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(54) Title: NUTRIENTS REMOVAL VIA SIMULTANEOUS NITRIFICATION AND DENITRIFICATION COUPLING WITH PHOSPHATE ACCUMULATION

(57) Abstract: The present invention relates to methods for water treatment, in particular using a novel *Thauera* species that is capable of removing nitrogen via simultaneous nitrification and denitrification. The novel *Thauera* species may be further capable of phosphate accumulation in the cells. The invention also relates to an isolated *Thauera* sp. strain SND5 (accession number: CGMCC 21549). The invention further relates to reactors for use in carrying out the methods as described herein and bioprocesses that are carried out using said reactor.

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