Supporting Information for

Magnetic Porous Controlled Fe_3O_4–Chitosan Nanostructure: An Ecofriendly Adsorbent for Efficient Removal of Azo Dyes

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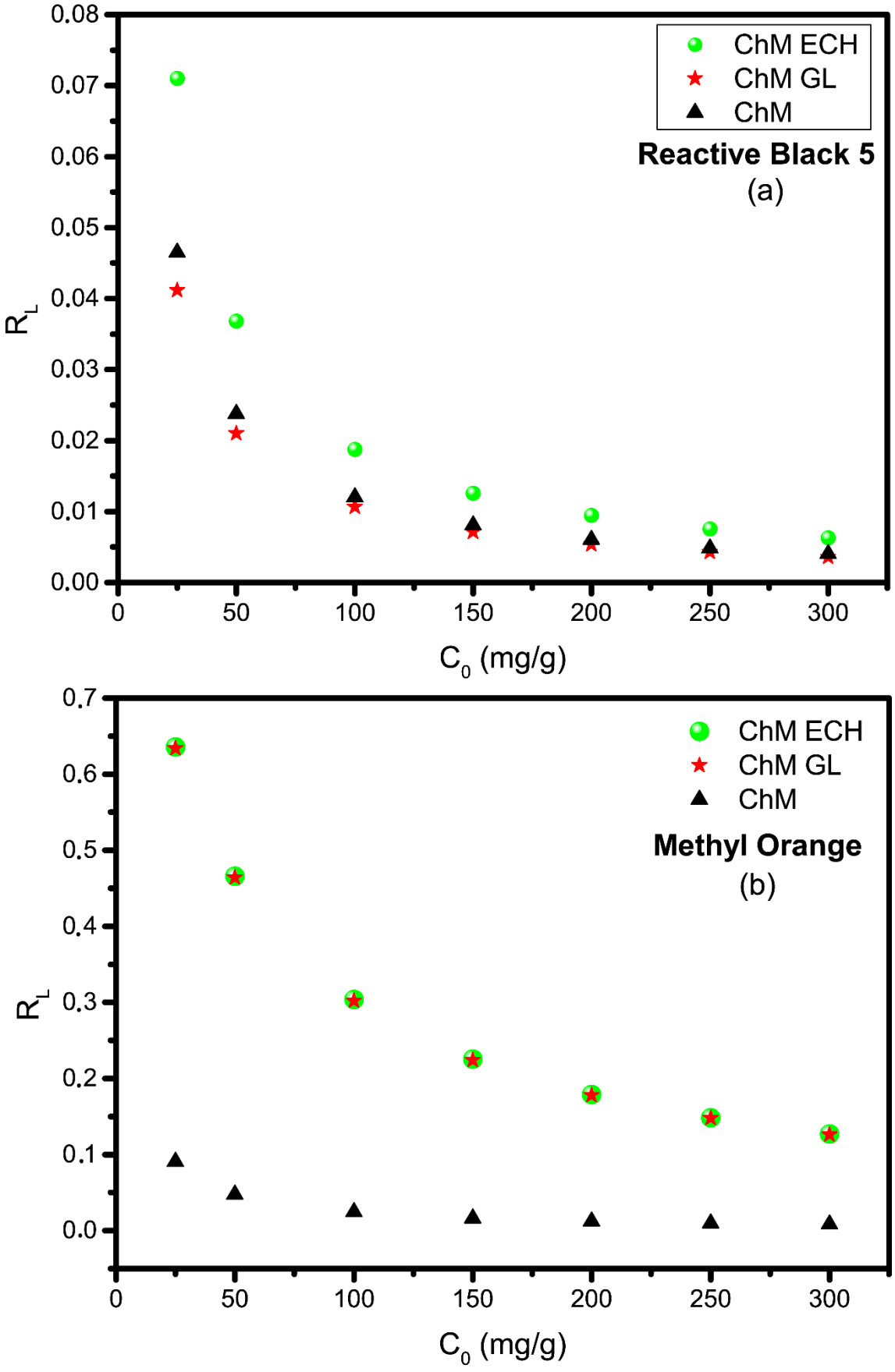

Figure S1: R_L value for (a) RB5 and (b) MO adsorption from the Langmuir isotherm.

