Research Project Title

Probing charge transfer mechanism at the interface of TiO_2 and $Ti_3C_2T_x$ MXene: Photocatalytic activation of TiO_2/MXene composite aerogel for POME degradation

Details of Primary Supervisor

1. Name: Dr. Andrew Ng Kay Lup
2. Department and University: School of Energy and Chemical Engineering, Xiamen University Malaysia
3. Email address: andrew.ng@xmu.edu.my
4. Research interests: catalysis, MXene, heterojunction, waste degradation

Details of Research Project

1. Duration: 2 years

2. Summary:
   To understand how the TiO_2/MXene composite works and how it can function as photocatalyst for application such as pollutant degradation.

3. Skills/techniques development:
   - Exposure to various characterization techniques (Photoluminescence spectroscopy, XRD, HRTEM, FESEM, EDX, XPS, BET, FTIR, UV-Vis, GC-MS)
   - Research writing and publication skill development

4. Location: Xiamen University Malaysia & University of Malaya

GRA Requirements

Number of Master places available: 1

1. The candidate must be enrolled in XMUM Master programme.
2. Diligent and willing to learn
3. Malaysian