

X-ray Diffraction (XRD) Workshop 2023

Co-organized with NTU FACTS

Making the most of your in-situ XRD investigations





X-Ray Diffraction Workshop 2023

23rd June 2023 (Friday) | 10.00 am to 3.00 pm

Introduction

X-ray diffraction (XRD) is a non-destructive method to obtain information on phase composition, crystal structure, texture, degree of crystallinity, and others. While the quality of an XRD measurement is in part determined by sample properties, it can be significantly improved by using the best possible hardware setup that is optimized for the highest data quality. In addition, all of these sample properties can be determined under the influence of different variables (e.g. temperature, pressure, relative humidity, gas environment). Diverse non-ambient attachments are available to cover almost all possible experimental requirements for in-situ XRD analysis. Besides its relevance for conducting research, this knowledge is essential for optimizing technical processes and performing quality control in industry. Yet, it is important to remember that there are certain common errors and pitfalls that have to be considered.

During this workshop, you will receive an overview of the possibilities on powder XRD as well as non-ambient XRD (NA-XRD) and we will take a closer look at everything that can go wrong in NA-XRD experiments and provides you information and tips for your non-ambient experiments. There will also be two presenters from NTU to share their research work on in-situ X-ray analysis.

Agenda

10:00 – 10:15	Welcome, introduction and company presentation
10:15 – 11:00	Latest advancements in XRD instrumentation
11:00 – 12:30	Non-ambient XRD: Tips, tricks and common challenges
12:30 – 13:30	Lunch Break
13:30 – 14:00	“Planning for a lab-based in-situ electrochemical measurement” by Dr Vivek Verma, Research Fellow, Nanyang Technological University
14:00 – 14:30	“In-situ SAXS for probing the interparticle interaction in a nanostructured glass” by Mr Ye Kai, Research Associate, Nanyang Technological University
14:30 – 15:00	Q&A/ Panel Discussion

Venue:

Nanyang Technological University
The Arc – Learning Hub North (LHN)
63 Nanyang Dr, Singapore 636922
LHN-TR+36

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OR

Link:
<https://www.anton-paar.com/sg-en/services-support/seminars/detail/event/x-ray-diffraction-xrd-workshop-2023/>

Lunch will be provided. Please let us know if you have any dietary restrictions.

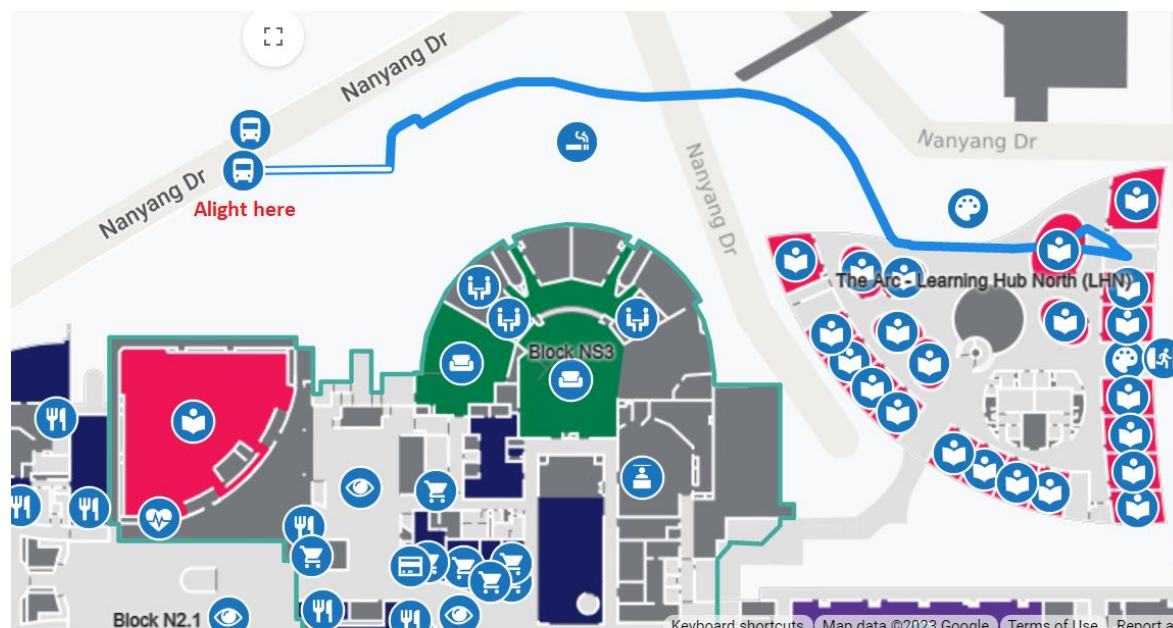
Key Speaker: Dr. Andrew Jones

Speaker Background:

Andrew Jones joined Anton Paar in 2017 and is currently product manager for XRD. For over 10 years, he has specialized in powder XRD, non-ambient XRD and grazing incidence XRD techniques. He has a doctorate degree in Chemistry from the University of Bath and also worked as a researcher with a focus on XRD at Université Libre de Bruxelles in Belgium and Graz University of Technology prior to joining Anton Paar.



How to get to the venue:



- From Boon Lay Interchange, take 179.
- Alight at Lee Wee Nam Library bus stop.
- Follow the directions on the map.