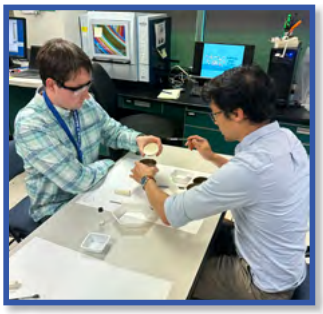
INTERNATIONAL CENTRE FOR DIFFRACTION DATA

LET OUR TEAM OF EXPERTS HELP YOU TAKE YOUR SKILLS TO THE NEXT LEVEL!



X-ray Fluorescence Courses:

Fundamentals of X-ray Fluouescence
From theory to hands-on exercises, this course offers techniques and skills to improve lab performance. Discover the latest in cutting-edge instruments such as TXRF, hand-held devices, energy dispersive and wavelength dispersive spectrometers through live demonstrations.

The XRF course covers the basics of X-ray spectra; instrumentation design; methods of qualitative and quantitative analysis; specimen preparation and applications for both wavelength and energy dispersive spectrometry. The course emphasizes quantitative methods, use of automated X-ray spectrometers, review of mathematical matrix correction procedures, and new developments in XRF.

Advanced Methods in X-ray Fluorescence
Advanced Methods in X-ray Fluorescence course is designed to teach and practice method development with respect to scope definition, selection and creation of reference material, instrumental settings, and most importantly the mathematical matrix correction and compensation methods for calibration. This practical oriented course alternates lectures and hands-on practical experience to deepen and intensify the material.

www.icdd.com/xrf

X-ray Powder Diffraction Courses:

Fundamentals of X-ray Diffraction
For the novice with some XRD knowledge or for the experienced with an interest in the theory behind XRD, this course offers a strong base for increased lab performance.

The course covers instrumentation, specimen preparation, data acquisition and qualitative phase analysis through live demonstrations. It consists of hands-on exercises, demonstrating the latest software, including data mining with the Powder Diffraction File™ (PDF®) and use of the powder diffractometer: optical arrangement, factors affecting instrumentation profile width, choice and function of divergence slit, calibration and alignment, detectors, and X-ray optics.

Advanced Methods in X-ray Powder Diffraction
For the experienced XRD scientist, this session offers enhanced analysis skills through intense problem solving, as well as an introduction to the Rietveld Method. The course emphasizes computer-based methods of data interpretation, both for qualitative and quantitative phase analysis.

The advanced course covers a wide range of topics including systematic errors, factors affecting intensities of diffraction peaks; data reduction algorithms; phase identification; advanced data mining with the PDF and its application in search/match; powder pattern indexing methods; structure solution methods; quantitative phase analysis using both reference intensity ratio (RIR) and Rietveld Method.

www.icdd.com/xrd

Rietveld Refinement & Indexing Course:

Powder pattern indexing and Rietveld structural refinement techniques are complementary and are often combined to determine the structure of a material. Successful indexing of a powder pattern is considered strong evidence for phase purity. Indexing is considered a prelude to determining the crystal structure, and permits phase identification by lattice matching techniques. This course introduces the theory and formalisms of various indexing methods and structural refinement techniques along with quantitative analysis. One unique aspect of this course is the extensive use of computer laboratory problem solving and exercises that teach method development in a hands-on environment.

www.icdd.com/rietveld

More information at www.icdd.com/icdd-education

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.

For More Information Contact:

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ICDD® International Centre for Diffraction Data — ISO 9001:2015 Quality Management System Certified by DEKRA

MDI Materials Data™

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