PFAS - How to deal with this substance class from the treatment perspective?

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PFAS (per- and polyfluorinated alkyl substances) have been in the news a lot recently. PFAS are persistent, which means that they remain in the environment for an extremely long time and are therefore also known as "Forever chemicals". The presentation will give you an understanding of this group of substances, their properties, toxicity and the challenges for treatment technologies as new methods to remove these substances from environmental compartments such as water or soil are urgently needed. You will get an overview of the methods used today and their limitations.

The research of the Department of Technical Biogeochemistry of the UFZ will show you how activated carbons can be improved as adsorbents, how electrical potential can help to filter PFAS from water, and what properties membranes can be given to remove PFAS more efficiently.

However, degradation of PFAS is not easy but can be accomplished. New methods that lead to genuine PFAS destruction are currently being developed. Examples include photocatalytic methods, coupling PFAS adsorption and oxidation using catalytically activated persulphate or a further development of electro-oxidation. You will hear examples for processes tested from laboratory to the pilot scale.