

Supplementary Materials: Experimental and modeling of dicamba adsorption in aqueous medium using MIL-101(Cr) metal-organic framework

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Table S1. Isotherm parameters for adsorption of dicamba onto MIL-101(Cr)

Isotherm Model	Parameter	MIL-101(Cr)-Dicamba
Langmuir	q_m (mg g ⁻¹)	263.157
	K_L (L mg ⁻¹)	1.9
	R_L	0.025
	R^2	0.939
	R^2_{adj}	0.924
	RMSE	0.001
Freundlich	AIC	-80.131
	K_F (mg g ⁻¹)	8.712
	n	2.059
	R^2	0.998
	R^2_{adj}	0.997
	RMSE	0.023
Temkin	AIC	-43.773
	A (mg g ⁻¹)	38.907
	b_T (kJmol ⁻¹)	44.379
	R^2	0.918
	R^2_{adj}	0.897
	RMSE	26.377
	AIC	40.837

Table S2. Coded range for independent variables for the CCD-RSM design matrix

Variables	Units	Range and levels				
		- α	-1	0	+1	+ α
Contact time	min	35	5	15	25	45
Initial concentration	mg L ⁻¹	40	10	20	30	50
Adsorbent dosage	mg	40	10	20	30	50
pH		8	2	4	6	10
Temperature	°C	40	25	30	35	45

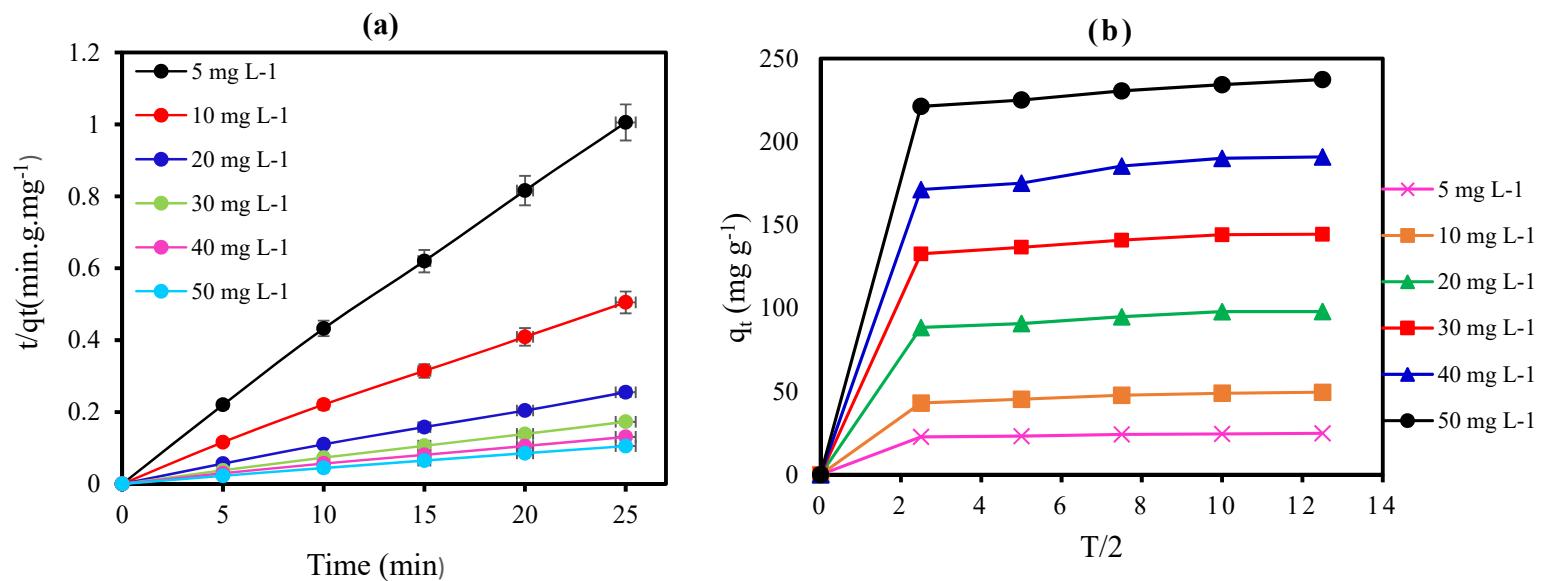


Fig. S1. (a) Pseudo-second-order kinetics and (b) intraparticle diffusion model kinetics for dicamba adsorption
(Dosage: 20 mg; 40°C; equilibrium time: 25 min, rpm: 150)