Converting Spent Cu/Fe Layered Double Hydroxide into Cr(VI) Reductant and Porous Carbon Material

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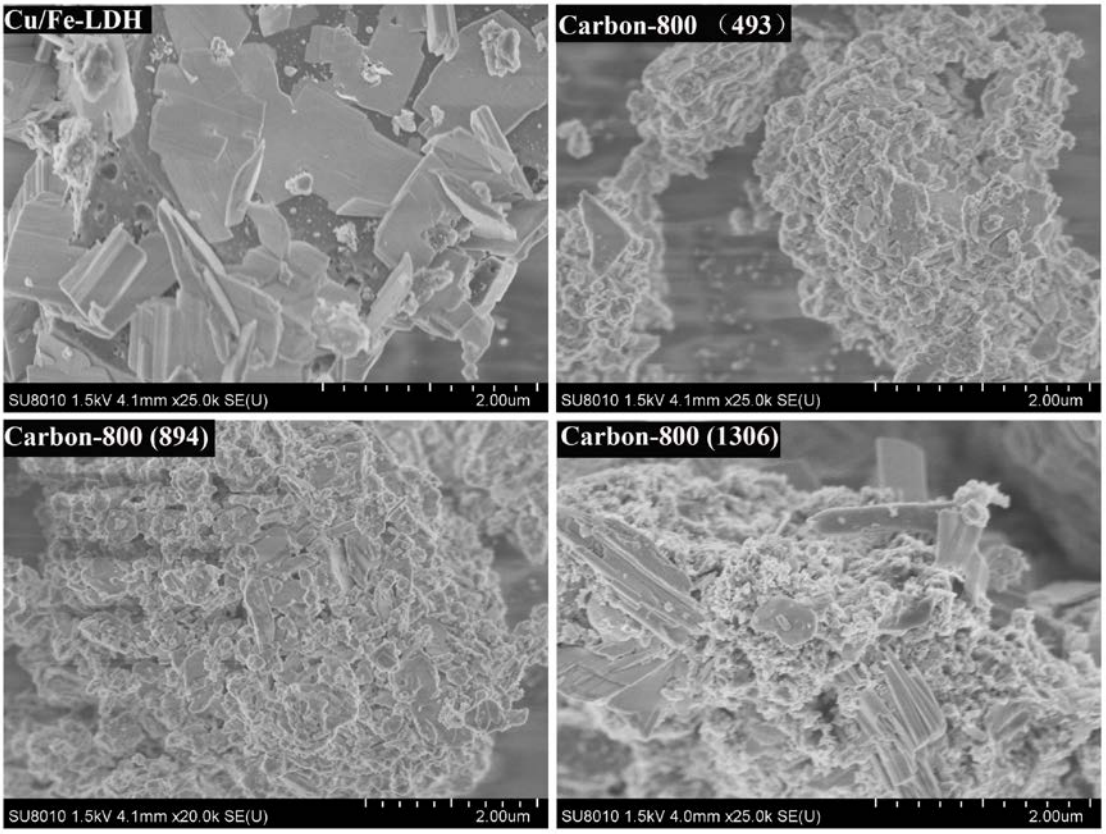

Figure s1. SEM images of Cu/Fe-LDH and carbon materials obtained from the spent Cu/Fe-LDH with various adsorbed amounts of OII via carbonizing at 800°C and acid washing. 493, 894, and 1306 mg/g represent the adsorbed amount of OII on the Cu/Fe-LDH

