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**Long-term effects of oxytetracycline (OTC) on the granule-based anammox:
process performance and occurrence of antibiotic resistance genes**

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Highlights

- The effect of oxytetracycline on anammox performance and microbial communities.
- The changes in properties of anammox granules under oxytetracycline stress.
- Four types of antibiotic resistance genes were detected in anammox mixed culture.

Abstract

The effect of oxytetracycline (OTC) on anaerobic ammonium oxidation (anammox) performance and the evolution of anammox consortia under OTC stress were analyzed in this study. Meanwhile, the level of resistance genes under OTC stress was monitored for the first time in the anammox system. The nitrogen removal capacity of anammox reactor was almost deprived within three weeks under the stress of 2 mg L⁻¹ OTC, accompanied by a significant reduction of specific anammox

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