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Divergent assemblage patterns of abundant and rare microbial sub-communities in response to inorganic carbon stresses in a simultaneous anammox and denitrification (SAD) system

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Abstract

Inorganic carbon has profound influence on anammox system and distinct microbial communities play pivotal roles in nitrogen removal, yet little is known about the ecological patterns of abundant and rare sub-communities in response to inorganic carbon stresses in simultaneous anammox and denitrification systems. Here the aspects of community ecology of abundant and rare taxa under abiotic constraints were explored. Results showed that different IC/NH₄⁺-N ratios have significant influences on NH₄⁺-N and TN removal. Co-occurrence networks revealed that abundant and rare taxa present contrasting assemblage patterns and ecological strategies. Spearman's

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