Adsorption behavior of chloramphenicol on an activated carbon from pomelo peel using $KHCO_3$ activator

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Supporting Figures

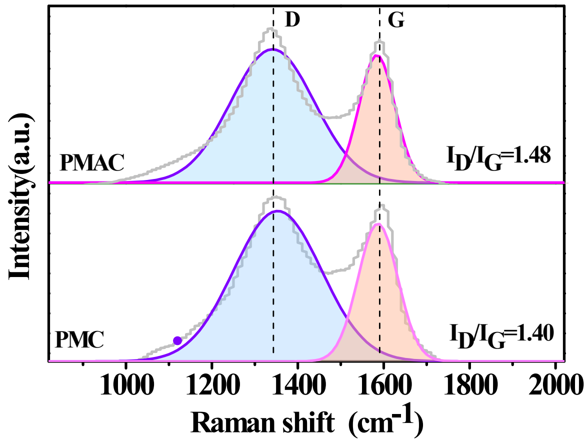

Fig. S.1 Raman spectra of PMAC by $KHCO_3$ as an activator

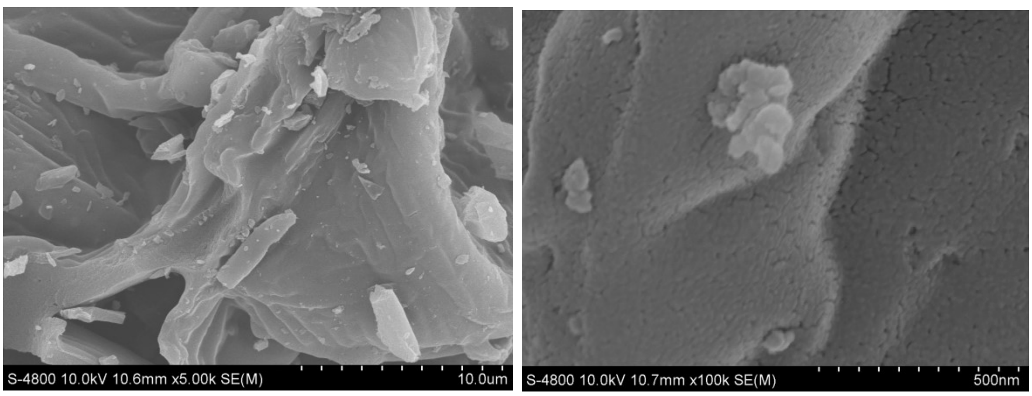

Fig. S.2 SEM of PMAC by $KHCO_3$ as an activator

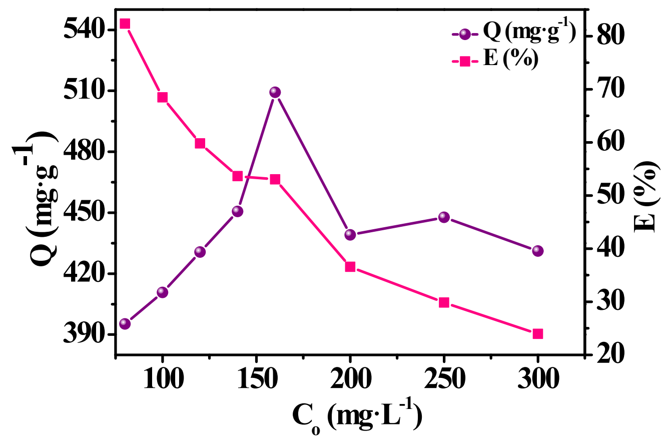

Fig.S.3 The effect of the initial CHL concentration on the adsorption capacity through PMAC by $KHCO_3$ as an activator. Adsorption conditions: m = 5 mg, pH = 5; T= 298 K.

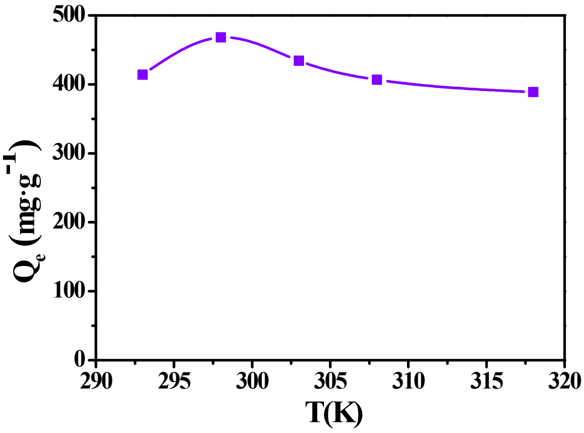

Fig.S.4 The effect of temperature on the adsorption capacity for CHL through PMAC by $KHCO_3$ as an activator. Adsorption conditions: C_o = 150 mg·L^{-1}, m = 5 mg, pH = 5.

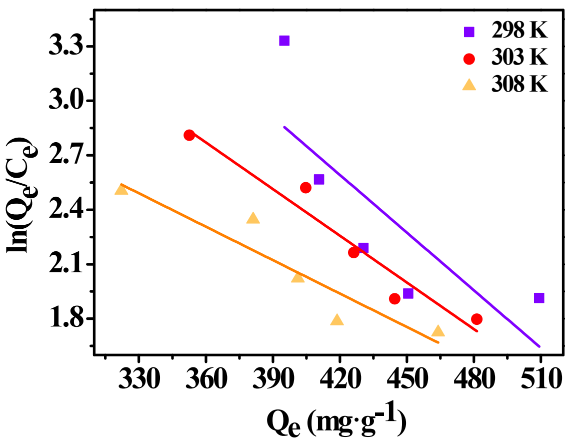

Fig. S.5 Plots of ln(Q_{eq}/C_{eq}) as a function of Q_{eq} for the adsorption of CHL through PMAC by $KHCO_3$ as an activator. Adsorption conditions: m = 5 mg, pH = 5, T=298, 303, 308 K.

