Supporting Information

Table S1 Adsorption capacity and the leaching concentration of Ti into solution for Orange II adsorption on different amount of titanium salt (SL-TiCs) at pH 2. (C_o = 100 mg/L)

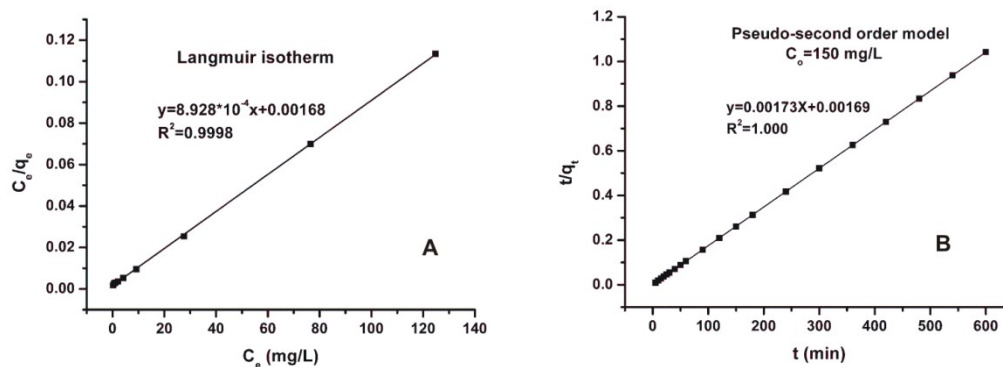| Amount of titanium salt (g)	Leaching concentration of Ti (mg/L)	Adsorption capacity to Orange II (mg/g)
1.71	0.023	249
3.42	0.028	396
5.13	1.98	314

Fig. S1 Langmuir isotherm and pseudo-second order model for the adsorption of Orange II onto SL-TiCs.

Table S2 Langmuir, Freundlich isotherm constants and pseudo-first order and pseudo-second order kinetic constants for Orange II adsorption onto SL-TiCs.

Adsorption isotherm constants			Kinetic model constants		
Langmuir	$q_e = \dfrac{K_L q_m C_e}{1 + K_L C_e}$	K_L (L/mg) = 0.531 q_m(mg/g) = 1120 R^2 = 0.9998	Pseudo first order	$\log\left(q_e - q_t\right) = \log q_e - \dfrac{}{}$	q_{m1}(mg/g) = 29.2 k_1(min^{-1}) = 4.9*10^{-3} R^2 = 0.8038
Freundlich	$q_e = K_F C_e^{\frac{1}{n}}$	K_F (L/g)= 318 n = 2.95 R^2 = 0.8113	Pseudo second order	$\dfrac{t}{q_t} = \dfrac{1}{k_2 q_e^2} + \dfrac{t}{q_e}$	q_{m2}(mg/g) = 578 k_2(g(mg/min))= 1.77*10^{-3} R^2 = 1.000