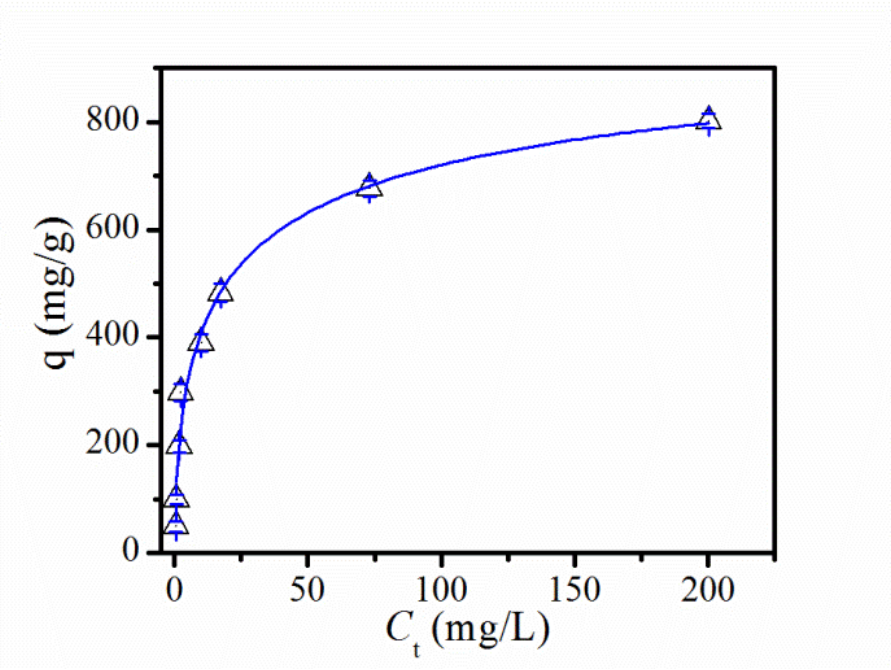

Figure s2. Adsorption isotherm of Orange II on Cu/Fe-LDH under 25°C

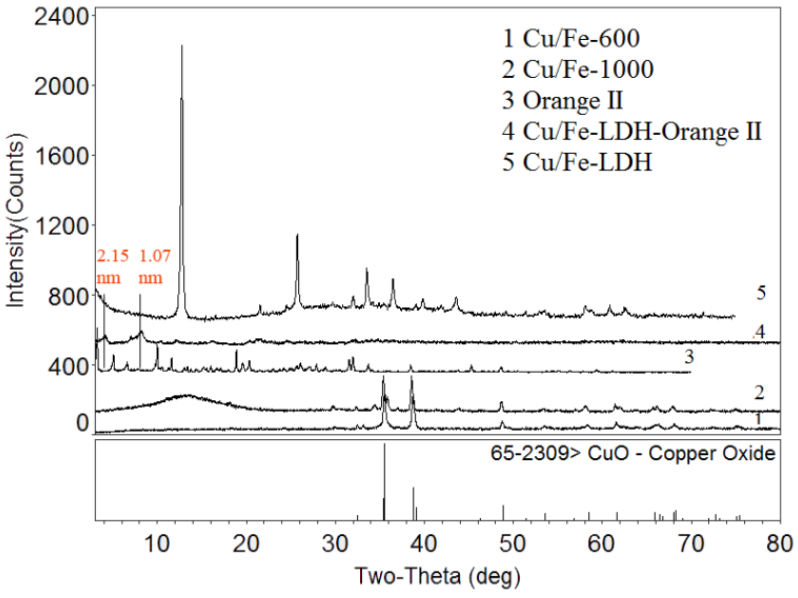

Figure s3. XRD patterns of Orange II, spent Cu/Fe-LDH (Cu/Fe-LDH-Orange II), Cu/Fe-LDH, Fe/Cu-600, and Fe/Cu-1000.

