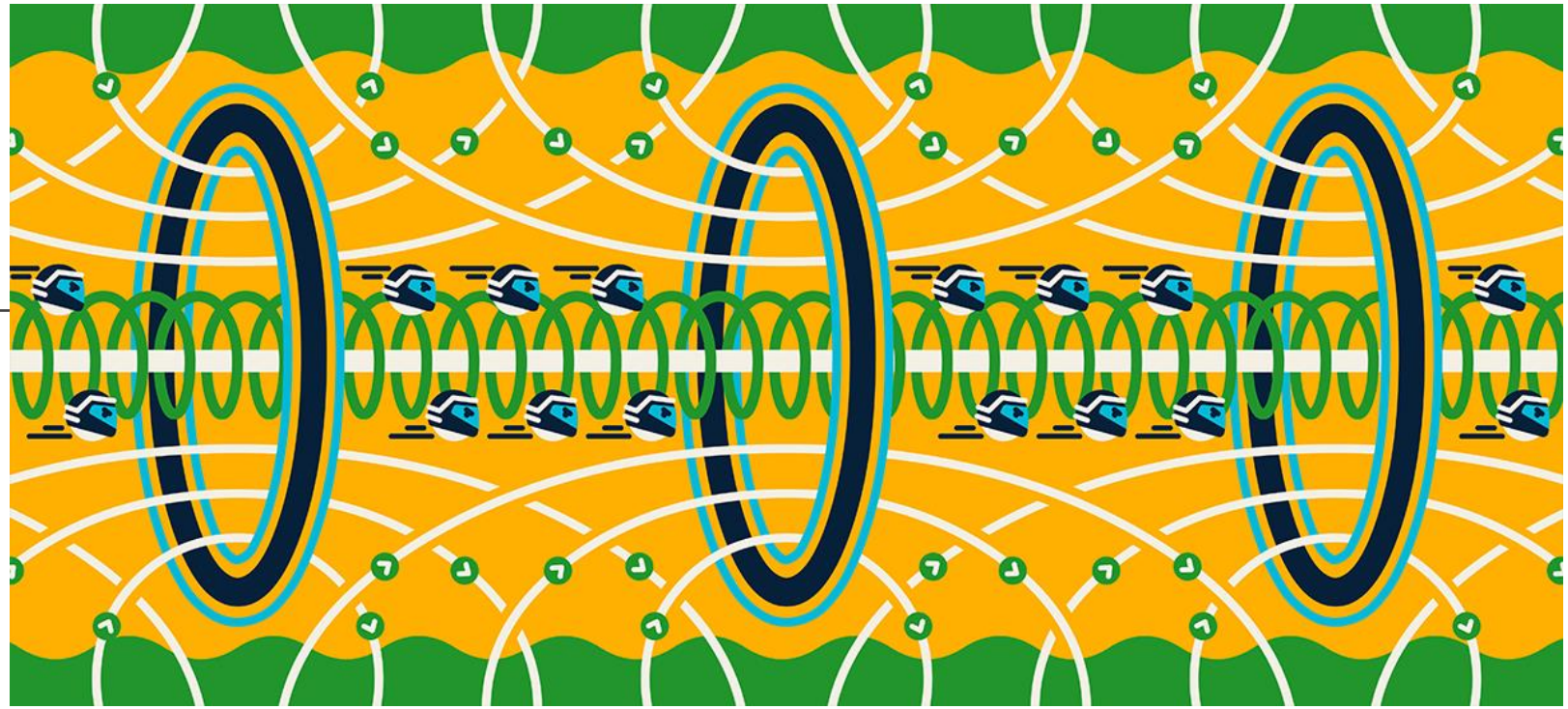


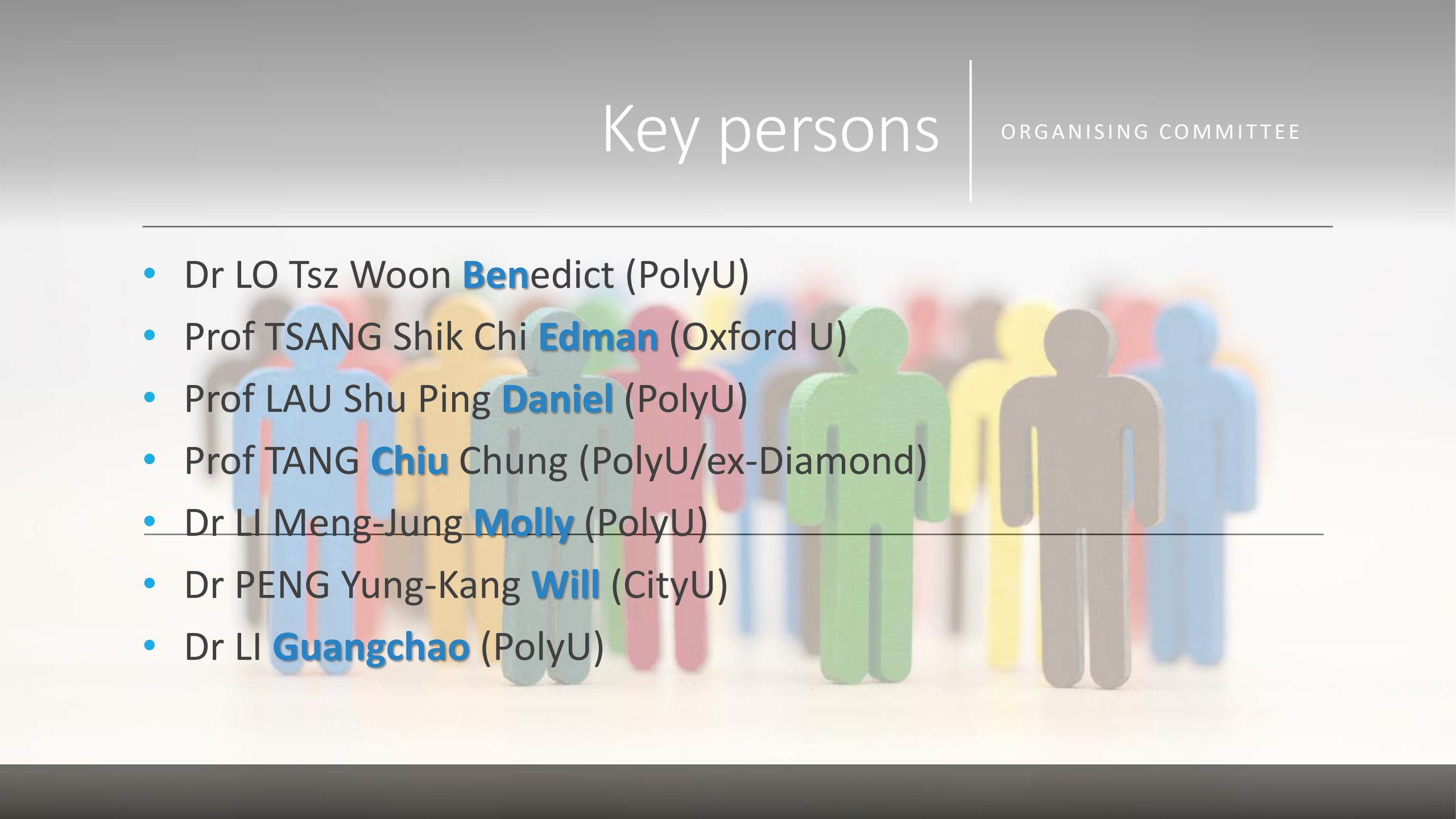
Summer Courses - Synchrotron radiation
Opening remarks

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

Croucher Foundation
裘槎基金會

Key persons

ORGANISING COMMITTEE



- Dr LO Tsz Woon **Ben**edict (PolyU)
- Prof TSANG Shik Chi **Edman** (Oxford U)
- Prof LAU Shu Ping **Daniel** (PolyU)
- Prof TANG **Chiu** Chung (PolyU/ex-Diamond)
- Dr LI Meng-Jung **Molly** (PolyU)
- Dr PENG Yung-Kang **Will** (CityU)
- Dr LI **Guangchao** (PolyU)



Highlights of our Team

- Extensive experience in synchrotron X-ray techniques
- Professional capabilities in synchrotron X-ray data analysis and modeling, allowing you to provide detailed data interpretation and recommendations
- Published a significant number of high-impact research results in the field of synchrotron X-ray technology

Key persons

BEN

Focussing on synchrotron X-ray powder diffraction & X-ray scattering

For the direct visualization of how reactant molecules behave and interact with nano and microporous catalysts

Structural elucidation & structure-reactivity study

EDMAN

Design and architecture of nanocatalysts and their in situ diffraction and spectroscopic characterization

