**Valorisation of Industrial Wastewater in Malaysia**

Malaysia is blessed with substantial amount of sunlight irradiation and raining water throughout the year. This has greatly catalysed the flourishing of local palm oil industry, transforming Malaysia into one of the biggest palm oil exporters in the world. However, the success of the palm oil industry is always shadowed by the massive production of its wastewater, the palm oil mill effluent (POME). Current adopted POME treatment system can no longer cope with the stringent hurdle imposed, making POME waste the major water pollutant in Malaysia. Hence, novel applications of photocatalytic and steam reforming degradation were investigated as the new alternative for the POME waste treatment. Based on the results, by coupling these processes under appropriate conditions, as high as 99.9% of COD degradation can be achieved, leaving the effluent’s COD level at 37 ppm that well below the discharge threshold. In addition, along the treatment process, the recalcitrant organic pollutants in POME are readily valorised into H2-rich syngas (steam reforming) and CH4-lean biogas (photocatalytic), which promote the sustainability of the industry, at the same time protect the environment from the disastrous POME pollution.

**Bibliography**

Dr. Ng Kim Hoong received his Doctoral Degree in Chemical Engineering from Universiti Malaysia Pahang in 2017. After the completion of his degree, he was appointed as Postdoctoral Research Fellow at Universiti Malaysia Pahang and subsequently joined School of Energy and Chemical Engineering, XMUM as Lecturer in April 2018. His research focuses on the treatment and valorisation of waste. To date, he has published 15 SCI journal papers in the field of industrial wastewater treatment and valorisation of waste into renewable energy.

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