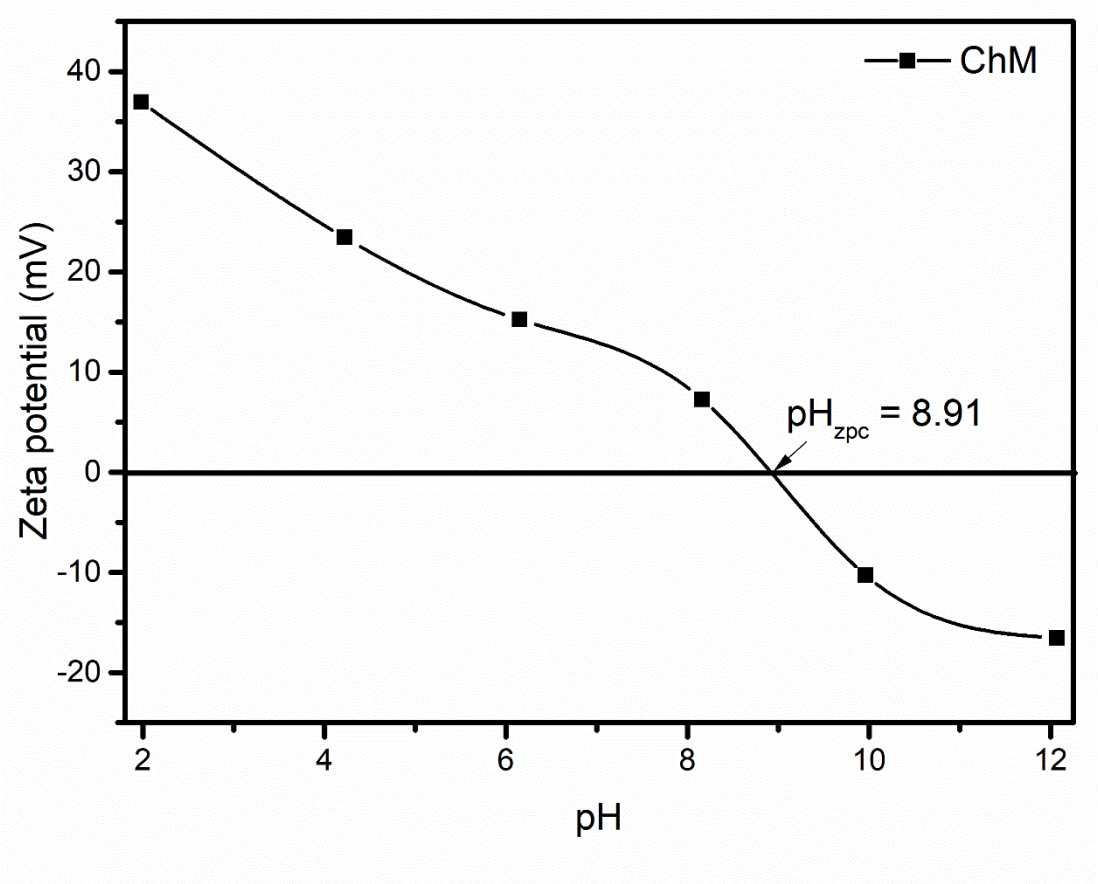

Figure S2: Zeta potential of ChM nanocomposite at different pH levels.

