Electronic Supplementary Material (ESI) for CrystEngComm.

Electronic Supplementary Information

Hundreds of milligrams of Cr(VI) adsorbed on each gram of Cu_2O@Cu fractal structures: kinetics, equilibrium, and thermodynamics

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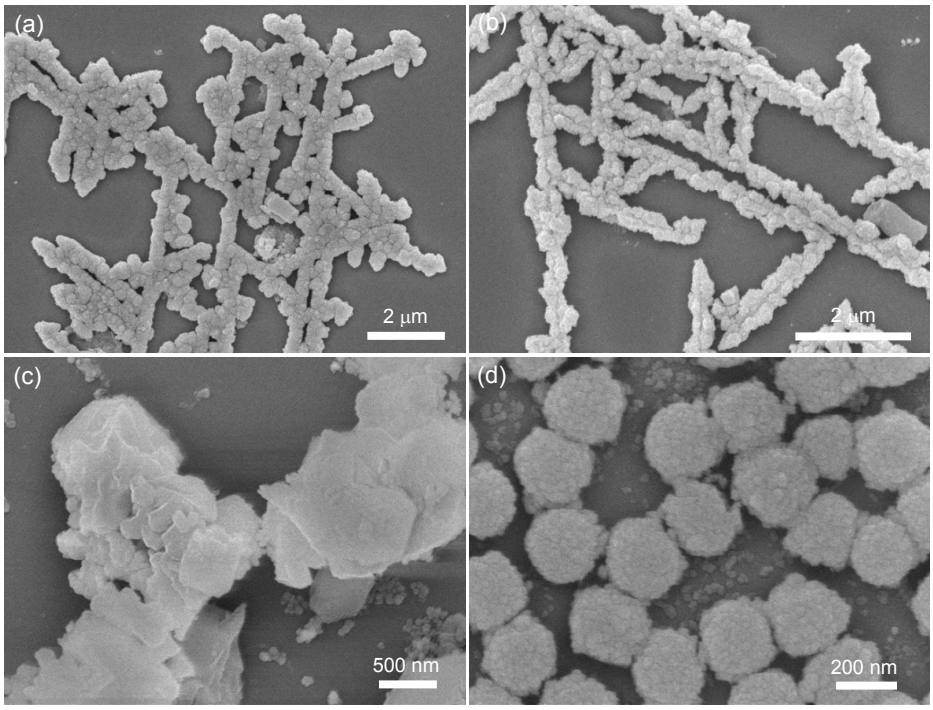

Fig. S1 SEM images of Cu_2O@Cu products prepared at (a) 140 °C for 3h, (b) 140 °C for 6h, (c) 140 °C with cupric nitrate/urea molar ratio of 1:3 for 12h, and (d) 160 °C with cupric nitrate/urea molar ratio of 1:1 for 12h.

