Supporting information for

Metal-Organic Frameworks Sorbents For The Removal Of Perfluorinated Compounds In An Aqueous Environment

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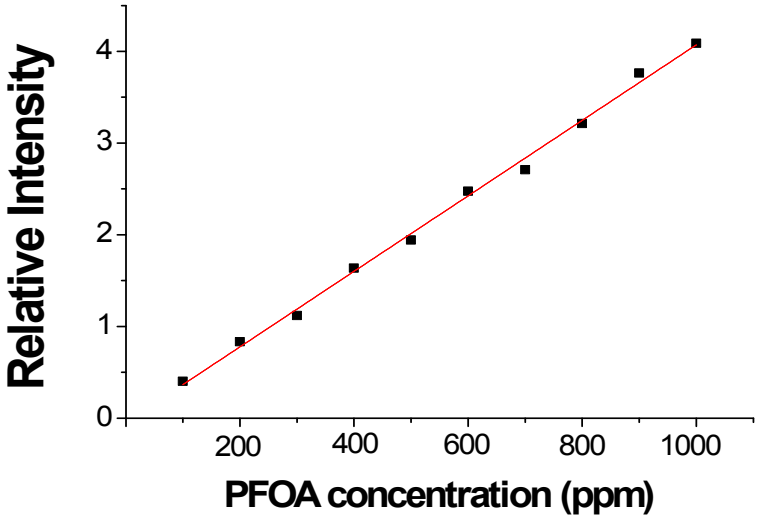
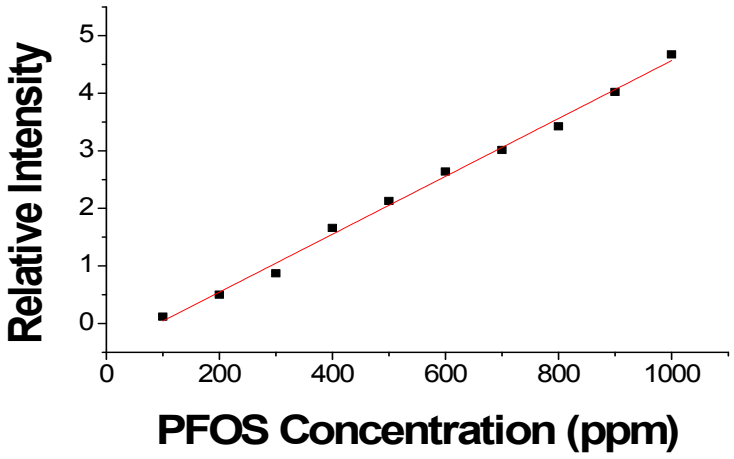
1. Calibration curves to determine the PFOX concentration



$y = 4.1173\ x \quad 0.0464,\ R^2 = 0.9981$



$y = 0.0050\ x \quad 0.4613,\ R^2 = 0.9947$

Figure S1 : Calibration curves with PFOA (top) and PFOS (bottom)

