

**Microbially Mediated Clinoptilolite Regeneration in a
Multifunctional Permeable Reactive Barrier used to Remove
Ammonium from Landfill Leachate Contamination: Laboratory
Column Evaluation**

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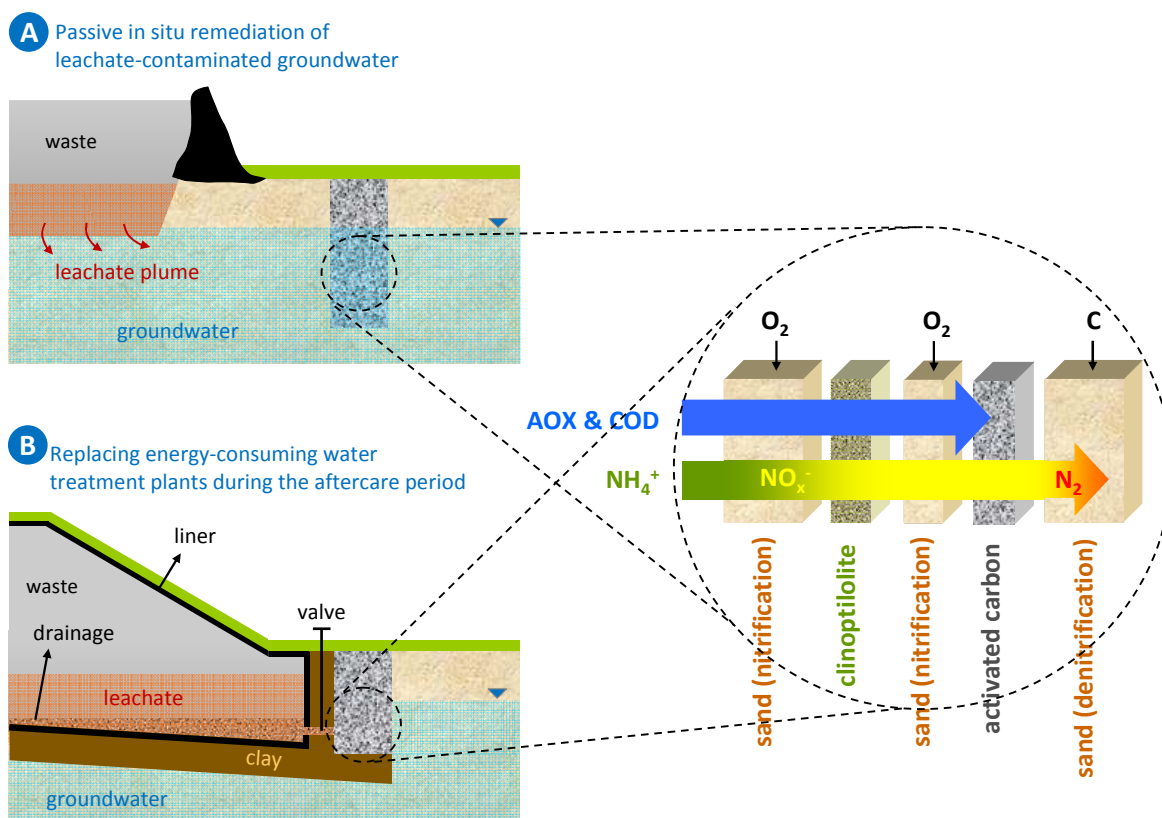


FIGURE S1. Schematic overview of a sequential multibarrier for the semi-passive treatment of (A) leachate-contaminated groundwater, or (B) leachate during the aftercare period of confined well-engineered landfills..

