

漆酶不同施用方法对土壤DDT污染修复的研究

Remediation of DDT contaminated soil by using laccase in different application ways

投稿时间: 2006-10-20 最后修改时间: 2008-1-17

稿件编号: 20080219

中文关键词: [土壤DDT污染修复](#) [漆酶](#) [不同投加方式](#)

英文关键词: [remediation of DDT in soil](#) [laccase](#) [different application ways](#)

基金项目: 广东省自然科学基金项目(021016、036716); 广东省科技计划项目(2002C31603、2003C34505)

作者	单位
赵月春	华南农业大学应用化学系, 广州 510640
付蓉	华南农业大学应用化学系, 广州 510640
莫测辉	暨南大学环境工程系, 广州 510632
易筱筠	华南理工大学环境科学与技术系, 广州 510640

摘要点击次数: 105

全文下载次数: 77

中文摘要:

该文从投加量、分次投加和灭菌等方面,研究了漆酶不同施用方法对其修复土壤DDT污染效果的影响。研究表明,土壤中DDT各组分(P, P'-DDE除外)及DDT总量(DDTs)的降解率均随着漆酶投加量的增加而显著提高,在投加量为每克土加酶6U时DDTs的降解率达到50.63%;漆酶两次投加对土壤中DDT各组分及总量的降解率均显著高于一次投加,DDTs的降解率提高11.4%;漆酶处理对于非灭菌土壤和灭菌土壤中DDT总量的降解率几乎相当,但各组分则有显著差异,其中P, P'-DDE、O, P'-DDT和P, P'-DDD在非灭菌土壤中的降解率低于灭菌土壤,而P, P'-DDT则相反。

英文摘要:

Effect of different application ways (application dose, batch application and unsterilized soil) of laccase on remediation of DDT in soil was investigated. The results show that degradation rate of DDT in soil increased significantly with increasing application dose of laccase except P, P'-DDE. The degradation rate of DDTs was up to 50.63% when adding dose of laccase was 6U per gram soil. Degradation rate of DDT in soil treated with two times addition of laccase is 11.4% higher for DDTs than that treated with one time addition of laccase with the equivalent dose of laccase. Degradation rates of DDT in unsterilized and sterilized soils both treated by laccase are equivalent for total DDT(DDTs), but significantly different for individual compounds, with degradation rates of P, P'-DDE, O, P'-DDT, and P, P'-DDD in unsterilized soil is significantly lower than those of which in sterilized soil and conversely for P, P'-DDT.

[查看全文](#)

[关闭](#)

[下载PDF阅读器](#)

您是第937113位访问者

主办单位: 中国农业工程学会 单位地址: 北京朝阳区麦子店街41号

服务热线: 010-65929451 传真: 010-65929451 邮编: 100125 Email: tcsae@tcsae.org

本系统由北京勤云科技发展有限公司设计