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Physico-chemical treatment for the degradation of cyanotoxins with emphasis on drinking water treatment- How far have we come?

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Highlights:

- Cyanotoxins removal are dependent on environmental parameters, mainly pH and Natural Organic Matters
- Chlorination and ozonation employed for cyanotoxin treatment may breach guideline values
- Membrane technology and photocatalysis operation involves high energy and maintenance
- Specific reaction pathway shifts oxidation process more towards sustainable approach

ABSTRACT:

Over the years, various physicochemical treatment processes, such as photocatalysis, membrane technology, ozonolysis, and chlorination, etc. have been tested at laboratory and pilot scale for the treatment of various cyanotoxins. Most of these treatment processes are also being commonly practiced in a drinking water treatment plants (DWTPs). However, the degree of treatment widely varies among cyanotoxin variants and is mainly governed by the source water characteristics,

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