The understanding of catalytic surfaces and interfaces

The Champion of the committee for the Diamond II for the VerSox upgrade

Key persons

CHIU

Well-respected scientist at Diamond Light Source (UK), who started to use SR beamlines since 1988

Ex-principal scientist of Beamline I11 of Diamond

- responsible for the design, construction and operation of the high-resolution powder diffraction facility
- I11 → A gold-standard diffraction facility

DANIEL

Head of Applied Physics (PolyU)

Director of the University Research Facility in Materials Characterization and Device Fabrication

Research focuses on nanomaterials and energy materials, particularly the synthesis of 2D materials for optoelectronic, electrocatalysis, and energy storage applications

Active synchrotron user

Key persons

MOLLY

Broad foundation and expertise in the chemistry of materials and applied catalysis in green energies and the environment

Expertise in X-ray absorption spectroscopy

Data analysis

Development of structural and surface reaction mechanistic investigation methods

WILL

Research focus on the surface chemistry of nanomaterials

Combination of solid-state NMR for surface structure elucidation

GUANGCHAO

Expertise in the fields of adsorption, surface adsorption porous materials, heterogeneous catalysis, catalyst characterization, catalytic hydrogenation, and computational chemistry

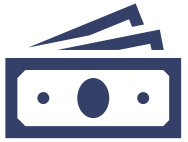


Key persons

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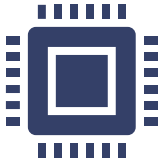
Overview of this course



Funded by Croucher Foundation



Introducing the key features in the 4th generation synchrotron facilities



5-day programme,

including a broad coverage of synchrotron principles, experimental techniques, data analysis, and applications



Multiple networking opportunities

e.g., cultural tour, synchrotron site visit, lectures, hands-on tutorial sessions,

Key techniques covered

- Introduction on crystallography
- Synchrotron X-ray powder diffraction
- X-ray scattering (XPDF)
- X-ray absorption spectroscopy
- Synchrotron nanoscale microscopy (nanoprobe)
- X-ray imaging
- Soft X-ray and photoelectron spectroscopy
- Inelastic neutron scattering



Particular Relevance to Early Career Researchers?

Early Career Researchers

- Specific needs and challenges of early career researchers
  - this summer school is designed to provide them with a comprehensive understanding of synchrotron X-ray techniques and their applications
- An excellent opportunity for the participants to network, collaborate, and learn from experienced researchers and facility staff



Course programme

- Day 1 Introduction, synchrotron science and SR techniques
- Day 2 SR techniques
- Day 3 SR techniques
- Day 4 Applications, science and discoveries and travelling
- Day 5 SR facility visit & sharing by the industry

https://projects.croucher.org.hk/summer-courses/synchrotron-radiation/programme

Logistics

General Q&A

Day 0: 16 June 2024

Check-in at the PolyU Homantin Hall; available to check-in after 14:00 h

The accommodation is for your stay throughout the course of the summer school.

Address: PolyU Student Halls of Residence (Homantin), 15 Fat Kwong Street, Hung Hom, Kowloon City, Kowloon

Travelling details and directions:

https://www.polyu.edu.hk/sao/student-resources-and-support-section/residential-life/university-managed-accommodations/homantin-halls/

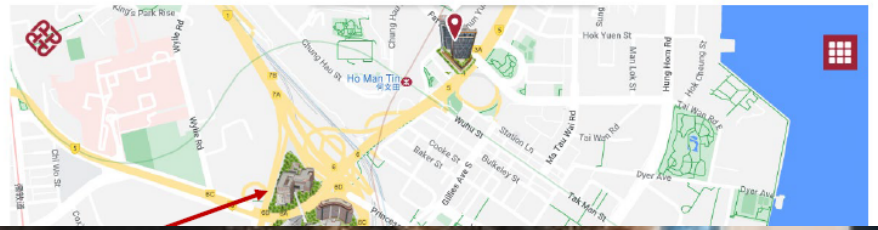
Day 1: 17 June 2024

School commences; registration at 10 am

Address: Z4 lobby for registration & Z409 for the School (lectures)

Travelling details and directions:

You are recommended to take the MTR from Ho Man Tin(□ □ □) MTR station to Hung Hom (□ □) MTR station – just 1 stop. We will send you a QR code (to your registered email address) to be scanned for entering the PolyU campus. Please contact us immediately if you still do not have the code by 15 June 2024.



Lecture materials



Questions & concerns?