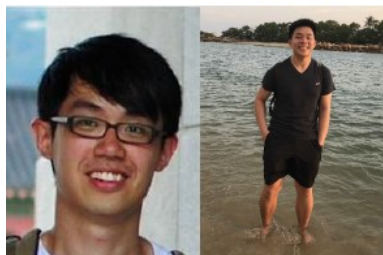




8 Oct 2021

Our second open access paper has been accepted (paper #209)! It is on a piece of work from two graduate students (Joey and Zhiyong) and two undergraduates (Carmen and Zhen Xuan), not including two ex-group members who are now faculty in their own rights.



2 Aug 2021

Congratulations to the newly-minted Dr Koh Wei Xiang!

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE
School of Physical and Mathematical Sciences
College of Science

ORAL DEFENCE ANNOUNCEMENT



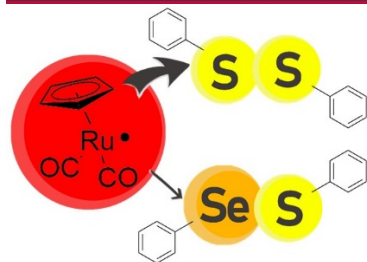
KOH WEI XIANG

TARGETING THIOREDOXIN REDUCTASE WITH ORGANOMETALLICS

The thioredoxin (Trx) system is essential to the regulation of oxidative stress in cells. Thioredoxin reductase (TrxR) is an enzyme which is central to the Trx system and is upregulated in cancer cells, making it a potential target in anti-cancer therapy. Its active site contains an S-Se bond (Cys497-SeC498). Since both sulphur and selenium are soft bases, we hypothesise that they may be targeted by organometallic compounds. In this work, two aspects on targeting TrxR with organometallics have been examined: (a) Developing organometallic complexes and derivatives of known drugs that act on TrxR, and (b) mechanistic and kinetic studies on the reaction of organometallic complexes with the S-Se bond.

Date: 2 August 2021
Time: 3PM
Supervisor: Assoc Prof Leong Wing Kee

26 Jul 2021



This is one of those papers that took the efforts of a number of students. It is the first paper on our hypothesis that organometallic compounds should exhibit differential reaction behaviour with Se-S vs S-S bonds; an idea that may lead to selective targeting of the enzyme TrxR. The paper is dedicated to the memory of Prof Arne Holmgren. Check out the paper (publication# 207).



6 Apr 2021

Congratulations to Deborah; her FYP work is finally published! Check out her paper (publication# 205).