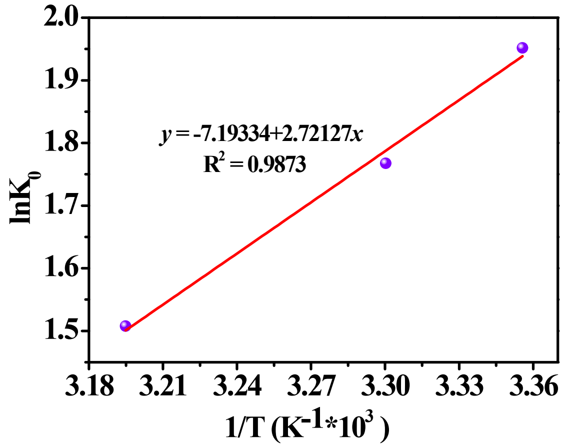

Fig.S.6 the plot of ln (K_0) versus 1/T for the adsorption of CHL through PMAC by $KHCO_3$ as an activator. Adsorption conditions: m = 5 mg, pH = 5, T=298, 303, 308 K.

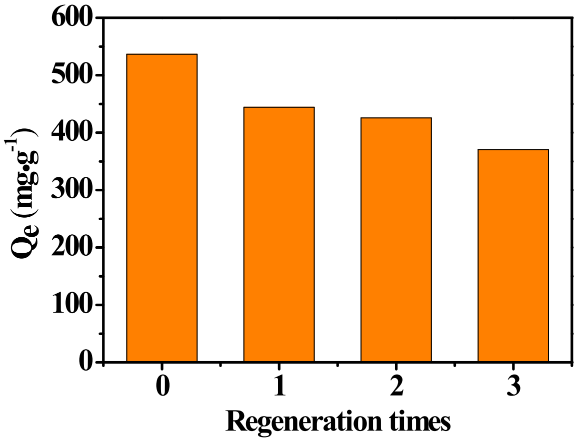

Fig.S.7 Reusability performance for CHL adsorption onto PMAC by $KHCO_3$ as activator. Adsorption conditions: C_o = 150 mg·L^{-1}, m = 5 mg, pH = 5; T= 298K.

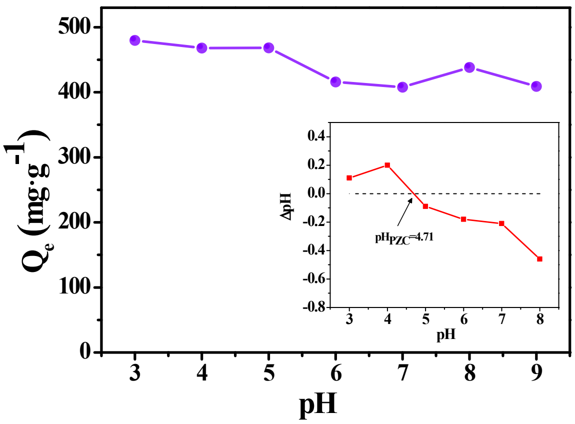

Fig.S.8 The effect of pH on the adsorption capacity for CHL through PMAC by $KHCO_3$ as an activator. Adsorption conditions: C_o = 150 mg·L^{-1}, m = 5 mg; T = 298 K.

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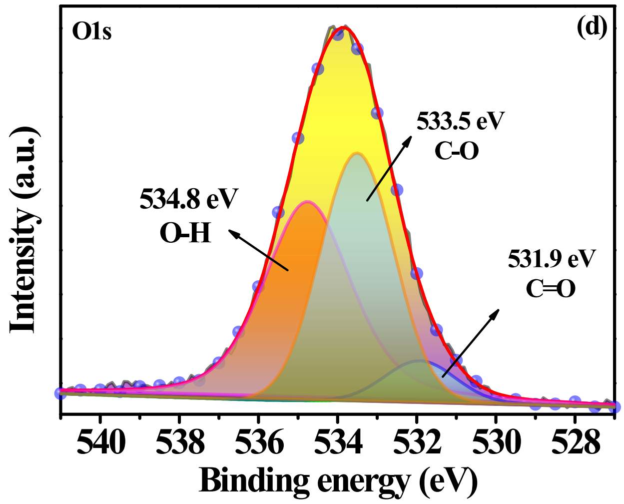

Fig.S.9 XPS deconvolution spectra O1s peak of PMAC by $KHCO_3$ as an activator

Supporting Tables

Table S.1 Adsorption capacity of CHL adsorbed by various adsorbents

Adsorbent	Activitor	CHL concentration ($mg{\cdot}L^{-1}$)	Adsorbent dosage ($mg{\cdot}L^{-1}$)	S_{BET} ($m^2{\cdot}g^{-1}$)	Q_m ($mg{\cdot}g^{-1}$)	Refs.
grape slurry	NaOH	5	1600	-	3.104	[5]
Coconut fiber	KOH	250	200	1755	523	[10]
Sodium lignosulfonate	K_2CO_3	120	150	1305.5	534.0	[44]
Cigarette butts	K_2CO_3	50	100	1421.27	450.13	[45]
Coconut husk	$NaHCO_3$	25	1000	438.2	4.32	[46]
Peanut shell	Ammonium polyphosphate	300	1000	979±25	423.7	[47]
Corn stover	-	30	8000	961.8	32.3	[48]
Sawdust	H_3PO_4	40	450	303-1298	176	[49]
Pomelo peel	KOH	150	167	1608	477	This work
Pomelo peel	$KHCO_3$	150	167	1608	549	This work