

研究报告

## 锌在红树植物白骨壤-土壤系统中的分布与迁移

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**摘要** 河口海湾沉积物中锌的污染已对水生生物构成了潜在的威胁. 本研究在温室中建立红树植物白骨壤的模拟湿地系统, 分别用不同浓度的人工配置污水和人工海水(对照)每周定时、定量地对模拟湿地系统进行为期1年的污灌试验, 研究污水中的重金属锌在红树植物白骨壤-土壤系统中的分布、累积与迁移规律. 结果表明, 由人工污水加入模拟系统中的锌主要存留在土壤中(大于67%), 只有一小部分(1.24%~10.4%)迁移到植物体和凋落物中, 即白骨壤-土壤系统对生活污水中的锌具有较强的净化作用. 根据物质平衡模型进行的计算表明, 土壤子系统中锌的环境容量较大.

**关键词** [白骨壤](#) [锌](#) [分布](#) [迁移](#) [污水](#)

分类号

## Distribution and migration of zinc in *Avicennia marina* plant;soil system.

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### Abstract

Zinc is a major anthropogenic contaminant in estuarine ecosystem, and has potential ecotoxicological consequences for aquatic animals and plants. An artificial mangrove wetland was set up in greenhouse to study the distribution and migration of zinc in synthetic wastewater in *Avicennia marina* plant-soil system. Different concentration synthetic wastewater and 1.5‰ salinity artificial seawater (control) were discharged into the system in fixed quantity twice a week for a year. The results showed that most part (>67%) of zinc in the artificial wastewater discharged into the system was remained in the soil, and only a small portion (1.24%-10.4%) of it was entered into plant and litter, indicating that this artificial plant-soil system had a stronger purifying effect on the zinc in synthetic wastewater. The calculation with matter balance model indicated that soil subsystem had a higher environmental capacity of bearing zinc.

**Key words** [Avicennia marina](#) [Zinc](#) [distribution](#) [migration](#) [wastewater](#)

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