Electronic Supplementary Information

Facile Preparation of Hybrid Porous Polyanilines for High Efficient Cr(VI) Removal

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Structure characterization

Fourier-transformed infrared (FT-IR) spectra were performed on a Bruker TENSOR27 infrared spectrophotometer from 400 to 4000 cm^{-1} at a resolution of 4 cm^{-1} by KBr disk method. UV-Vis spectra were recorded by Shimadzu UV-2600 UV-vis spectrometer and the concentration of Cr(VI) solution was measured using UV-vis spectrophotometer at 540 nm. Field-emission scanning electron microscopy (FE-SEM) graphics were recorded by a HITACHI S4800 spectrometer. Thermal gravimetric analysis (TGA) was performed on a Mettler Toledo model SDTA 854 TGA system under N_2 atmosphere at a heating rate of 10 °C min^{-1} from ambient temperature to 1000 °C. Powder X-ray diffraction (PXRD) images were recorded with a Riguku D/MAX 2550 diffractometer under Cu-Kα radiation, 40 kV, and 200 mA with a scanning rate of 10° min^{-1}. N_2 adsorption-desorption experiment was performed on a Micro Meritics surface area and pore size analyzer. The surface area and pore size distribution were calculated by using the Brunauer-Emmet-Teller (BET) equation and Nonlocal density functional theory (NL-DFT) on the basis of the adsorption isotherm. The X-ray photoelectron spectroscopy (XPS) was conducted on a Thermo ESCALAB 250Xi, operating at 15 kV and 15 mA with an alumina target (Al–Kα, hv = 1486.6 eV), The binding energy of the C 1s peak at 284.8 eV was used as the reference. The spectrum decomposition was performed using the XPS Peak 41 program with Gaussian functions after subtraction of a Shirley background.

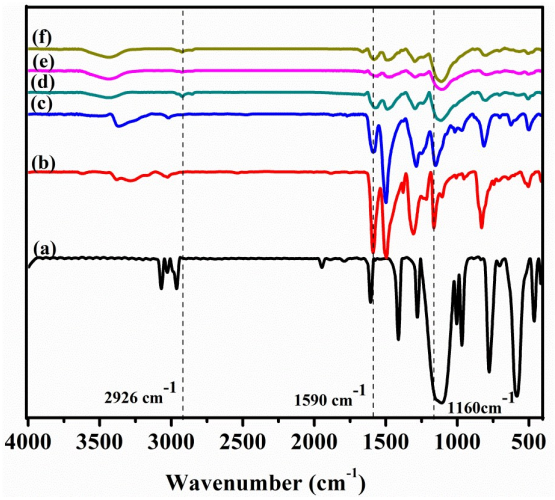

Fig S1. FT-IR spectra of (a) OVS; (b) emeraldine; (c**)** leucoemeraldine**;** (d) LHPP-1; (e) LHPP-2 and (f) LHPP-3.

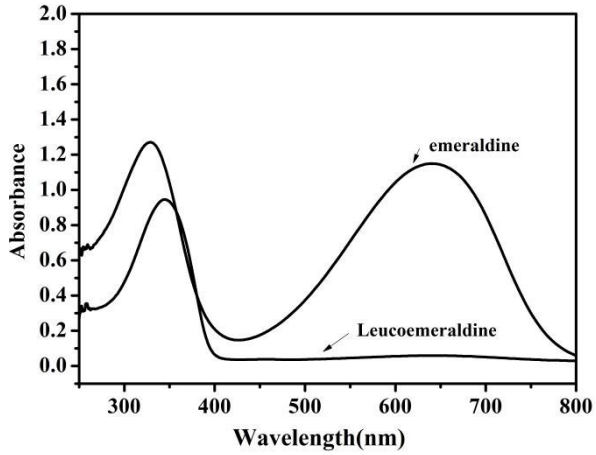

Fig S2. UV-Vis spectra of emeraldine and leucoemeraldine.

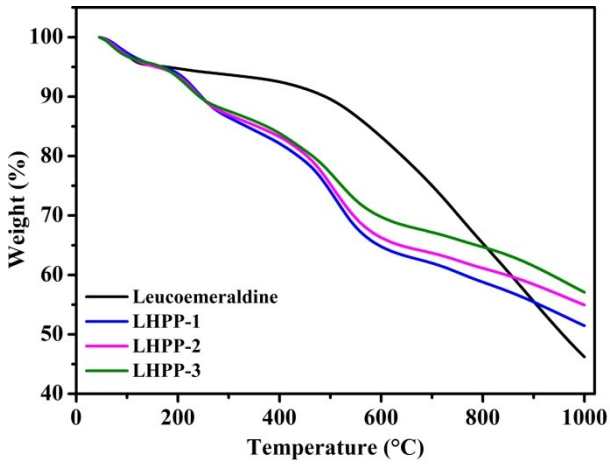

Fig S3. TGA curves of leucoemeraldine, LHPP-1, LHPP-2 and LHPP-3.