

# Per- and polyfluoroalkyl substances (PFASs) - "the big picture"

Co-convenors:

Lena Vierke (German Environment Agency (UBA), Dessau, Germany)

Zhanyun Wang (ETH Zurich, Zurich, Switzerland)

## Background

Per- and polyfluoroalkyl substances (PFASs) are a large family of over 3,000 chemicals that have been used in numerous industrial and consumer applications since the 1940s. Due to their high persistence, bioaccumulation potential and toxicity, considerable efforts have been made over the past decade to understand and limit the environmental and human exposure to the so-called "long-chain" PFASs, in particular perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA) and their major precursors. However, there are still many other PFASs on the global market that are structurally similar to the long-chain compounds, including overlooked legacy compounds and novel alternative substances developed to replace long-chain PFASs. Many of these are still largely non-assessed and unregulated, although scientific knowledge regarding some of them has started to emerge.

This Satellite Event aims to bring together scientists from different disciplines, regulators and industry representatives to present and discuss the "big picture" of emerging and novel PFASs in light of available scientific knowledge regarding them and lessons learned from the long-chain PFASs. In particular, the Event intends to analyze and identify [i] which emerging and novel PFASs are relevant for future actions and [ii] which scientific knowledge should be targeted and prioritized. The session hopes to attract active students, researchers, regulators and industry representatives that are interested in exploring beyond our current knowledge and moving towards a sustainable future.

## Preliminary program

**12:00 - 12:30** **Introducing the Satellite Event - Why the "big picture" of PFASs matters? Perspectives from science and regulation**

Zhanyun Wang (ETH Zurich) and Lena Vierke (German Environment Agency)

**12:30 - 12:50** **Dark Matter and the Precautionary Principle: developing a regulatory response for unregulated or novel PFASs, taking account of scientific uncertainty - Total Oxidisable Precursor Analysis (TOPA)**

Roger Klein (Cambridge UK) and Nigel Holmes (Queensland DEHP Australia)

**12:50 - 13:10** **Why It Matters: Frequency, Occurrence, Transport, and Implications of the 40 Classes of Recently-Discovered Per- and Polyfluoroalkyl Substances in Aqueous Film-Forming Foam Impacted Groundwater**

Jennifer Field (Department of Chemistry, Oregon State University)

*13:10 - 13:25 Break*

**13:25 - 13:40** **tentative: Industry's perspective on perfluoroethercarboxylic acids as processing aids in fluoropolymer production**

(Fluorocouncil)

**13:40 - 13:55** **Discovery and hazard characterization of per- and polyfluoroether acids**

Robin Verstergren (IVL Swedish Environmental Research Institute)

**13:55 - 14:15** **Mechanism of action of PFAS and possible implication for human health**

Kristine Bjerve Gützkow (Norwegian Institute of Public Health)

**14:15 - 14:35** **Advances in per- and poly-fluorinated alkyl substances (PFASs) characterization and remediation in saturated and unsaturated zone**

Marko Filipovic (NIRAS Sweden AB)

*14:35 - 14:50 Break*

**14:50 - 15:50** **Round table discussion and interaction with the audience to discuss**

- emerging and novel PFASs relevant for future actions

- scientific knowledge to be targeted and prioritized in the future

**15:50 - 16:00** **Closing the Satellite Event**

Zhanyung Wang (ETH Zurich) and Lena Vierke (German Environment Agency)