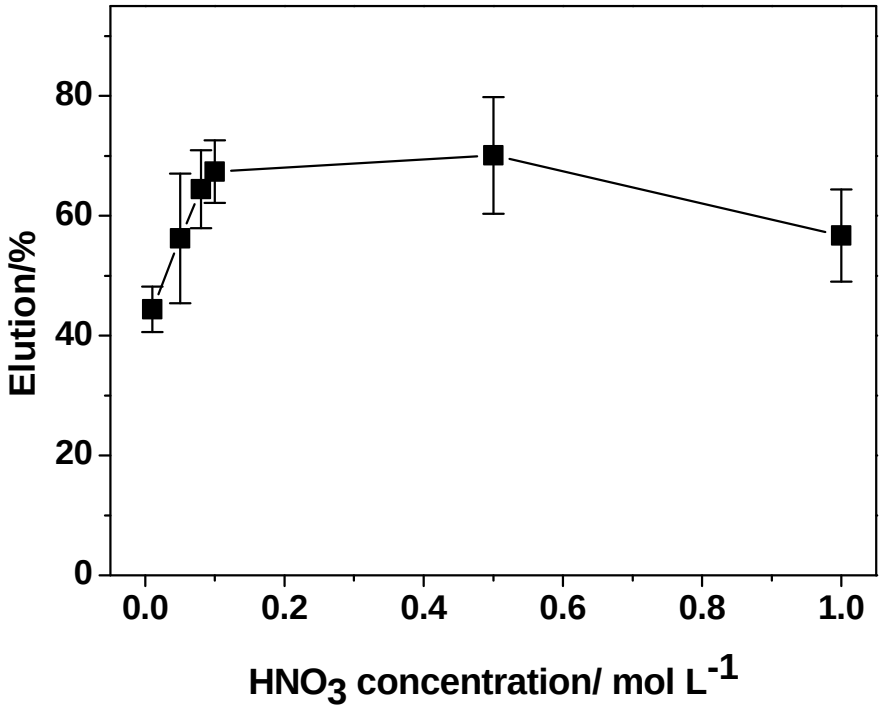

Figure S4

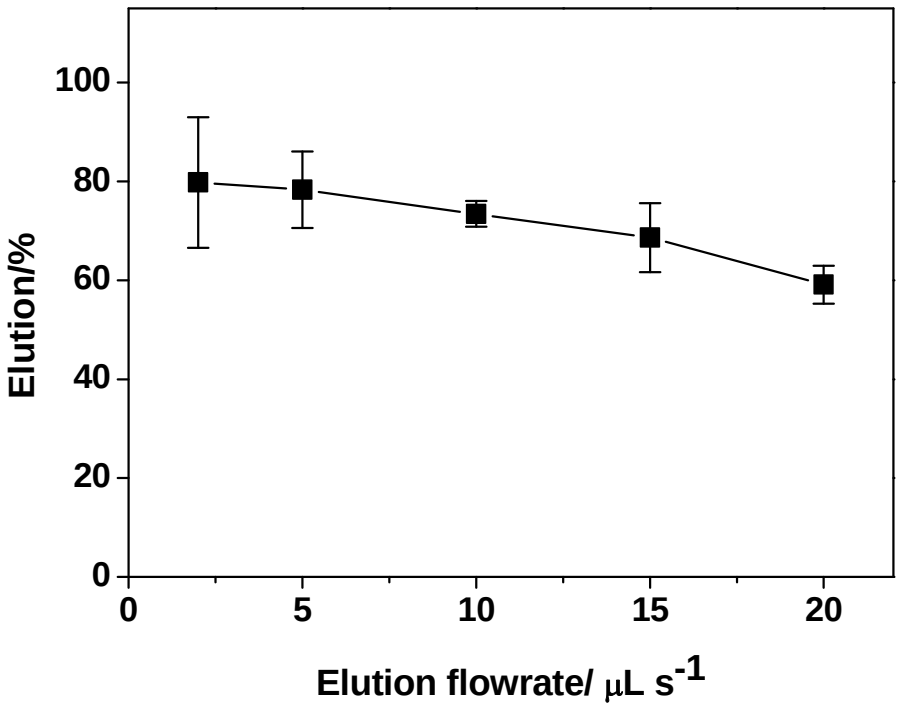

Figure S5