



FLEET

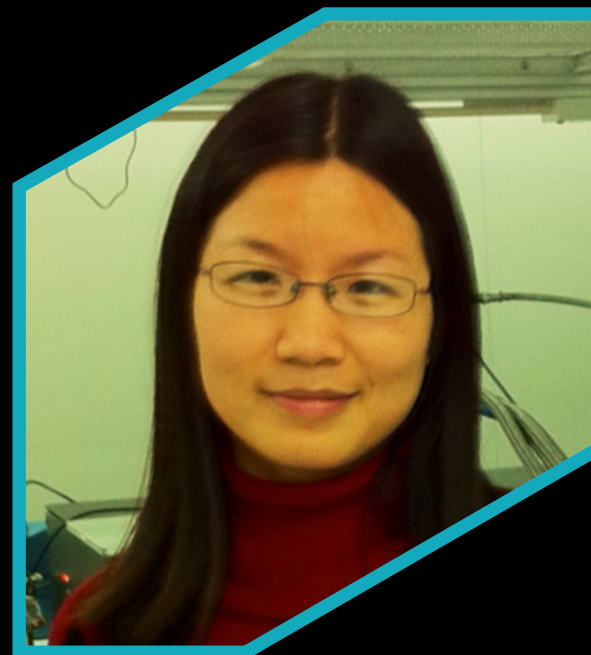
ARC CENTRE OF EXCELLENCE IN
FUTURE LOW-ENERGY
ELECTRONICS TECHNOLOGIES

FLEET RESEARCH SEMINAR

Two-dimensional materials and hetero-structures for new topological phases and tailored electronic structures

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Abstract: Two-dimensional (2D) materials (e.g. graphene, transition metal dichalcogenides) provide an important playground for exploring fundamental physics and potential applications. Probing the electronic structure is critical for revealing the fundamental physics and angle-resolved photoemission spectroscopy (ARPES) is a direct and powerful technique.

In this talk, I will present our recent progress in searching novel topological phases and new spin physics in transition metal dichalcogenides using ARPES and Spin-ARPES.

I will also show that by stacking simple 2D materials together to form heterostructures, we can use the band structure engineering at the interface to obtain new properties that are not otherwise possible in a single material.

About the Speaker: *Professor Shuyun Zhou* received her Ph.D. in Physics from University of California at Berkeley in 2007. She was a postdoc fellow of the Advanced Light Source and a project scientist of Materials Sciences Division of the Lawrence Berkeley National Laboratory before joining the Department of Physics at Tsinghua University in 2012. She was promoted to full professor in 2017.

Shuyun Zhou's research focuses on the electronic structure of novel two-dimensional materials and heterostructures using advanced electron spectroscopic tools. She has made important progress on the electronic structure of novel transition metal dichalcogenides.

DATE: Tuesday 6 February 2018
TIME: 11:00AM–12:00midday
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20 Research Way,
Monash, Clayton
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