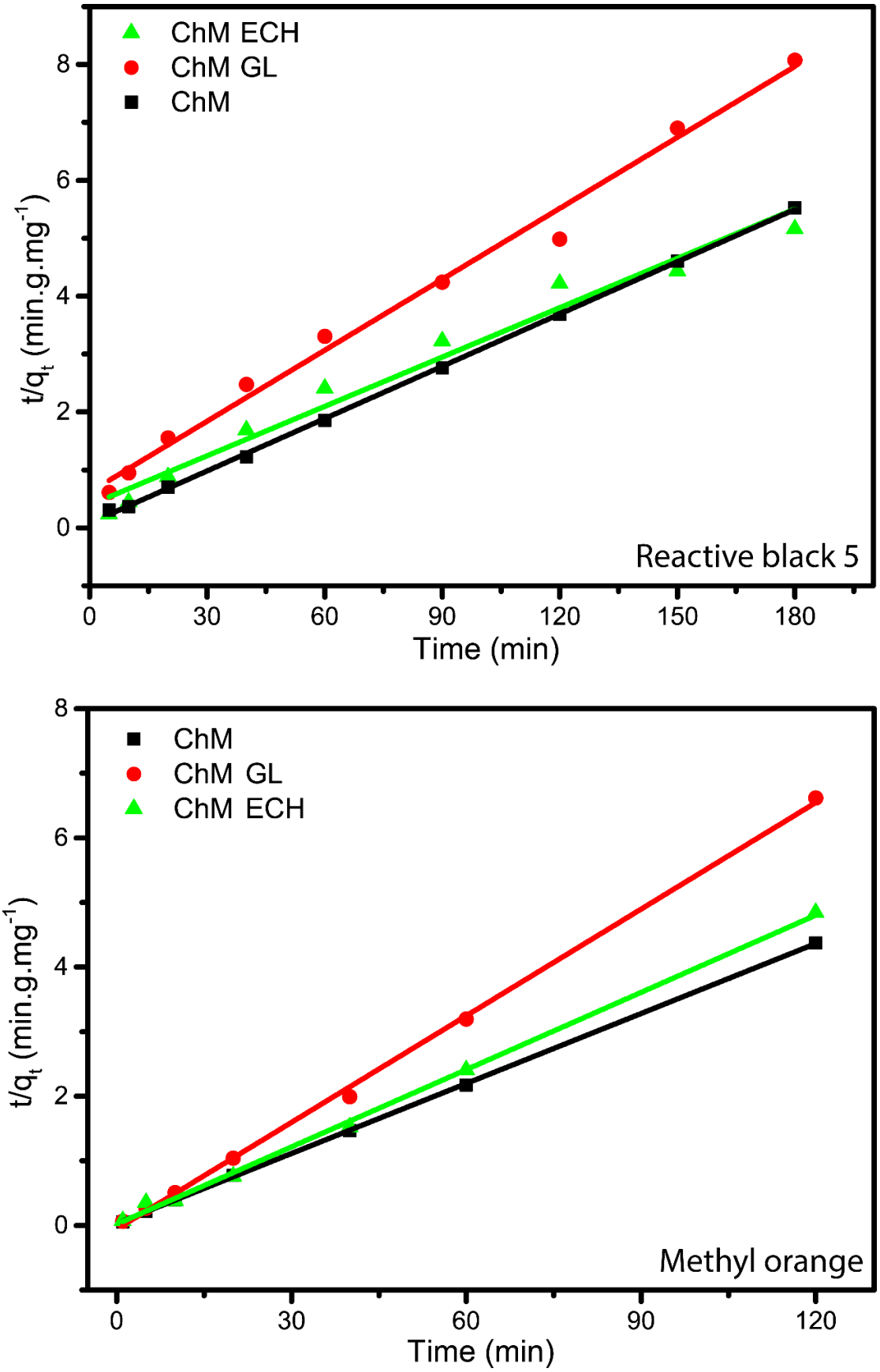

Figure S3: Pseudo-second order plots for (a) reactive black 5 and (b) methyl orange adsorption onto nanocomposites.

