



| DAY 2 | | |
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| CHEMICAL CRYSTALLOGRAPHY | | PROTEIN CRYSTALLOGRAPHY |
| Single Crystal XRD (Bruker) | Powder XRD (Rigaku) | Computational Crystallography Data Processing & Model Building |
| <p>APEX workshop with hands-on training. The primary topic of this workshop is to teach participants the usage of APEX for data integration, structure determination and refinement from single crystal area detector data. The workshop is open to all applicants interested in the capabilities of APEX.</p> <p>What you will learn:</p> <ul style="list-style-type: none"> • Introduction to the concept and the workflow • CIRRUS for Sample Submission and Results Dissemination • Structures within minutes • Exploring the reciprocal space, defaults, challenges, and pitfalls • Starting a data collection, tips and tricks • Indexing including twin handling • Data integration and scaling • Structure solutions and refinement including twins, disorder, and others | <p>Theory of X-ray Diffraction</p> <ul style="list-style-type: none"> • Crystal Lattice, Lattice plane & Plane Indices • XRD Measurement <p>Application of XRD</p> <ul style="list-style-type: none"> • Phase Analysis • Crystallite Size • Crystallinity • Quantification <p>Demonstration of</p> <ul style="list-style-type: none"> • Miniflex 600C • Smartlab Studio II • Sample Testing for participants <p>Introduction of</p> <ul style="list-style-type: none"> • Smartlab XRD • Ab-Initio structure determination via powder XRD • Pair Distribution Function for amorphous & Nano Crystalline analysis <p>Online demonstration of Smartlab XRD</p> | <p>Part-I: Lecture</p> <ul style="list-style-type: none"> • Introduction to Molecular Replacement • Experimental Phasing • Structure Refinement & Model Validation <p>Part-II: Hands-On</p> <ul style="list-style-type: none"> • Molecular Replacement • Model Building & Refinement • Model Validation • Summary & Closing |

What you will do:

- Use your own laptop to determine and refine several organic and inorganic structures

Instructors:

Dr. Kenji Yoza, Senior Application Scientist SC-XRD, Bruker Japan K.K
Dr. Zhang Zhenyi, Senior Scientist SC-XRD, Bruker Shanghai
Dr. Prathapa S. Jagannatha, Product Manager SC-XRD, Bruker India Scientific Pvt. Ltd.

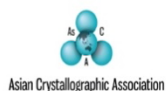
Instructors:

Dr. Muhammad Firdaus Bin Omar
Dr Low Yiin Jian
Mr. Takahiro Kuzumaki

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Meet in
Malaysia
BE Greater, Together.

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