**Session Proposal**

# Session Title

Organohalide biogeochemical cycling and remediation in soil

# Session Organizers

Shanquan Wang, Sun Yat-Sen University, wangshanquan@mail.sysu.edu.cn;

Jun Yan, Institute of Applied Ecology, Chinese Academy of Sciences,

Lorenz Adrian, Helmholtz Centre for Environmental Research (UFZ), lorenz.adrian@ufz.de;

Michael Manefield, University of New South Wales (UNSW Sydney), manefield@unsw.edu.au;

# Session Description

The symposium will provide a scope for critical discussion about biogeochemical cycling of organohalides and its bioremediation applications in soil. It will serve as a pivotal platform for scholars, researchers, and practitioners to converge and explore the latest advancements, methodologies, and discoveries in the field of the organohalide biogeochemical cycling and bioremediation, including practical solutions for managing organohalides in agricultural soil and industrial sites. The symposium will also provide a networking opportunity for domestic/early-career soil scientists as well as established international soil scientists.

# Relevance

 The session is highly relevant to the congress’s theme of “soil degradation control, remediation and reclamation” as organohalides are a common and large group of soil pollutants that present in both agricultural soil and industrial sites. In addition, organohalides are major target pollutants in the list of New Pollutants for Priority Control in China (2023).

# Format

Oral presentations and posters

# Proposed Speakers

**Elizabeth A. Edwards**, University of Toronto; Prof. Edwards is mainly engaged in anaerobic microbial community analysis, biodegradation, biotransformation, bioremediation, and anaerobic digestion of industrial and municipal wastes. Prof. Edwards’ research team has discovered and characterized novel microbial cultures such as the now commercial KB-1 consortium that metabolize chlorinated ethenes and ethanes.

**Max M. Häggblom**, Rutgers University; He is a Distinguished Professor and Chair of the Department of Biochemistry and Microbiology at Rutgers University; Research in his laboratory focuses on the biodegradation of environmental pollutants, especially halogenated aromatic compounds.

**Feng He**, Jiangnan University; Prof. He has long been engaged in environmental geochemistry and environmental nanotechnology research to address global sustainability challenges in the fields of emerging contaminant treatment, environmental remediation, agriculture, and resource recycling.

**Yan He**, Zhejiang University; She is interested in the research of soil chemistry and biochemistry, environmental biogeochemistry, pollution ecology, and soil pollution control and remediation, with special focus on biogeochemical processes of typical elements and organic pollutants in soil ecosystem.

**Jiandong Jiang**, Nanjing Agricultural University; His research mostly focuses on the microbial catabolism of chemical pesticides, with great interests in aerobic and anaerobic dehalogenation of halogenated aromatics.

**Frank E. Löffler**, University of Tennessee; He is a the Goodrich Chair of Excellence Professor and his research primarily focuses on the degradation of anthropogenic contaminants and bioremediation, the use of molecular biological tools for environmental monitoring, the study of natural organohalides on current and early Earth, microbial ecology and systems biology approaches, and the cultivation and isolation of novel microorganisms.

**Xin Song**, Institute of Soil Science, Chinese Academy of Sciences; her primary research focus on the development of materials and technologies, as well as underlying mechanisms, for remediation of contaminated soil and groundwater, of which many have been tested in pilot and field scales.

**Jingchun Tang**, Nankai University; His current research focuses on environmental microbial technology and toxicology, the development of biochar and nanomaterials for remediation purposes, ecological remediation, microplastic pollution and its environmental impact.

**Naoko Yoshida**, Nagoya Institute of Technology; She has a strong background in both theoretical and applied aspects of environmental science, having worked extensively on environmental impact assessments and the role of microorganisms in environmental processes.

**Songhu Yuan**, China University of Geosciences (Wuhan); His primary research focuses on the reactive oxygen species (ROS) and electron transfer processes in the subsurface environment, as well as the remediation of chlorinated solvents contaminated sites.

**Jun Yan,** Institute of Applied Ecology, Chinese Academy of Sciences; His research mainly focus on the biogeochemical cycling of orgnaohalides and bioremediation applications, with a particular foci on the biochemistry of cobalamin-based organohalide respiration.