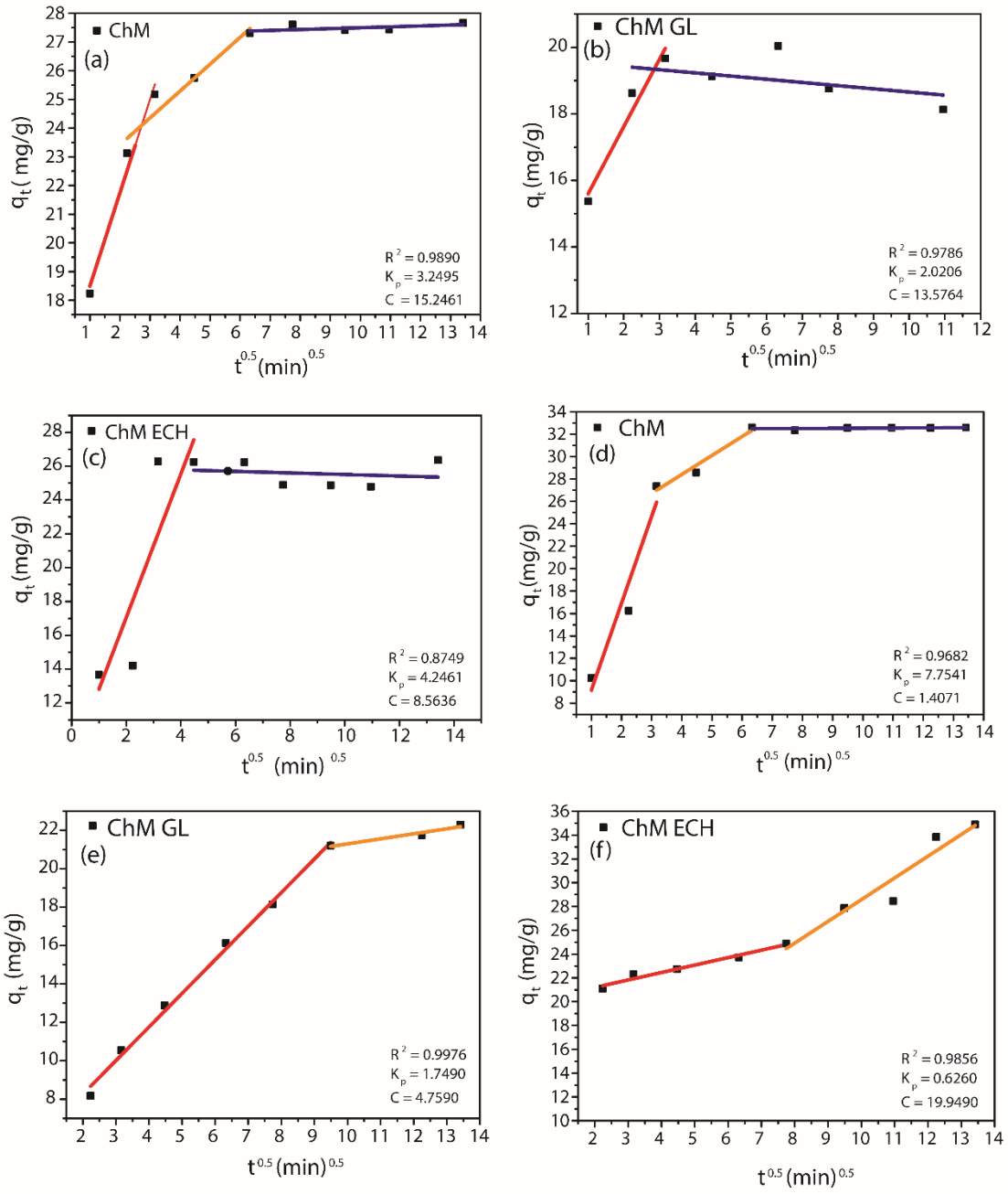

Figure S4: (a), (b), and (c) show the intraparticle diffusion plots for sorption of MO; (d), (e), and (f) show the intraparticle diffusion plots for sorption of RB5.