2. Kinetic with the pseudo-first order model

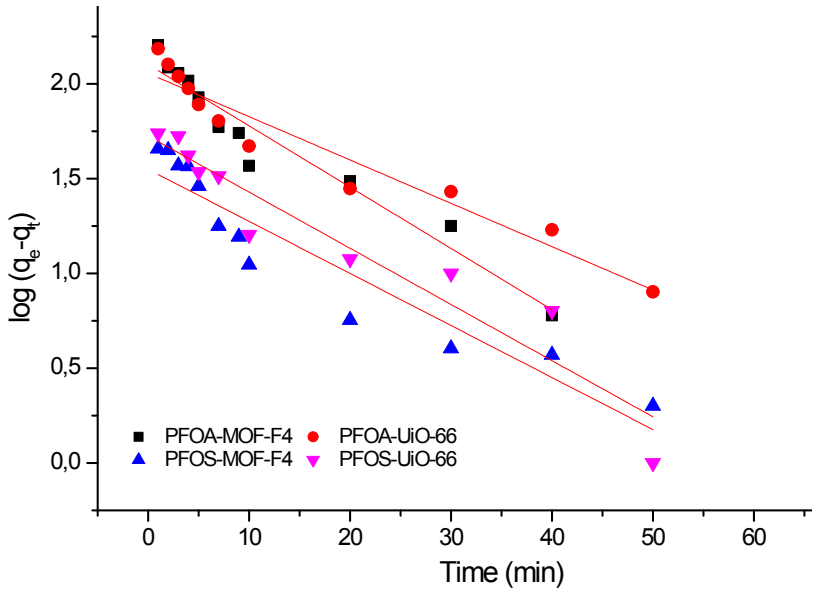


Figure S2 : Kinetic fit with the pseudo-first order model

3. Ration m/V

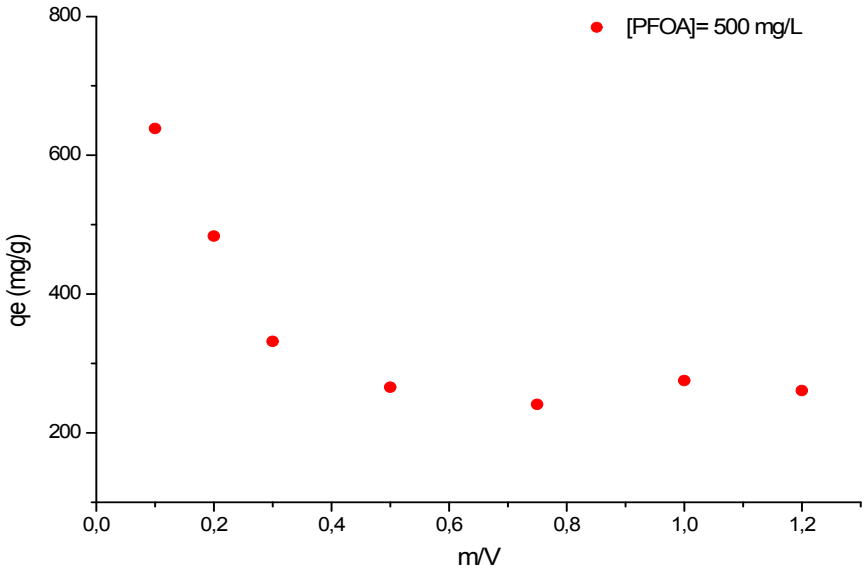


