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**Adsorption behavior of thorium on N,N,N',N'-tetraoctyldiglycolamide (TODGA)
impregnated graphene aerogel**

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Abstract

As a kind of three-dimensional graphene architecture material with superhydrophobic, low density, high specific surface area and porosity, graphene aerogel (GA) can be used to immobilize extractant to constitute the solvent impregnated adsorbent. In this paper, the N,N,N',N'-tetraoctyldiglycolamide impregnated graphene aerogel (GA-TODGA) was prepared to remove the thorium from aqueous solution. It is found that the adsorption of thorium on GA-TODGA is strongly dependent on the concentration of TODGA in GA and HNO₃ in aqueous solution. Compared with other solvent impregnated adsorbents, the adsorption capacity of GA-TODGA is much higher due to the high immobilization capacity of

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