Supporting Information

Graphene Oxide - Crospolyvinylpyrrolidone Hybrid Microspheres for the Efficient Adsorption of 2,4,6-Trichlorophenol

*Xiaofei Lv, Sifang Li**

Department of Chemical and Biochemical Engineering, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen 361005, China

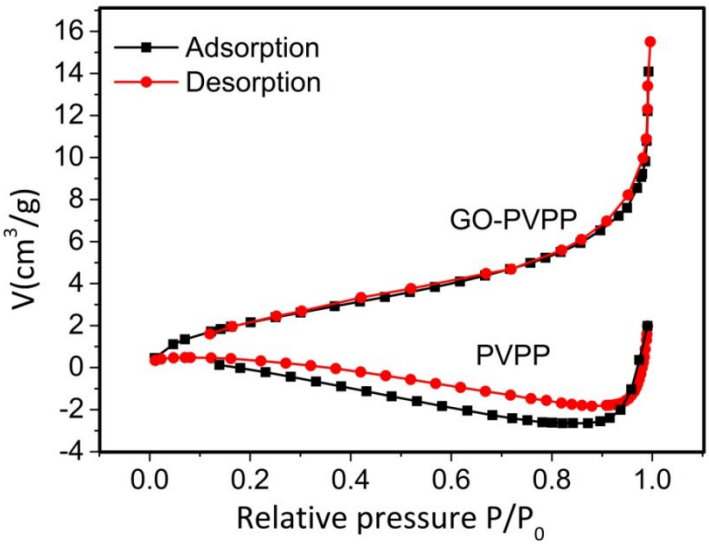

Figure S1. N_2 adsorption and desorption curves of GO-PVPP and PVPP.

* Corresponding Author. E-mail: sfli@xmu.edu.cn

Table S1. Physiochemical Properties of the PVPP and GO-PVPP

Materials	Swelling rate (%)	Specific surface area (m^2/g)	Pore diameter (nm)	pore volume (cm^3/g)
GO-PVPP	272.81	10.46	28.58	0.0092
PPVP	60.40	1.14	36.71	0.00265

Table S2. Elemental Analysis of the PVPP and GO-PVPP

Materials	Elemental analysis (%)		
	C	H	N
GO-PVPP	45.00	6.89	9.66
PPVP	50.92	8.02	14.62

Table S3. Parameters for Intraparticle Diffusion Model

C_0 (mg/L)	Intraparticle diffusion model								
	$k_{ip,1}$	$k_{ip,2}$	$k_{ip,3}$	C_1	C_2	C_3	R_1^2	R_2^2	R_3^2
	($mg\ g^{-1}min^{-1/2}$)								
50	7.29	0.31	-	1.8	58.6	-	0.9877	0.9618	-
100	15.37	0.57	-	6.0	117.3	-	0.9793	0.9296	-
200	32.39	6.69	0.41	1.9	125.7	200.5	0.9883	0.9308	0.8745
250	34.76	1.41	0.30	5.2	214.2	236.6	0.9902	0.9857	0.9612
300	51.72	2.34	0.28	-0.6	226.8	257.8	0.9446	0.9770	0.8739

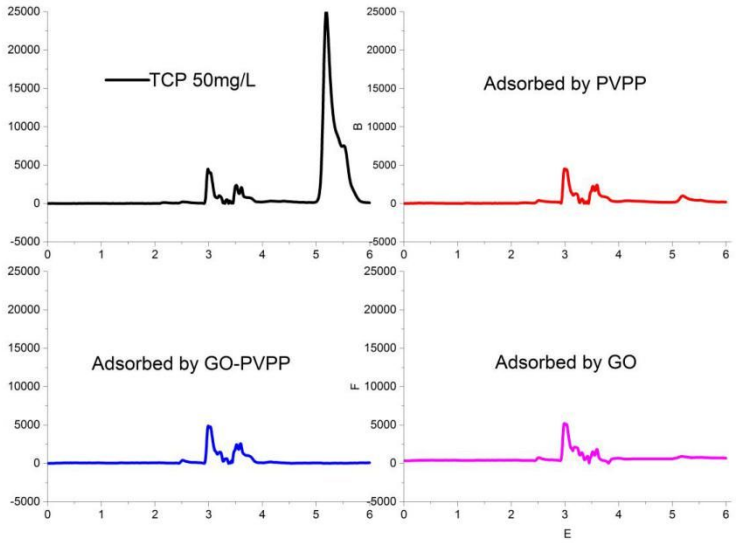

Figure S2. HPLC chromatograms of 2,4,6-TCP before and after adsorption by different adsorbents (C_0=50 mg/L, adsorbent dosage = 1 g/L, T = 30 ℃, pH = 4, t = 6 h).

Table S4. Detection Parameters of HPLC Method for 2,4,6-TCP

HPLC instrument model	Agilent 1100
Mobile phase	Methanol : pure water = 80 :20
Detection wavelength	290 nm
Flow rate	1 mL/min
Chromatographic column	Eclipse Plus C18 3.5 μm, 4.6×150 mm
Column temperature	30 ℃
Detection limit	18.565 μg/L

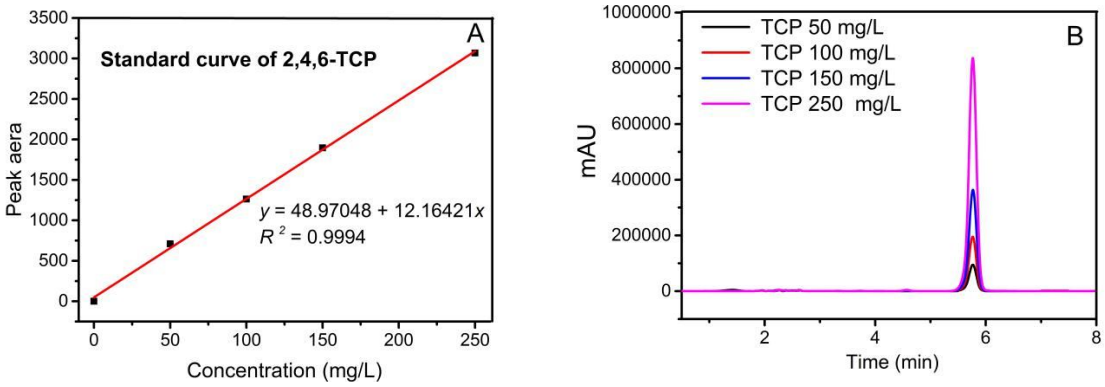

Figure S3. (A) HPLC standard curve of TCP solution. (B) Chromatographic peaks of TCP standard solutions at 290 nm.