

عنوان مقاله:

Adsorption study of 4-chloro-2-nitrophenol occurring in pesticide wastes by nano-TiO₂

محل انتشار:

اولین همایش ملی یافته های نوین در پژوهش های کشاورزی و منابع طبیعی (سال: 1394)

تعداد صفحات اصل مقاله: 5

نویسنده:

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خلاصه مقاله:

The present study deals with the removal of 4-chloro-2-nitrophenol (4C2NP) as a model contaminant from pesticide industries using titanium dioxide nanoparticles as an adsorbent. Batch experiments were carried out to investigate the effect of contact time, nano-TiO₂ dosage, pH, initial 4C2NP concentration and temperature on adsorption efficiency. The results showed that the adsorption capacity was increased with increasing 4C2NP concentration and temperature. Optimum conditions for 4C2NP adsorption were found to be initial pH \approx 2, nano- TiO₂ dosage \approx 0.01 g/250 mL and equilibrium time \approx 1 h. TiO₂ nanoparticles recorded a maximum capacity of 86.3 mg/g at optimal conditions.

کلمات کلیدی:

Adsorption, Nanoparticle, Phenolic compounds, Wastewater

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