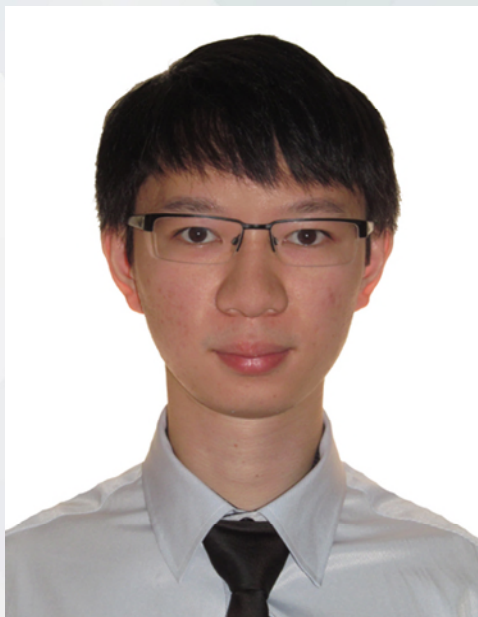




ORAL DEFENCE ANNOUNCEMENT



NG YUN RU

Photocatalytic and photoelectrochemical systems for oxidation of aromatic compounds in an aqueous environment

As the demand for chemical products increases, alongside a rising problem of pollution due to chemical wastes, there is a great interest in developing systems that can resolve either or both issue in a sustainable way. Inspired from nature, the development of photocatalytic and photoelectrochemical system had been pursued as possible solutions to the aforementioned problems. In this work, both a photoelectrochemical system involving bismuth vanadates with tetraamidomacrocyclic ligand iron complexes (Fe-TAML) as co-catalysts and a photocatalytic system involving modified graphitic carbon nitride were investigated. Both systems were also applied to the oxidation of bisphenolic compounds, as well as the oxidation of lignin in lignocellulose.

Date: 14 April 2020
Time: 3pm
Supervisor: Asst Prof Soo Han Sen
Co-Supervisor: Dr Dr Lim Yee Fun (A*STAR IMRE)