

综合评述

## 植物修复多氯联苯研究进展

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摘要

综述了植物修复持久性有机污染物多氯联苯(PCBs)的研究进展,重点阐述了植物对PCBs的去除作用和机理,植物在从环境中去除PCBs的过程中,不仅仅是作为微生物降解的支持者,而且还作为积极的参与者对PCBs进行代谢:一方面植物通过根系从环境中吸收和积累PCBs,并将吸收的PCBs转化为非毒性的代谢产物累积于植物组织中;另一方面植物释放促进PCBs降解的酶直接降解PCBs,或释放根系分泌物,增加根际微生物的数量,提高其活性间接降解PCBs.文中对植物修复PCBs的影响因素如植物组织培养的类型、生物量、PCBs的初始浓度以及PCBs的类型、理化性质等进行了讨论.

关键词 [多氯联苯\(PCBs\)](#) [植物修复](#) [有机污染物](#)

分类号

## Research advances in phytoremediation of polychlorinated biphenyls (PCBs)

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### Abstract

This paper reviewed the research advance in PCBs phytoremediation, with the focus on the roles and mechanisms of plants in the removal of PCBs from the environment. In the process of PCBs removal, plants acted not only as a supporter of biodegradation, but also as an active participator in metabolism. Plants could absorb and accumulate PCBs from the environment, and store the non-toxic metabolic products in their tissues. Root exudates could degrade PCBs directly by the contained ectoenzymes, or indirectly through stimulating the activity of rhizospheric microbes. The internal and external factors affecting the phytoremediation of PCBs, including plant species, their culture types and biomass, as well as the initial concentration of PCBs and their physical and chemical characters, were also discussed.

**Key words** [Polychlorinated biphenyls](#) [Phytoremediation](#) [Organic contaminants](#)

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