



## X-ray Powder Diffraction Clinics

Fundamentals of XRD I: 1 – 5 June 2020

Advanced Methods in XRD II: 8 – 12 June 2020

### Fundamentals Course Outline

- Production and properties of X-rays
- Production of monochromatic X-radiation
- Components of the diffraction pattern
- The powder diffractometer
- Acquisition of good diffraction data
- Qualitative phase identification
- Industrial applications of X-ray powder diffraction
- Hands-on use of computers for demonstration of the latest software
- Data mining with the PDF

### Advanced Methods Course Outline

- Brief review of fundamentals
- Factors affecting accuracy of measured  $2\theta$  values
- Factors affecting intensities of diffraction peaks
- Use of computer methods for data reduction and qualitative phase identification
- Advanced data mining with the PDF
- Exploration of powder pattern indexing methods
- Quantitative analysis
- Structure solution and refinement using the Rietveld method

**Please note:** A minimum of 10 registrants per course is required, otherwise the course will be cancelled and your registration fee will be refunded. You will be notified of a course cancellation no later than two weeks prior to the start of the course.

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### ATTENDEES WILL RECEIVE THE FOLLOWING:

Selected Resources for X-ray Diffraction – a valuable online link to the compilation of software for data analysis and interpretation, and ICDD's Methods and Practices – a compendium of articles and reports relating to applications and techniques in XRD.



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