



Applications of Biotechnology for Treatment of Poly- and Perfluoroalkyl Substances (PFASs) in Water and Wastewater

Guest Editor:

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Message from the Guest Editor

Poly- and perfluorinated alkyl substances (PFAS) constitute a diverse array of fully and partially fluorinated compounds, comprising over 4000 linear, branched, or cyclic variations. Growing concerns about PFAS have been raised due to their environmentally persistent and bioaccumulative nature and adverse human health effects. Comprehensive surveys in the United States and other nations have been conducted to monitor PFAS distribution, transport, transformation, and removal in both drinking water and wastewater systems. Recently, regulative agencies worldwide have proposed national drinking water standards for certain PFAS compounds, such as PFOS and PFOA to protect communities from PFAS-contaminated water. Despite the development of physicochemical treatments for PFAS, biodegradation of PFAS offers a potentially cost-effective approach. Therefore, a thorough investigation into the integration of current biotechnological treatment and emerging microbial ecology techniques is warranted to comprehend the fate, transport, and removal of PFAS in water and wastewater systems





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