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Occurrence, transportation, monitoring and treatment of emerging micro-pollutants in waste water- A review from global views

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ABSTRACT

This paper collects data from worldwide research groups and aims to critically review and analyse the advances of knowledge development in the area of occurrence, transportation, monitoring and treatment of emerging micro-pollutants from around the globe and to recommend the research needs in this research area. This review discovers that •A waste water treatment plant is one of pathways for micro-pollutants to transfer into surface waters; •Sample preparation, matrix effects and validation methods are challenges and more advanced analytical instrumentation and procedures are critical in analysing emerging micro-pollutants; •Traditional activated sludge and/or bio-filtration processes showed less efficiency to remove emerging micro-pollutants; •Advanced oxidation processes need to be validated for the efficiency and cost effectiveness; • More researches are needed to classify the type and toxicity of by-products resulting from the reactions between advanced oxidation processes and emerging micro-pollutants. The suggested future research needs from this

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