Biotechnology and Biological Sciences Research Council

Engineering and Physical Sciences Research Council

EBNet Travel Bursary Support
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(*TB202304*)

EBNet Environmental Biotechnology

10th International Symposium on Wetland Pollutant Dynamics and Control (WETPOL), 10-14 September 2023

Presentation titles:
'The UK's Efforts to Understand and Tackle Antimicrobial Resistance (AMR): the Role of Nature-based Solutions' and **'Innovative Hybrid Constructed Wetlands for Pharmaceutical Industrial Wastewater Treatment''**
Authors: Dr Tao Lyu *et al.*

Dr Tao Lyu, a lecturer at Cranfield University, recently attended the 10th International Symposium on Wetland Pollutant Dynamics and Control (WETPOL) held in Bruges, Belgium from September 10-14, 2023. This premier conference convened over 180 scientists, engineers, and policymakers from 30 countries across five continents to discuss cutting-edge research on using nature-based solutions for water and wastewater treatment.

With support from the EBNet travel bursary, Dr. Lyu delivered two oral presentations highlighting his group's work on intensified treatment wetland technologies for micropollutant removal.

The first talk, entitled 'The UK's Efforts to Understand and Tackle Antimicrobial Resistance (AMR): the Role of Nature-based Solutions', introduced a current PhD project funded by EPSRC and Welsh Water. The second presentation, entitled 'Innovative Hybrid Constructed Wetlands for Pharmaceutical Industrial Wastewater Treatment', summarized the findings from his recently completed project supported by the Royal Academy of Engineering.

Group photo of the conference attendees

Dr Tao Lyu's two platform presentations at the WETPOL 2023 conference.

With the experiences and connections gained through the conference, Dr. Lyu is looking forward to new international collaborations to pioneer innovative nature-based solutions for tackling water pollution threats through environmental biotechnology.

Beyond the presentations, Dr. Lyu shared news of the recently established **EBNet PFAS Working Group***.

***EBNet Working Group: PFAS 'forever chemicals' – see: https://ebnet.ac.uk/wg-details/wg-pfas/**
Per- and Polyfluoroalkyl Substances (PFAS), known as 'forever chemicals', are extensively used in industrial and consumer applications due to their exceptional persistence properties. Attributed to the enduring characteristics, these substances have a detrimental impact on human health when their residues persist in the environment. While current remediation approaches primarily rely on physical adsorption and chemical oxidation processes, recent studies have emerged regarding the potential of microbial degradation as a cost-effective solution.