

Biology of emerging contaminants, do they really eventually emerge?

Abstract:

Societal demand for new products promotes the production and release of new chemicals.

Additionally, population growth and climate change has produced increased demand on water resources, resulting in greater reliance on direct and indirect water reuse. Advances in analytical chemistry enables us to detect environmental contaminants with increasing sensitivity, allowing us to discover new families of emerging contaminants that threaten our water resources.

Understanding the biotransformation potential of emerging contaminants has been a challenge that's been greatly assisted recently by means of molecular tools. This talk will describe lessons-learned and research aimed at discovering the biodegradation potential and pathways for a variety of important "emerging contaminants", including MTBE, I,4-dioxane, NDMA, PBDEs and aqueous film forming foams (AFFF) (that include PFAS, or so-called 'forever chemicals').