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Title: Comparisons of kinetics, thermodynamics and regeneration of tetramethylammonium hydroxide adsorption in aqueous solution with graphene oxide, zeolite and activated carbon

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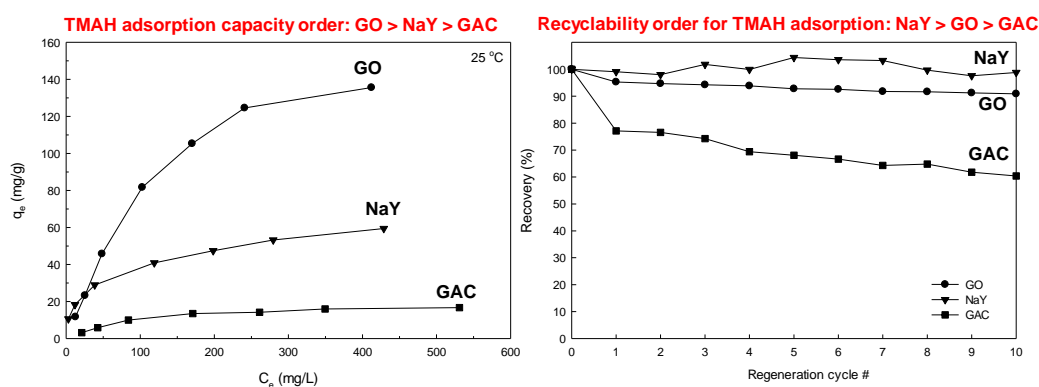
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## Graphical abstract

A comparison of TMAH adsorption capacity with GO, NaY and GAC is conducted and the result reveals that the magnitude of  $q_e$  follows the order of GO>NaY>GAC. The adsorption capacity of GO is significantly higher than those of zeolite and activated carbon in this and reported studies, showing its encouraging potential. GO also exhibits good reversibility of TMAH adsorption through 10 cycles of adsorption and desorption process. This reflects that GO is a promising and efficient adsorbent for TMAH removal in wastewater treatment.



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