Table S1. The fitting parameters of the isotherm models.

Langmuir Model				Freundlich Model				Temkin Model			
q_m (mg/g)	b (L/mg)	R^2	χ^2	K_f (mg/g)	1/n	R^2	χ^2	A_T	B	R^2	χ^2
217.39	0.0142	0.9997	1.54	31.56	0.2847	0.9703	219.79	0.21	39.70	0.9870	72.21

Table S2. The fitting parameters of the kinetic models.

Pseudo-First-Order				Pseudo-Second-Order			
q_e	k_1	R^2	χ^2	q_e	k_2	R^2	χ^2
100.87	0.08	0.8832	124.34	104.66	7.76	0.9497	53.599
Intra particle diffusion							
C_1	k_{p1}	R^2	χ^2	C_2	k_{p2}	R^2	χ^2
63.11	2.09	0.9615	1.1571	87.10	0.51	0.9471	4.2476

Table S3. Chemical composition of LMZ determined by XRF analysis.

	Na_2O	MgO	Al_2O_3	SiO_2	P_2O_5	SO_3	Cl	K_2O
Component (mass%)	6.15	0.229	18.7	29.9	0.150	0.475	1.77	0.400
	CaO	TiO_2	Fe_2O_3	ZnO	SrO	ZrO_2	La_2O_3	
	1.96	0.861	4.47	0.0291	0.0660	0.0650	34.7	

Table S4. Comparison of the maximum adsorption capacities of various adsorbents for glyphosate.

Adsorbent	Target Pollutant	Q_{max} (mg/g)	References
Cu-zeolite 4A	Glyphosate	112.7	[1]
AL/Fe_3O_4/$La(OH)_3$	Glyphosate	83.87	[2]
ZIF-8	Glyphosate	67.67	[3]
$MnFe_2O_4$@CAC	Glyphosate	167.2	[4]
LMZ	Glyphosate	217.39	This study

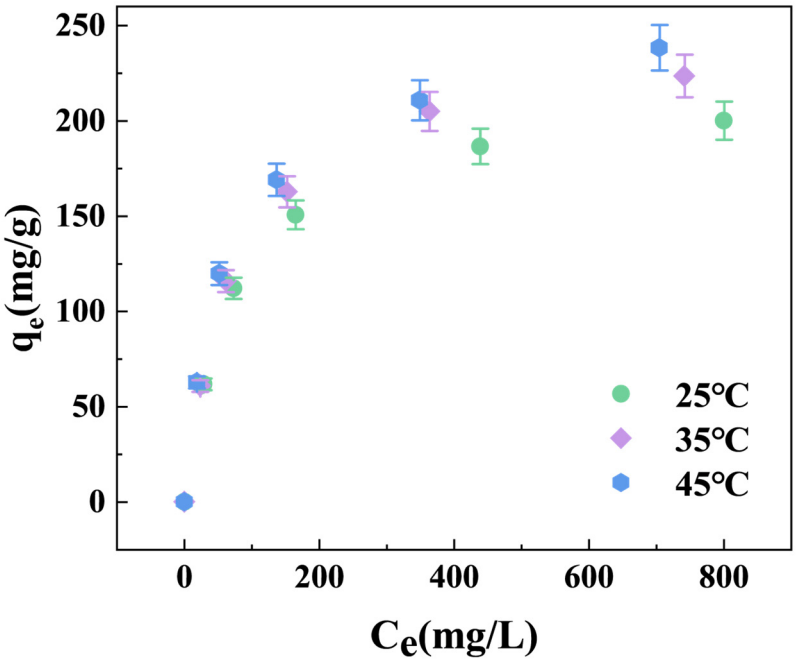

Figure S1. Adsorption of glyphosate onto LMZ at different temperatures.

Table S5. Thermodynamic fitting parameters for glyphosate adsorption onto LMZ.

25 ℃		**35 ℃**		**45 ℃**	
1/b	R^2	1/b	R^2	1/b	R^2
70	0.9995	65	0.9972	59	0.9942
ΔH°(kJ/mol)		ΔS°(kJ/(mol·K))		ΔG°(kJ/mol)	
6.72		0.1021		−23.70	

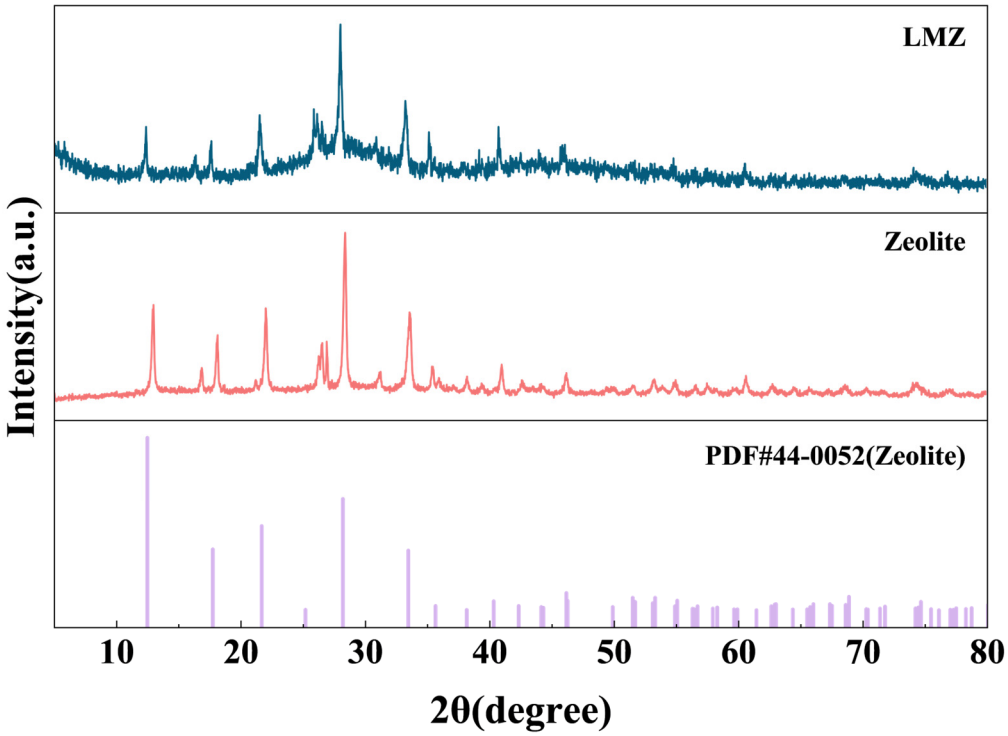

Figure S2. XRD patterns of zeolite and LMZ.

References

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