

# 高亮度同步輻射光源在量子材料之研究契機

The emergent opportunity for scientific research on quantum materials by high brilliance synchrotron light sources

Date: January 16 (Mon.), 2023

Venue: 化學系館CH36308, NCKU

## Session A (09:30 – 11:45)

Chair: Tzu-Hung Chuang, NSRRC

- 09:30 - 09:35 **Opening Remarks**  
Der-Hsin Wei (魏德新), NSRRC
- 09:35 - 09:55 **Characterization and Manipulation of Complex Oxide Architectures via Synchrotron Radiation**  
Jan-Chi Yang (楊展其), NCKU
- 09:55 - 10:15 **The Electronic Structure of Layered Quantum Materials Studied with Angle-resolved Photoemission Spectroscopy**  
Cheng-Maw Cheng (鄭澄懋), NSRRC
- 10:15 - 10:35 **Study of Diluted Magnetic Oxide Using Hard X-ray Photoemission with Bulk and Orbital Sensitivity**  
Jung-Chun Huang (黃榮俊), NCKU
- 10:35 - 10:45 **Break (10 mins)**
- 10:45 - 11:05 **Dirac Nodal Line in Hourglass Semimetal  $Nb_3SiTe_6$  (online)**  
Ro-Ya Liu (劉若亞), NSRRC
- 11:05 - 11:25 **Quantum Materials in the Spotlight of Momentum Microscopy: From Symmetry to Topology**  
Christian Tusche, Forschungszentrum Jülich, Germany
- 11:25 - 11:45 **Electronic Structures of Topological Materials**  
Tay-Rong Chang (張泰榕), NCKU
- 11:45 - 16:10 **Lunch & Plenary Talks**

Chair: Ashish Atma Chainani, NSRRC

## Session B (16:10 – 18:05)

Chair: Tzu-Hung Chuang, NSRRC

- 16:10 - 16:30 **Probing the Electronic and Chemical Structures of 2D Materials by Soft X-ray Spectroscopy Techniques**  
Chia-Hao Chen (陳家浩), NSRRC
- 16:30 - 16:50 **Resonant Tunneling and Negative Differential Resistance in 2D Quantum Transistors**  
Yann-Wen Lan (藍彥文), NTNU
- 16:50 - 17:10 **Exciton and Phonon Excitations of Cuprate Superconductors Studied by RIXS**  
Hsiao-Yu Huang (黃筱妤), NSRRC
- 17:10 - 17:20 **Break (10 mins)**
- 17:20 - 17:40 **The Modeling Quantum Many-body Calculation to Analyze Soft X-ray Absorption Spectroscopy**  
Chang-Yang Kuo (郭昌洋), NYCU
- 17:40 - 18:00 **Probing 2D Materials with Photoelectron Momentum Microscopy at TPS 27A2**  
Tzu-Hung Chuang (莊子弘), NSRRC
- 18:00 - 18:05 **Closing Remarks**  
Chia-Hao Chen (陳家浩), NSRRC

Chair: Chia-Hao Chen, NSRRC

