

Current trends and future prospects of ammonia removal in wastewater: A comprehensive review on adsorptive membrane development

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ABSTRACT

The excessive amount of ammonia presents in water streams has led to a serious potable water scarceness worldwide. The application of conventional methods in removing ammonia suffers from many drawbacks. To this end, the shift towards adsorptive membrane application in eliminating ammonia has gained a great attention due to its outstanding performance attributable to the hybrid process, i.e., adsorption and filtration approaches, as a single step. Thus, this review critically discusses the current trend of ammonia removal means and the approach of fabricating adsorptive membrane. The future prospective on the utilisation of natural zeolite as adsorptive membrane is also conferred.

KEYWORDS:

Ammonia removal; Adsorptive membrane; Hybrid; Adsorption; Natural zeolite