

# Supplementary Materials:

## Adsorption characteristics of dimethylated arsenicals on iron oxide-modified rice husk biochar

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**Table S1.** Parameters obtained through Langmuir model, Freundlich model, and Temkin model after isothermal adsorption experiments for each As species on FeBC

Model	Equation	Parameter	As(V)	DMA(V)	DMMTA(V)	DMDTA(V)
Langmuir	$q_e = \frac{q_m b C_e}{1 + b C_e}$	$q_m$ (mg/g)	6.32	7.08	0.430	0.280
		$b$ (L/mg)	0.023	0.002	0.013	0.115
		$R^2$	0.684	0.792	0.508	0.772
Freundlich	$q_e = K_F C_e^{1/n_f}$	$K_F$ ( $\text{mg}^{(1-1/n)} \text{L}^{1/n}/\text{g}$ )	1.83	0.286	0.009	0.050
		$n_f$	5.65	2.65	1.38	2.42
		$R^2$	0.682	0.671	0.466	0.688
Temkin	$q_e = \frac{RT}{B} \ln A_T C_e$	$B$ (kJ/mol)	2.49	1.95	47.4	45.6
		$A_T$ (L/mol)	0.597	0.031	0.439	1.51
		$R^2$	0.789	0.725	0.391	0.748

$K_F$ : the Freundlich constant

$n_f$ : the heterogeneity factor

$B$ : the constant related to the adsorption heat

$A_T$ : the equilibrium binding constant