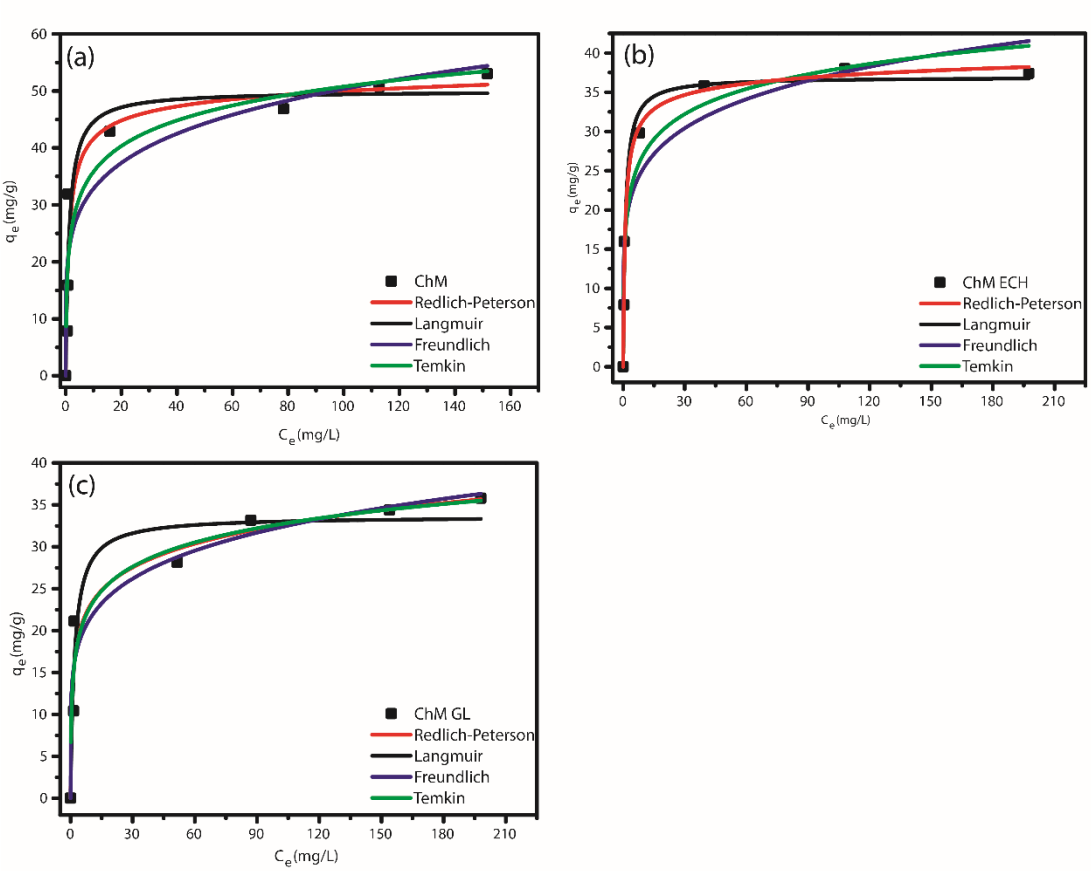

Figure S5: Fits of applied isotherms models to the experimental data for adsorption of reactive black 5 onto (a) ChM, (b) ChM ECH and (c) ChM GL.