Figure S3 : Extraction of PFOA with different m/V ratio with UiO-66

4. Freundlich Model

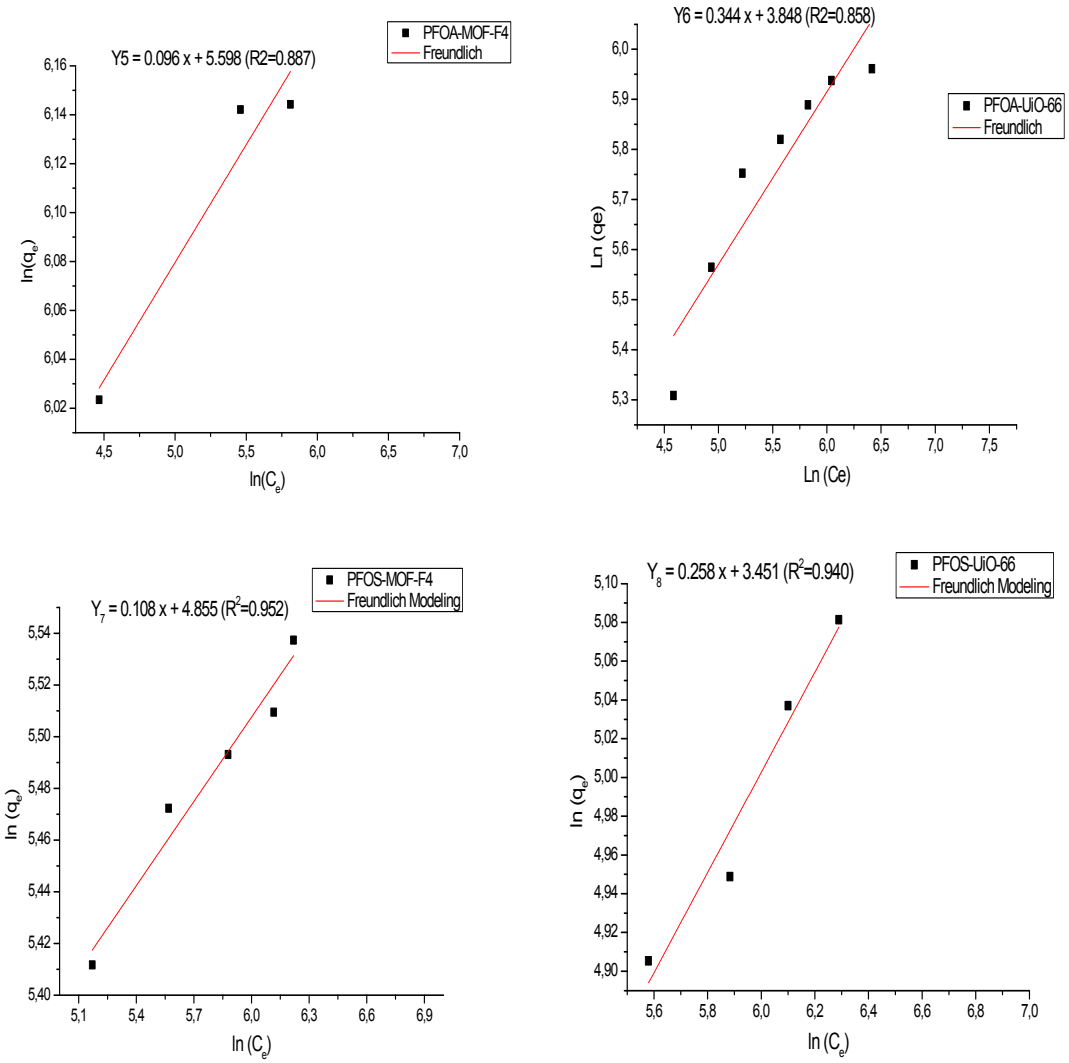


Figure S4 : Freundlich Modeling of PFOA, PFOS on UiO-66 and UiO-66 (F4)

