Fig. S1 Magnetization curves of Fe_3O_4@CMC (A), Fe_3O_4@CMC@PPDIL (B), Fe_3O_4@CMC@PDIL (C) and Fe_3O_4@CMC@PDIL/$CaCO_3$ (D).

Fig. S2 TGA thermograms of Fe_3O_4@CMC (A), Fe_3O_4@CMC@PPDIL (B), Fe_3O_4@CMC@PDIL (C) and Fe_3O_4@CMC@PDIL/$CaCO_3$ (D).

Fig. S3 FT-IR spectrum of DIL-monomer (A), Fe_3O_4@CMC (B), Fe_3O_4@CMC@PPDIL (C), Fe_3O_4@CMC@PDIL (D) and Fe_3O_4@CMC@PDIL/$CaCO_3$ (E).

Fig. S4 Zeta potentials of Fe_3O_4@CMC, Fe_3O_4@CMC@PPDIL, Fe_3O_4@CMC@PDIL and Fe_3O_4@CMC@PDIL/$CaCO_3$.

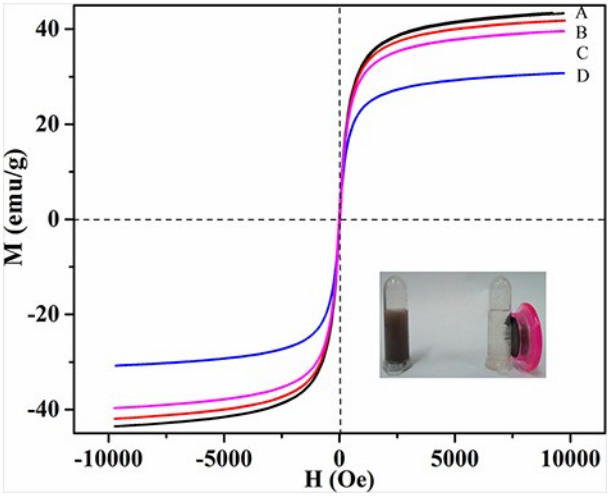

Fig. S1 Magnetization curves of Fe_3O_4@CMC (A), Fe_3O_4@CMC@PPDIL (B), Fe_3O_4@CMC@PDIL (C) and Fe_3O_4@CMC@PDIL/$CaCO_3$ (D).

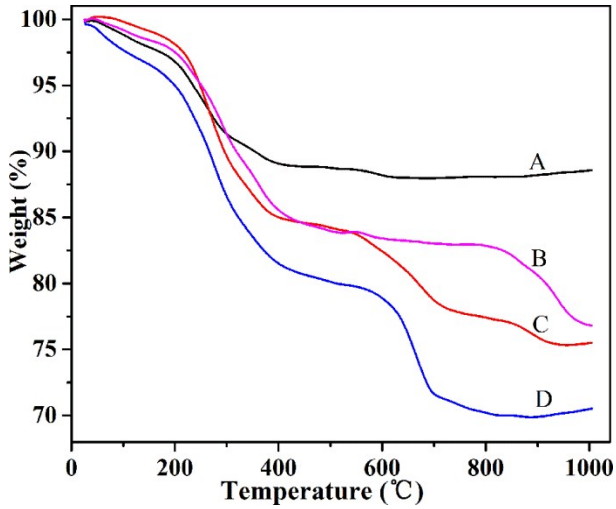

Fig. S2 TGA thermograms of Fe_3O_4@CMC (A), Fe_3O_4@CMC@PPDIL (B), Fe_3O_4@CMC@PDIL (C) and Fe_3O_4@CMC@PDIL/$CaCO_3$ (D).

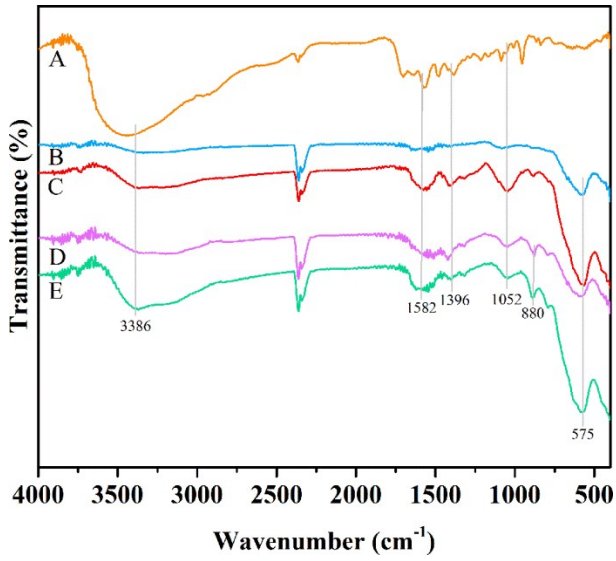

Fig. S3 FT-IR spectrum of DIL-monomer (A), Fe_3O_4@CMC (B), Fe_3O_4@CMC@PPDIL (C), Fe_3O_4@CMC@PDIL (D) and Fe_3O_4@CMC@PDIL/$CaCO_3$ (E).

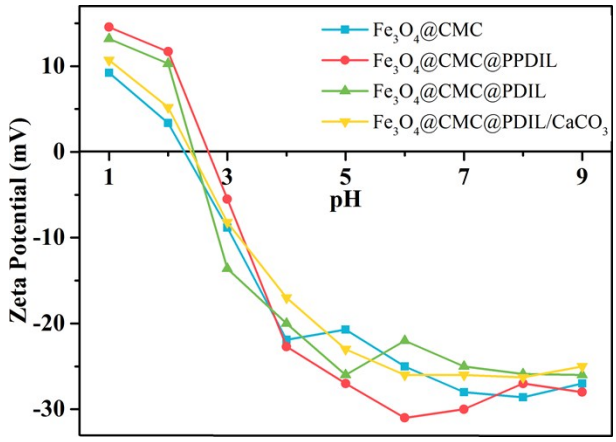

Fig. S4 Zeta potentials of Fe_3O_4@CMC, Fe_3O_4@CMC@PPDIL, Fe_3O_4@CMC@PDIL and Fe_3O_4@CMC@PDIL/$CaCO_3$.