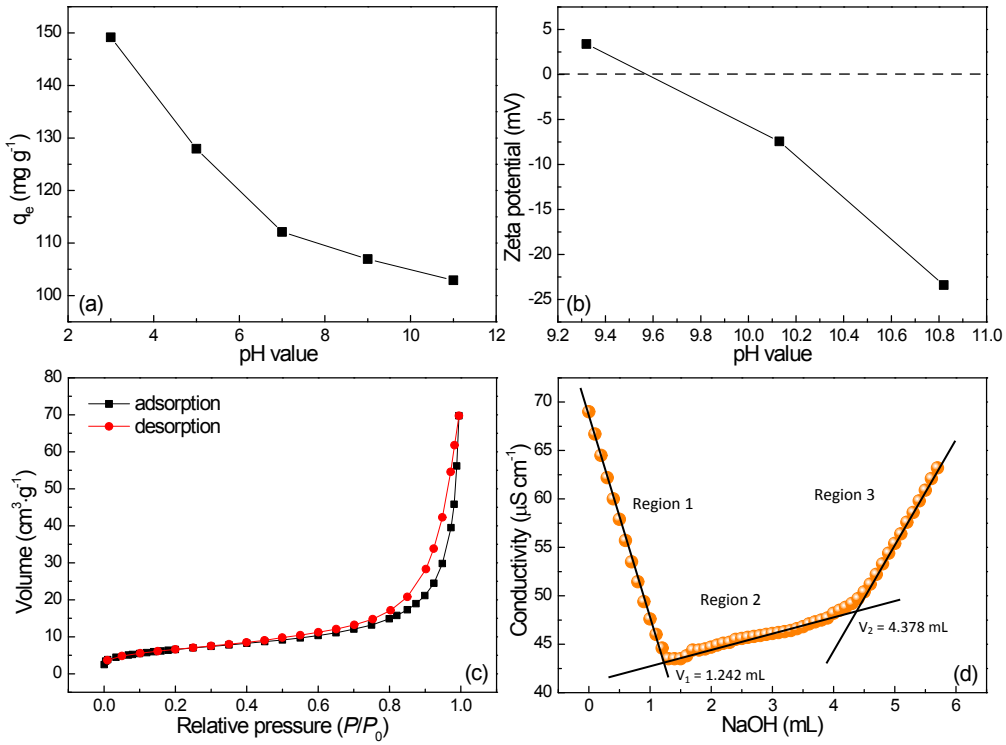

Fig. S2 (a) Effect of pH values on the equilibrium adsorption capacity for the Cu_2O@Cu product with initial Cr(VI) concentration of 100 mg L^{-1}. (b) pH-dependent zeta potential values of the Cu_2O@Cu product in aqueous solution. (c) Nitrogen adsorption-desorption isotherm, and (d) conductometric titration of the Cu_2O@Cu product.

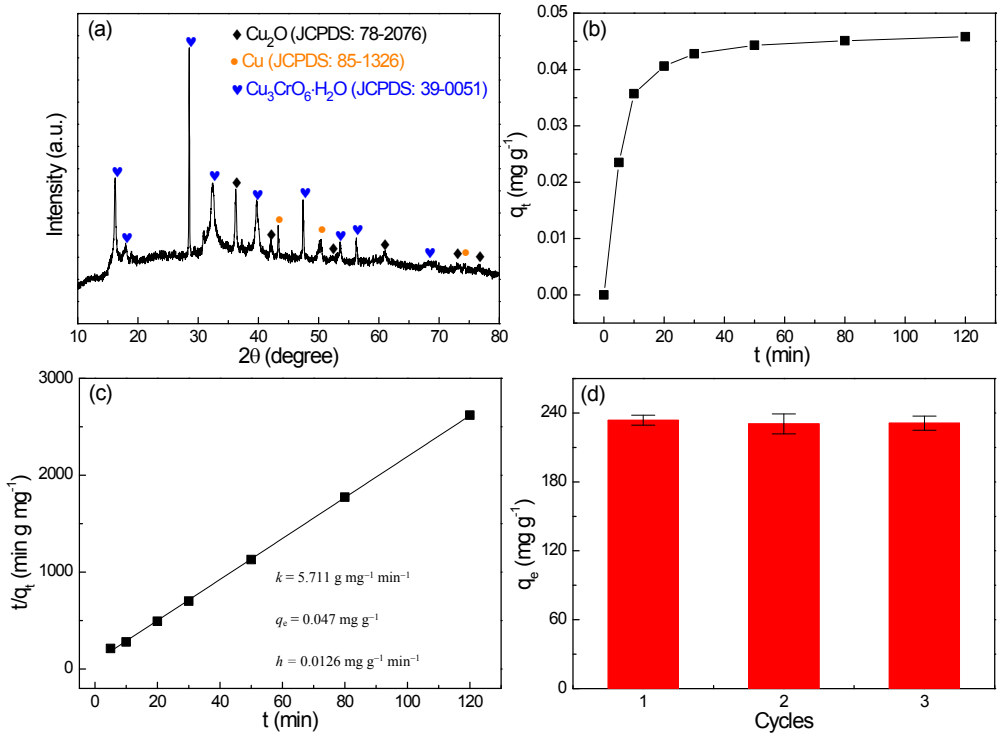

Fig. S3 (a) XRD pattern of the Cu_2O@Cu product after Cr(VI) adsorption. (b) The kinetics of Cr(VI) adsorption onto the product with an initial concentration of 50 μg L^{-1} at 293 K. (c) A linear plot of the pseudo-second-order model. (d) Equilibrium adsorption capacity of Cr(VI) on the product at 293 K during 3-cycled desorption and reusability.