

## 成型膨润土和钛柱撑膨润土对水中 $Pb^{2+}$ 和氯乙酸吸附及再生

### Sorption of $Pb^{2+}$ and chloroactic in solution on molding bentonite and molding Ti-pillared bentonite and their regeneration

摘要点击: 139 全文下载: 54 投稿时间: 2006-9-25 最后修改时间: 2007-4-1

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

中文关键词: [成型膨润土](#) [成型钛柱撑膨润土](#) [吸附](#) [铅离子](#) [氯乙酸](#)

英文关键词: [molding bentonite](#) [molding Ti-pillared bentonite](#) [adsorption](#) [lead ionic](#) [chloroacetic acid](#)

基金项目: 天津市自然科学基金资助项目 (033603211)

作者	单位
<a href="#">陈学青</a>	<a href="#">河北工业大学化工学院, 天津 300130</a>
<a href="#">曹吉林</a>	<a href="#">河北工业大学化工学院, 天津 300130</a>
<a href="#">侯丽红</a>	<a href="#">河北工业大学化工学院, 天津 300130</a>
<a href="#">谭朝阳</a>	<a href="#">河北工业大学化工学院, 天津 300130</a>

#### 中文摘要:

针对水中微量铅离子和氯乙酸的脱除, 考察了成型膨润土及成型钛柱撑膨润土的吸附性能, 得出对铅离子的吸附, 成型膨润土、成型钛柱撑膨润土与粉末状活性炭性能相当, 而对氯乙酸的吸附前两者要比粉末状活性炭低好多。确定了成型膨润土吸附氯乙酸后可用沸水煮沸30 min的方法再生, 成型钛柱撑膨润土吸附氯乙酸后, 可用500℃焙烧3 h的方法再生, 再生的膨润土循环使用3次后性能降低明显。此外, 还测得了成型的膨润土及成型的钛柱撑膨润土吸附铅离子和氯乙酸的等温线, 计算出其对铅的最大吸附量分别为24.33 mg/g和15.47 mg/g。

#### 英文摘要:

In view of the removal of small lead ionic and chloroactic in solution, the adsorption of molding bentonite and molding Ti-pillared bentonite are determined. It is concluded that the adsorption capability of molding Ti-pillared bentonite is equal to active carbon for lead ionic, their adsorption capability for chloroactic is much lower than active carbon. The regeneration mehod of molding benotine is that after adsorption chloroactic is boiled in water for 30 minutes. The regeneration mehod of molding Ti-pillared bentonite is that it is canclined at 500℃ for 3 h. The regenerative molding Ti-pillared bentonite can be used three times and their adsorption capability is reduced significantly after three times. Moreover, the sorption isotherm for chloroacetic acid and lead ionic on molding bentonite and molding Ti-pillared bentonite are determined, the max adsorption mass for lead ionic are 24.33 mg/g and 15.47 mg/g separatively.

您是第1340895位访问者

主办单位: 中国科学院生态环境研究中心

单位地址: 北京市海淀区双清路18号 中国科学院生态环境研究中心环境工程学报编辑部

服务热线: 010-62941074 传真: 010-62941074 邮编: 100085 [cjee@rcees.ac.cn](mailto:cjee@rcees.ac.cn)

本系统由北京勤云科技发展有限公司设计