

Workshop: Extracellular Polymeric Substances: Challenges and Opportunities

The objective of the workshop is to assemble the main research groups working on the topics related to fundamental understanding of EPS, therefore including the research of EPS extraction and characterization (both physical and chemical characterization) in the research fields of biofilm stability/bioprocess optimization, as well as resource recovery from excess sludge, in order to share knowledge and identify the main bottlenecks and methodological limitations currently hampering the development of this fascinating field of research.

The workshop is intended to establish a platform of knowledge sharing and discussion in order to identify the main bottlenecks and methodological limitations currently hampering the development of the EPS research field. Participants will benefit from the presentation of different EPS extraction and characterization methodologies applied by leading research groups as well as the following critical discussion which will be guided and stimulated with the aim of defining potential solutions to the main challenges faced by researchers. This workshop appears particularly indicated for researchers to learn how to critically select the appropriate methods to apply for their particular EPS research purpose.

Time	Topics and Presenter
10:00- 10:25	Current state of EPS research (Thomas Seviour, SCELSE, Singapore)
10:25-10:30	Case study 1: eDNA in biofilm EPS (Bairoliya Bakcham, Nanyang Technological University)
10:30-10:55	New findings in EPS composition and application (Yuemei Lin and Sergio Tomas Martinez, Delft University of Technology)
10:55-11:00	Case study 2: EPS production in single cells (Tsukasa Ito, Gunma University, Japan)
11:00 -11:25	Metagenomics in biofilm EPS control (Morten Simonsen Dueholm, Aalborg University)
11:25 -11:30	Case study 3
11:30 – 12:00	Discussion – revisit the road map of EPS extraction and characterization
12:00-13:30	Lunch break
1:30 – 2:15	Group discussion on EPS composition, characterization and application
2:15 - 2:45	Report of each group about their findings and suggestions
2:45 - 3:00	Summary of the workshop