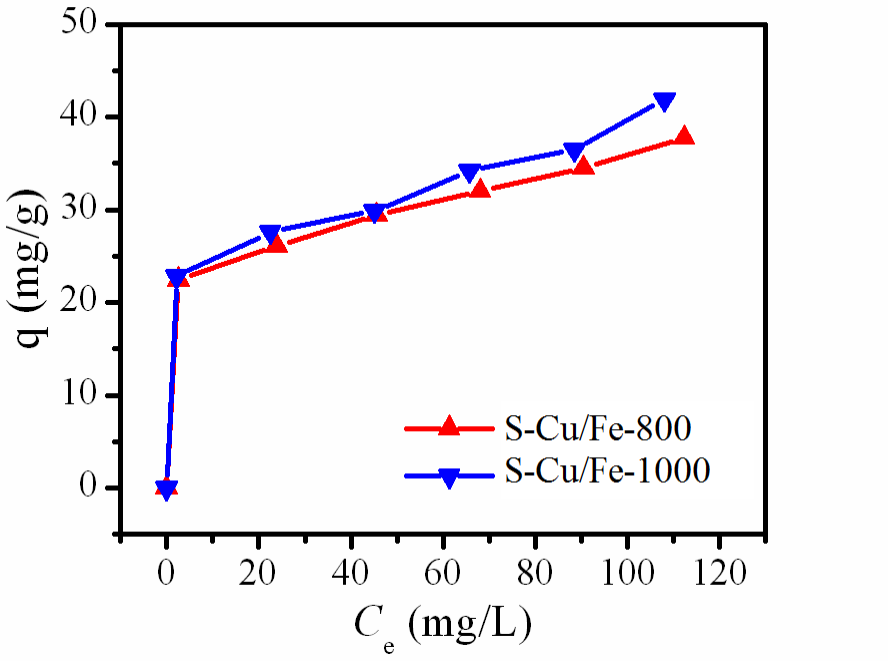

Figure s4. Isotherm removal curves of Cr(VI) on S-Cu/Fe-800 and S-Cu/Fe-1000 at pH 3 and room temperature (Initial concentrations of Cr(VI) vary from 20 to 150 mg/L)

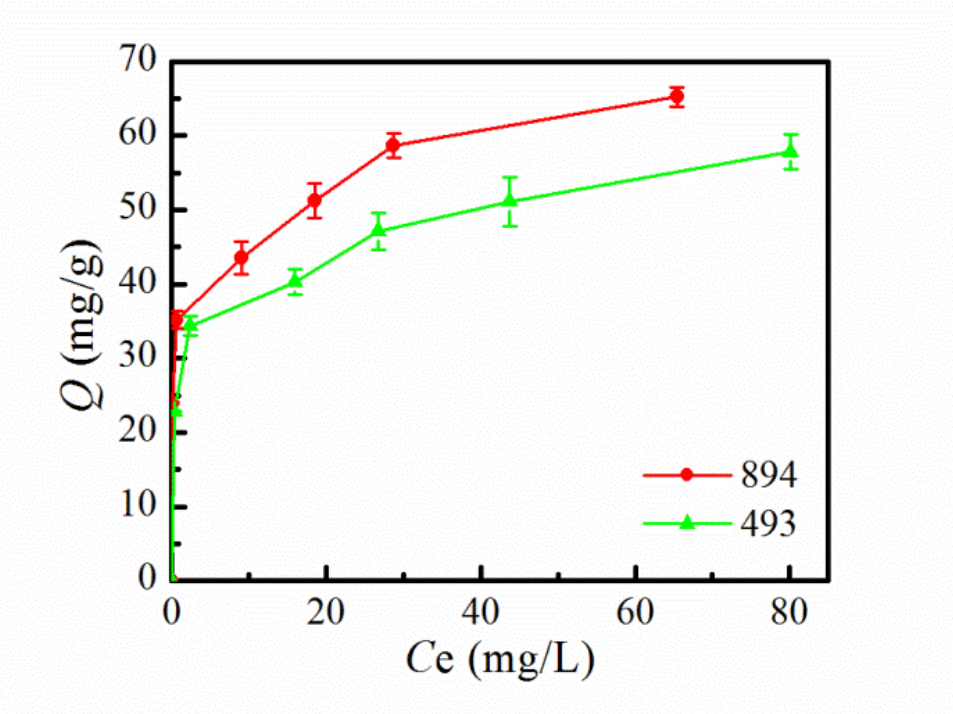

Figure s5. Cr(VI) removal isotherms (25°C) on S-Cu/Fe-800 generated from the spent Cu/Fe-LDH loaded with different OII amount (894 and 493 mg/g)

