

Supplementary Materials

Table S1. BET results of MIL-101(Fe)、MIL-101(Fe) - NH₂、MIL-101(Fe) -NO₂、MIL-101(Fe) -Br、CNT@MIL-101(Fe).

Material	Pore volume (cm ³ /g)	S _{BET} (m ² /g)	Pore size (nm)
MIL-101(Fe)	0.601	1730.85	1.171
MIL-101(Fe)-NH ₂	0.511	1724.85	1.177
MIL-101(Fe)-NO ₂	1.021	1652.52	1.171
MIL-101(Fe)-Br	1.578	2318.37	1.155
CNT@MIL-101(Fe)	1.127	2443.35	1.170

Table S2. Effect of the ratio of metal to organic ligand synthesis on the removal rate of Cr(VI).

n(H ₂ BDC): n(FeCl ₃)	DMF dosage(mL)	removal rate (%)
2:1	10	35
1:1		44
1:2		50
1:3		30
1:4		22

Table S3. Effect of different DMF dosage on the removal rate of Cr(VI).

n(H ₂ BDC): n(FeCl ₃)	DMF dosage (mL)	removal rate (%)
1:2	10	50.5
	20	61.4
	30	71.1
	40	72.0
	50	72.2

Table S4. MIL-101- Na_2CO_3 thermodynamic model fitting parameters.

T (°C)	K(mL/g)	$\Delta G(\text{kJ mol}^{-1})$	$\Delta H(\text{kJ mol}^{-1})$	$\Delta S(\text{kJ mol}^{-1})$
10	4.33	-3.448	21.368	83.3
20	5.05	-3.945		
30	6.33	-4.649		
40	10.09	-6.015		

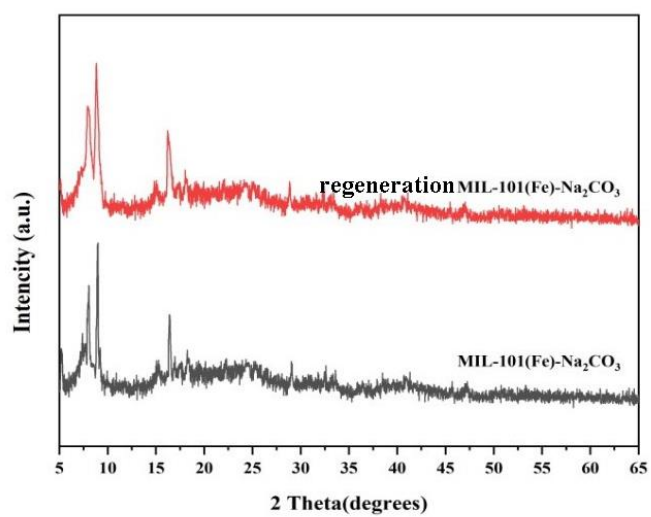


Figure S1. XRD pattern of MIL-101- Na_2CO_3 .