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Polymer decorated magnetite materials as smart protein separators to manipulate the high loading of heme proteins

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Supporting information

Adsorption data for Lysozyme

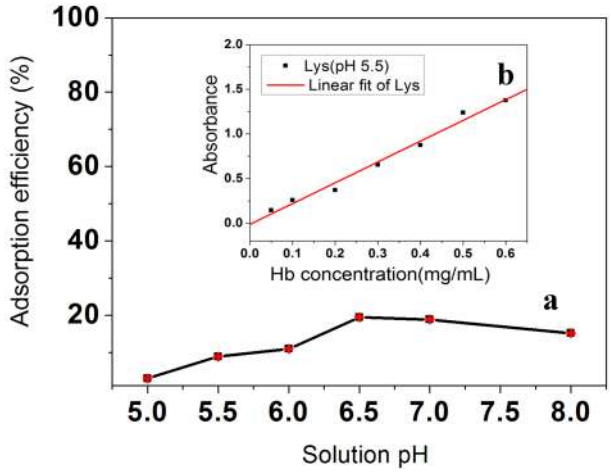

Fig. S1 pH dependence of the adsorption efficiencies of 0.1 mg/mL protein (Lys) in 2 mL phosphate buffer (1/15 mol/L, pH 5.0-8.0) by 3 mg PVIM-MMPs (a). Standard curves of Lys in the PBS (pH 5.5) (b).

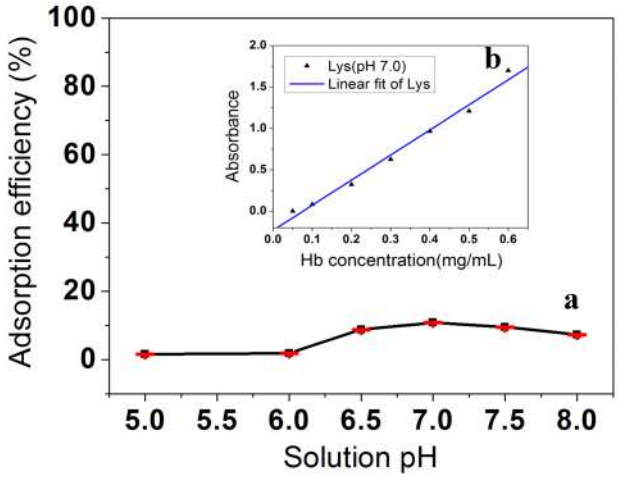

Fig. S2 pH dependence of the adsorption efficiencies of 0.1 mg/mL protein (Lys) in 2 mL phosphate buffer (1/15 mol/L, pH 5.0-8.0) by 3 mg PVIM-MNPs (a). Standard curves of Lys in the PBS (pH 7.0) (b).

Seen from Fig. 4 in the manuscript, for PVIM-MMPs, the maximum adsorption efficiency was achieved at pH 5.5 (Fig. 4-a), while pH 7.0 for PVIM-MNPs (Fig. 4-b). After treated with PVIM-MMPs, the Lys adsorption efficiency can be seen from above figures (Fig. S1-a and Fig. S2-a). We calculated the adsorbed amount (q) of Lys on single component toward PVIM-MMPs and PVIM-

MNPs with the support of standard curves of Lys (Fig. S1-b and Fig. S2-b). And the q of Lys towards PVIM-MMPs is 0.042 mg/mg, and towards PVIM-MNPs is 0.006 mg/mg.