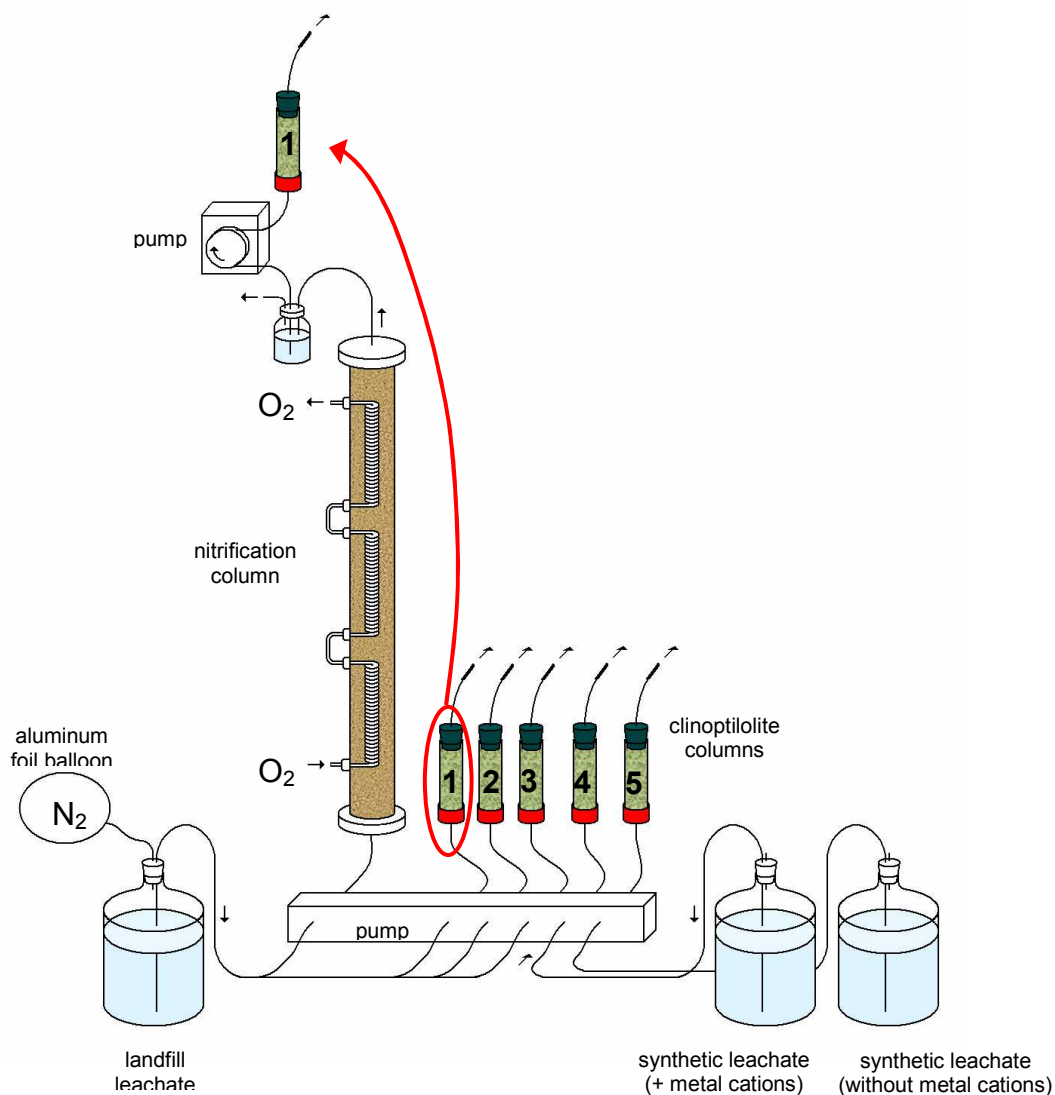
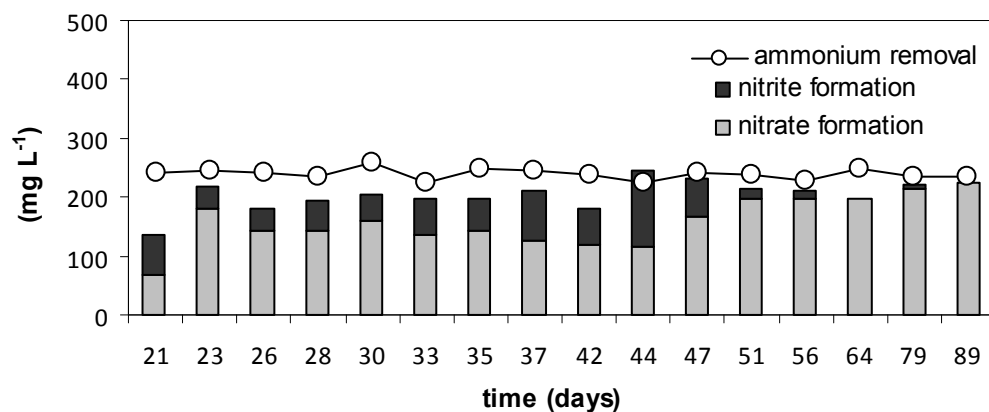


FIGURE S2. Schematic overview of the laboratory-scale column system. As indicated, the clinoptilolite-filled columns fed with landfill leachate were periodically installed after the nitrification column to receive ammonium-free leachate.



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64 **FIGURE S3. Overview of ammonium removal ($\circ$) and formation of nitrate (light grey bars)**
 65 **and nitrite (dark grey bars) in the nitrification column. The data indicate the formation of**
 66 **primarily nitrate and to a minor extent nitrite. This suggests a more extensive oxidation**
 67 **compared to findings in our previous paper (4) where primarily nitrite was formed and to a**
 68 **minor extent nitrate, and is likely due to a higher hydraulic retention time in the current**
 69 **study.**