Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2020-16
Project Title:	Electrocatalytic degradation of refractory organics in active landfill leachate to enhance the sequencing batch reactor (SBR) denitrification process
Principal Investigator:	Dr Lam Chun Ho Jason, School of Energy and Environment, City University of Hong Kong
Total Approved Grant:	$497,000
Duration:	1/11/2021 to 31/10/2024
Project Status/Remarks:	On-going
Project Scope:	This project aims to design a flow electrochemical reactor to fragment the refractory organic into smaller organics that can be utilised by the microbes during the SBR anoxic denitrification treatment. This strategy can solve multiple issues – (a). Reduce the amount of refractory organics going into the environment; (b). Improve the bCOD: N ratio for the SBR to ensure an efficient denitrification cycle; (c). Reduce or omit the need to add sugar during the SBR treatment; and (d). Eliminate the nitrogen quota occupancy incurred from the refractory organics, thereby making it easier to comply with the discharge licence; and (e). Reduce any metal ions entering the environment.
Summary of the Findings/Outcomes:	To be available upon completion of the project