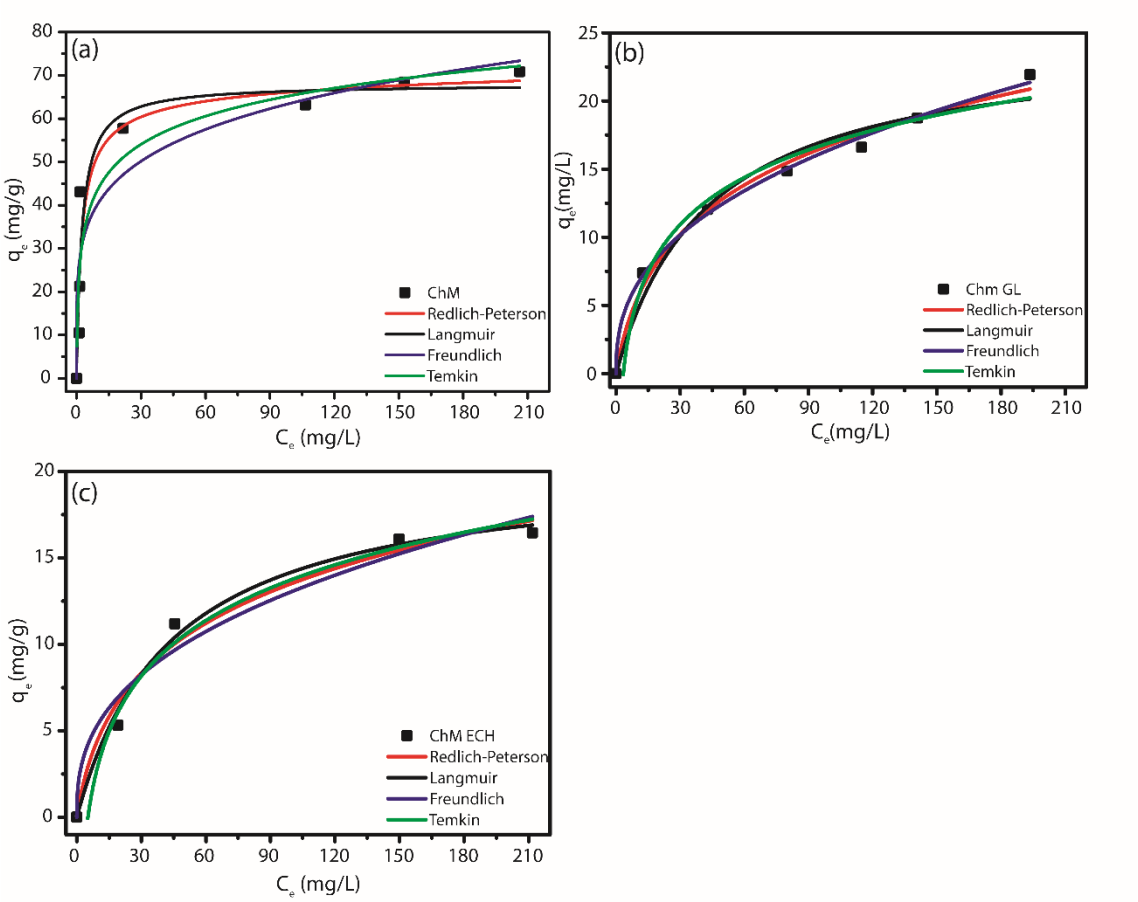

Figure S6: Fits of applied isotherms models to the experimental data for adsorption of methyl orange onto (a) ChM, (b) ChM GL and (c) ChM ECH.

Table S1. Comparison of the maximum adsorption capacity of ChM, ChM GL and ChM ECH to different modified chitosan adsorbents in the literature.

Adsorbent	Adsorption Capacity (mg g^{-1})		Reference
	RB5	MO	
γ-Fe_2O_3/chitosan	-	29.41	[1]
Fe3O4-chitosan- L-arginine	-	338.98	[2]
m-CS/Fe3O4/MIL-101	-	117	[3]
chitosan/Al2O3/magnetite	-	417	
Graphene Oxide/Fe_3O_4	391	-	[4]
Eichhornia crassipes/chitosan	0.606	-	[5]
Magnetic chitosan - glutaraldehyde	357.10	-	[6]
Modified chitosan-pandan	169.49	-	[7]
ChM	53.02	70.85	
ChM GL	35.77	21.93	This study
ChM ECH	37.39	16.44	

Reference

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