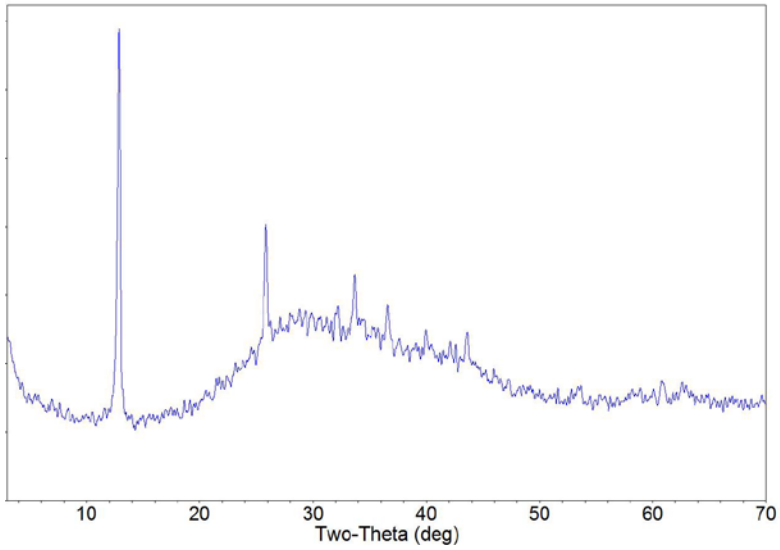

Figure s6. XRD patterns of LDH prepared from waste metal solution (Synthesis at pH 6.0, aging at 75°C for 24 h)

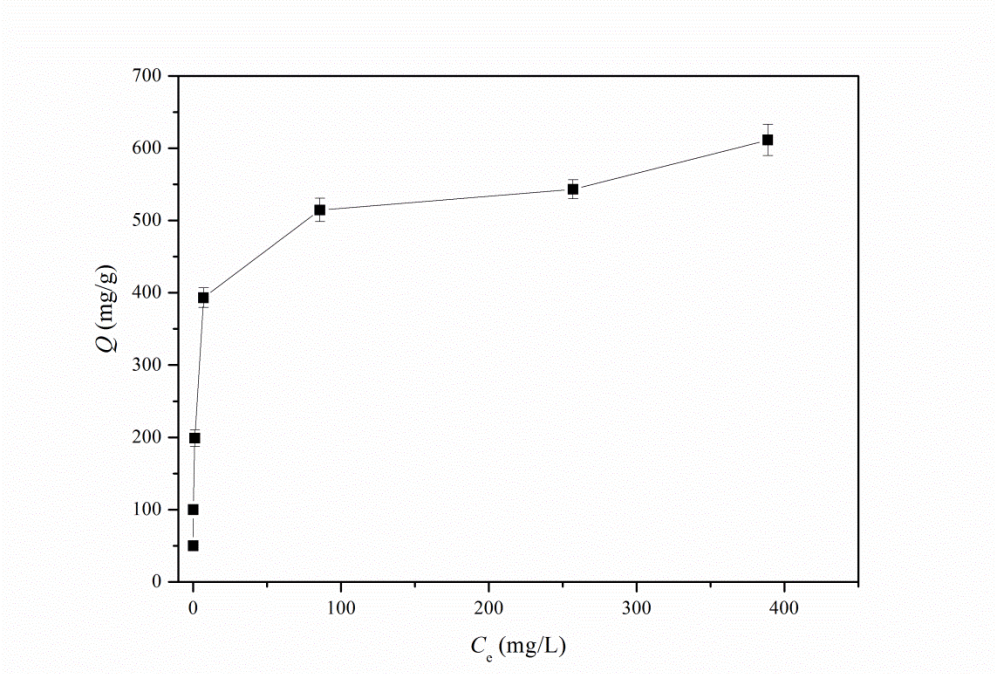

Figure s7. Adsorption isotherm of Orange II on regenerated Cu/Fe-LDH under 25°C