5. PXRD patterns and BET analyses after sorption

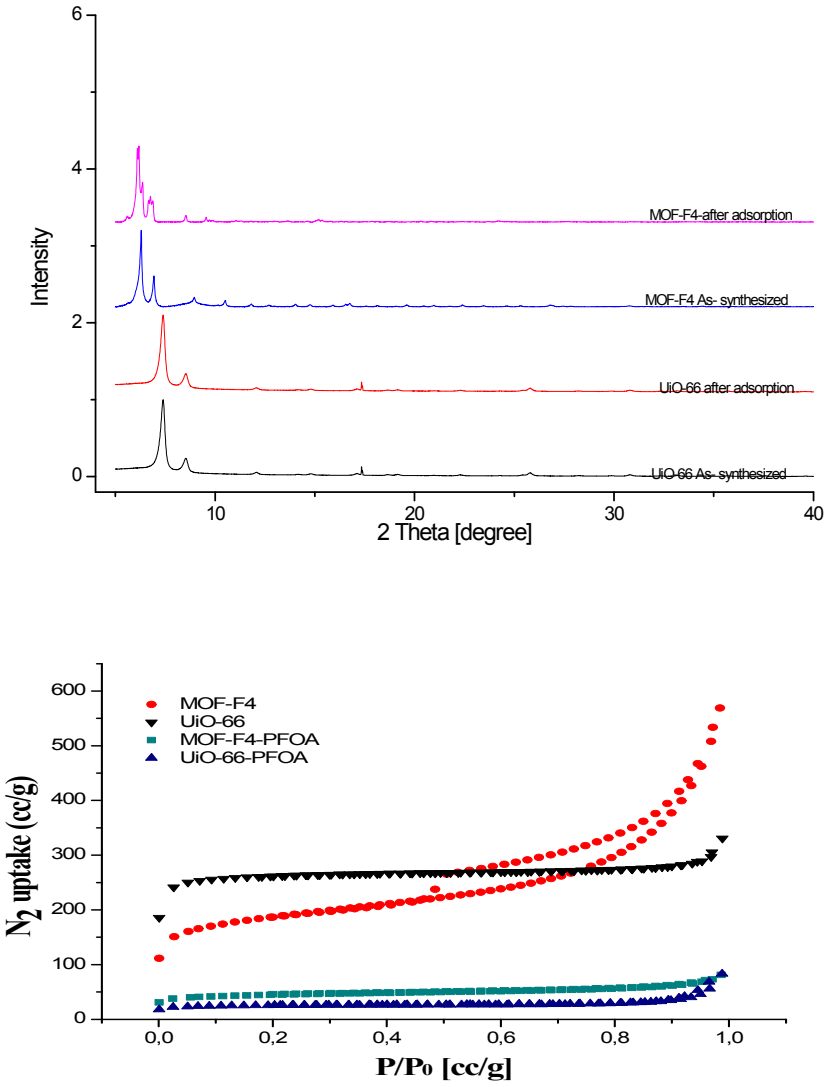


Figure S5. PXRD analyses (top) and BET analyses after pollutant removal

6. Calibration curve and sorption isotherms of Perfluorooctanol

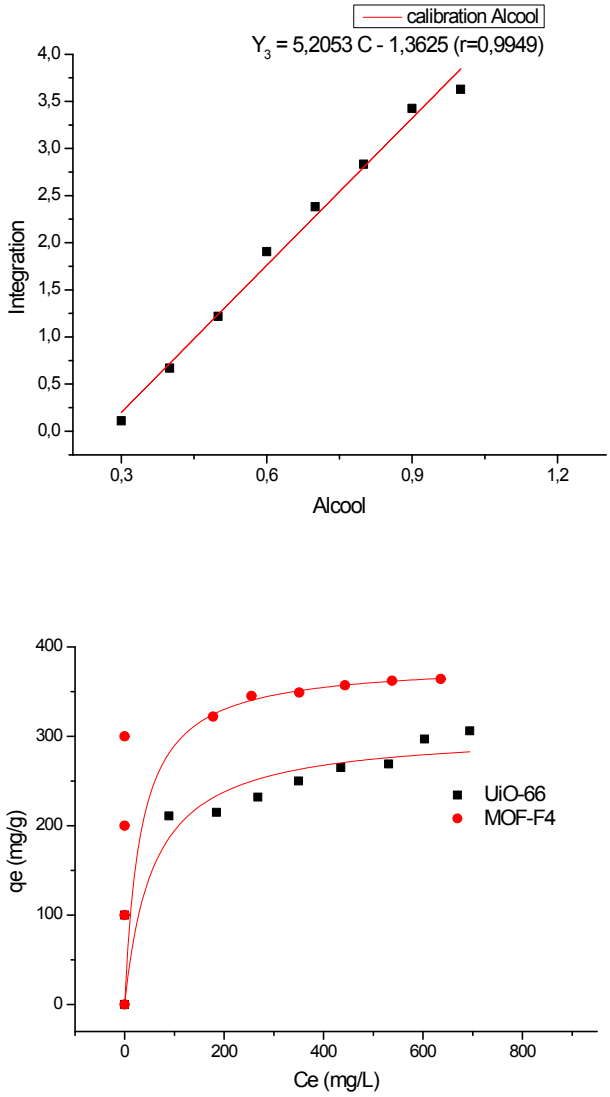


Figure S6. Calibration curve and sorption isotherms of Perfluorooctanol on the UiO-66 and UiO-66(F4), at 25 °C

