Supplementary Materials S1

Removing the Oxamyl from Aqueous Solution by a Green Synthesized $HTiO_2$@AC/SiO_2 Nanocomposite: Combined Effects of Adsorption and Photocatalysis

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Table S1. Biosorption kinetics.

The pseudo-first-order model	**Plotting**		**k_1 min^{-1}**	**q_e mg g^{-1}**	**R^2**
Nonlinear: $q_t = q_e\,(1-e^{-k_1 t})$	q_t vs t	AC/Tio2-Dark	0.037	22.517	0.730
		AC/Tio2-Light	0.01	10.439	0.959
Linear: $\log(q_e - q_t) = \log(q_e) - k_1 t/\ln 10$	$\log(q_e - q_t)$ vs t	AC/Tio2-Dark	0.005	6.634	0.926
		AC/Tio2-Light	0.012	10.146	0.886
The pseudo-second-order model	Plotting		**K_2** g mg^{-1} min^{-1}	**q_e** mg g^{-1}	**R^2**
Nonlinear: $q_t = k_2 q_e^2 t/(1 + k_2 q_e t)$	q_t vs t	AC/Tio2-Dark	0.0003	24.138	0.844
		AC/Tio2-Light	0.0006	14.197	0.938
Linear: $t/q_t = 1/(k_2 q_e^2) + t/q_e$	t/q_t vs t	AC/Tio2-Dark	0.002	25.853	0.992
		AC/Tio2-Light	0.0006	13.925	0.858

Table S2. Diffusion model.

Intraparticle diffusion model	**Plotting**		**k_1 mg g^{-1} min$^{-0.5}$**	**C mg g^{-1}**	**R^2**
Nonlinear: $q = k_i t^{0.5} + C$	q vs t	AC/Tio2-Dark	1.039	0.00	0.793
		AC/Tio2-Light	1.039	0.00	0.931
Linear: $q = k_i t^{0.5} + C$	q vs $t^{0.5}$	AC/Tio2-Dark	0.561	14.373	0.793
		AC/Tio2-Light	0.630	-0.051	0.931
Pore diffusion model	**Plotting**		**k_p** min-$^{0.5}$	**D_{ii}** cm^{2}min^{-1}	**R2**
$\frac{q_t}{q_e} = F = \frac{6}{r_o}(-\frac{D_{ii}\cdot t}{\pi})^{1/2} = k_p * t^{1/2}$	$\frac{q_t}{q_e}$ vs $t^{0.5}$	AC/Tio2-Dark	0.053	1.361E-08	0875
		AC/Tio2-Light	0.015	1.120E-09	0.938
film diffusion model	**Plotting**		**k_{fd}** min-^{1}	**D_{ii}** cm^{2}min^{-1}	**R2**
$ln\left(1-\frac{q_t}{q_e}\right) = -\left(\frac{D_i}{r_o^2}\right).\pi^2.t = -k_{fd}.t$	$ln\left(1-\frac{q_t}{q_e}\right)$ vs t	AC/Tio2-Dark	0.007	6.211E-09	0.803
		AC/Tio2-Light	0.002	4.544E-09	0.9