

资源环境 生物药物 生物质转化

微藻水环境修复及研究进展

孙传范

(中国农村技术开发中心, 北京 100045)

摘要:

水资源危机已成为人类面临的最大挑战,污水再利用是解决这一难题的重要途径。微藻(micropalgae)是指那些需要借助于显微镜等工具辨别的微型藻类的总称,对污水具有很强的清洁能力,能够高效清除污水中的N和P,在水环境修复中,微藻具有广阔的发展前景。阐述了微藻修复水环境污染的优势、特点和现状,综述了微藻修复受污染水环境的机理,处理氮磷有机物、重金属污水和污水处理厂污泥的研究进展,并对微藻修复的综合利用提出展望。

关键词: 微藻;水环境修复;氮磷污水;重金属

Research Progress on Microalgae Rehabilitation of Water Environment

SUN Chuan-fan

(China Rural Technology Development Center, Beijing 100045, China)

Abstract:

Water resources crisis is one of the biggest challenges facing human beings, and waste water reuse is an important approach to resolve the problem. Microalgae including all mini-type alga can be distinguished with microscopes. Microalgae has strong cleaning ability and can effectively clean out N and P in waste water. So rehabilitation of water environment microalgae has a bright future for further development. This paper detailed the advantages, characteristics and existing status in using microalgae to rehabilitate water environment, and summarized the mechanism of using microalgae to rehabilitate the polluted water, the research progress on treating nitrogen and phosphorus, eliminating heavy metals and decontaminating sewage sludge. It also prospected the possibility of microalgae comprehensive utilization in water resources rehabilitation.

Keywords: microalgae rehabilitation of water environment; polluted water by nitrogen and phosphorus; heavy metal

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通讯作者:

作者简介: 孙传范,副研究员,博士,研究方向为植物营养与生理学和科技政策。E-mail: scf@crtedc.org.cn

作者Email:

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