7. PXRD patterns of the (a) UiO-66 and (b) MOF-F4 in different conditions

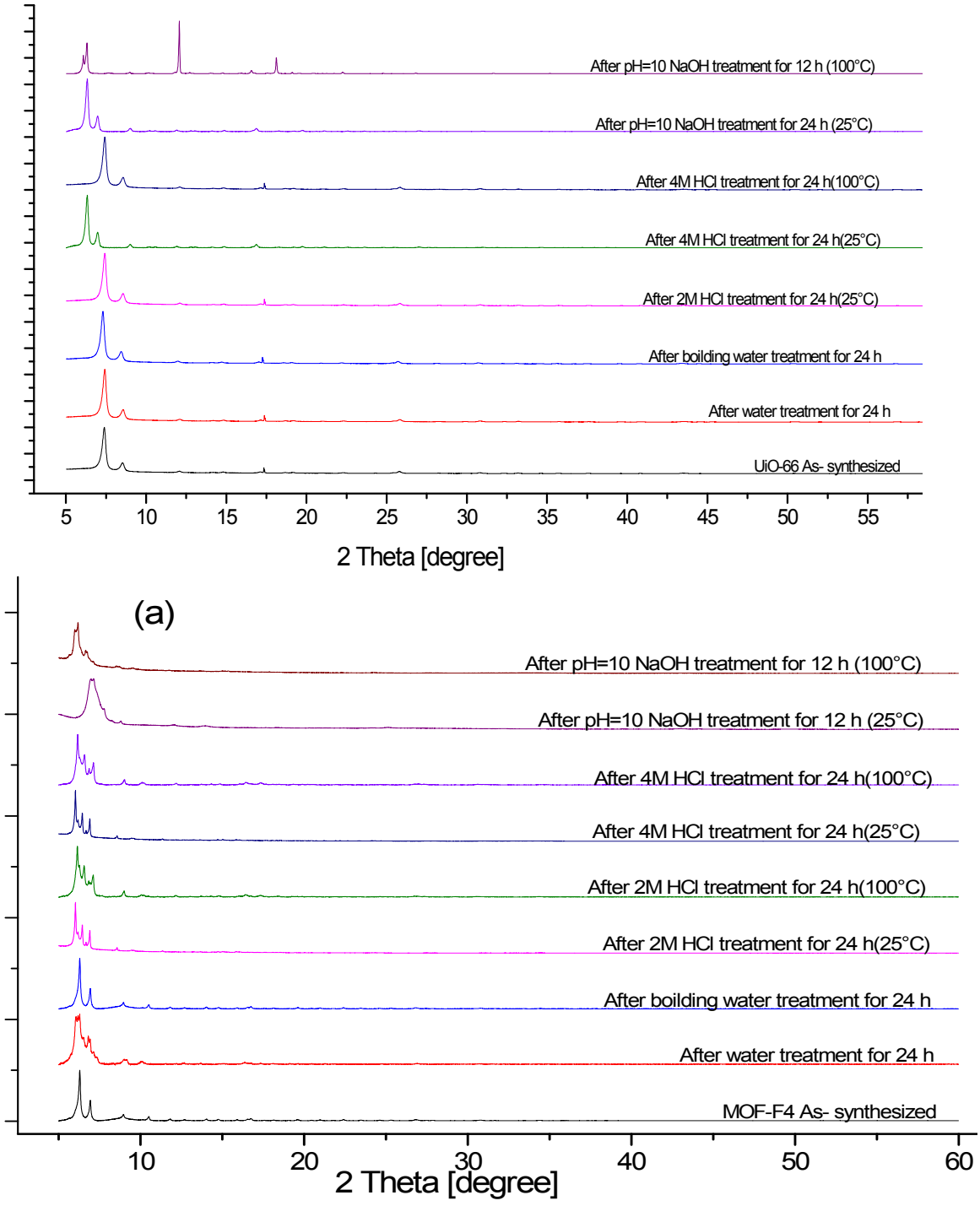


Figure S7. PXRD patterns of the (a) UiO-66 and (b) MOF-F4 in different conditions

Table S1: Thermodynamic parameters for the adsorption of PFOA and PFOS onto UiO-66 and UiO-66-(F4) (ΔH° = (kJ/mol), ΔS° = (J/mol/K), ΔG° = (kJ/mol))

T (K)	UiO-66-(F4)						UiO-66					
	PFOA			PFOS			PFOA			PFOS		
	ΔH°	ΔS°	ΔG°	ΔH°	ΔS°	ΔG°	ΔH°	ΔS°	ΔG°	ΔH°	ΔS°	ΔG°
298	12.7	52.5	-3	5.8	20	-0.16	14.3	51	-0.9	3.89	13.3	-0.1
308			-3.5			-0.36			-1.4			-0.2
313			-3.7			-0.46			-1.7			-0.3
318			- 4			-0.56			-1.9			-0.34

Table S2 Effect of foreign ions in the extraction of PFOA with UiO-66-(F4)

Interfering substance	Solution (M)	q_m ($mg.g^{-1}$)
-	-	479
NaCl	0.1	377
KCl	0.01	400
$CaCl_2.2H_2O$	0.01	443
$MgCl_2.6H_2O$	0.014	362
Na_2SO_4	0.02	377

[PFOA] = 1000 $mg.L^{-1}$, m(MOF) = 1 mg, Contact time = 60 min