Pollutants of the Modern Era: Remediation Technologies and Biological Outcomes

The presence of chemical pollutants in aquatic ecosystems poses serious ecotoxicological risks, primarily due to their environmental persistence and bioaccumulation potential. A wide variety of remediation technologies have been developed based on the sequestration or degradation of contaminants. In addition to removal efficiency and economic feasibility, evaluating the biological effects of emerging degradation by-products on living organisms is of paramount importance. This presentation outlines the status of global contamination, with emphasis on per- and polyfluoroalkyl substances (PFAS) as prominent pollutants of the modern era, reviews current remediation approaches, and evaluates the potential biological impacts associated with pollutant degradation induced by non-thermal plasma.