

GRANT-IN-AID FUNDS ARE AVAILABLE DO NOT DELAY!

Submission deadline is 31 July 2019

Does your research project involve the preparation and characterization of new materials using powder diffraction techniques?

If the answer is YES, then ICDD's Grant Program is the perfect fit for you!

See if you qualify to submit a proposal to ICDD in two simple steps:

Step 1: Submit a sample XRD dataset in .CIF format

Step 2: Submit a powder diffraction pattern of NIST standard reference material, preferably Al2O3, Aluminum Oxide.

Please email sample patterns to:

Denise DelCasale
ICDD Grant-in-Aid Coordinator
Delcasale@icdd.com

ICDD for over 75 years has been dedicated to collecting, editing, publishing, and distributing powder diffraction data for the identification of crystalline materials. To assist us in this growth, ICDD has called on researchers from around the world to contribute their experimental data. In return, ICDD supports their efforts by funds provided through our Grant-in-Aid Program.

ICDD's approved grantees receive these additional benefits:

- A 50% price reduction on a PDF-4+ or PDF-4/Organics product
- Financial support to aid current research projects
- Publication of pattern(s) in the Powder Diffraction File™ (PDF®) once approved by the Editorial Department
- Access to the list of compounds in the ICDD master database; includes published patterns, as well as patterns in the editorial process
- First-time grantees receive a complimentary one-year subscription to *Powder Diffraction Journal*



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Targeted For Material Identification and Characterization

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



Practical X-ray Fluorescence:

29 April – 3 May 2019

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.



Fundamentals of X-ray Powder Diffraction:

3 – 7 June 2019

For the novice with some XRD knowledge or for the experienced with an interest in the theory behind XRD, this clinic offers a strong base for increased lab performance.

The clinic covers instrumentation, specimen preparation, data acquisition and qualitative phase analysis through live demonstrations. It also covers hands-on use of personal computers for demonstration of 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:

10 – 14 June 2019

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 collection and interpretation, both for qualitative and quantitative phase analysis.

The advanced clinic covers factors affecting d-spacings of crystals, as well as factors affecting diffraction-line intensities; structure-sensitive properties (atomic scattering and structure factors), polarization effects, and multiplicity. Additionally, the clinic covers specimen-sensitive effects (orientation, particle size), measurement-sensitive effects (use of peak heights and peak areas), and choice of scanning conditions will also be addressed.



Rietveld Refinement & Indexing Clinic:

23 – 27 September 2019

Powder pattern indexing and Rietveld structural refinement techniques are complementary and are often used to completely describe 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 clinic introduces the theory and formalisms of various indexing methods and structural refinement techniques along with quantitative analysis. One unique aspect of this clinic is the extensive use of computer laboratory problem solving and exercises that teach method development in a hands-on environment.

Please visit the ICDD website for more information.

Register today at WWW.ICDD.COM

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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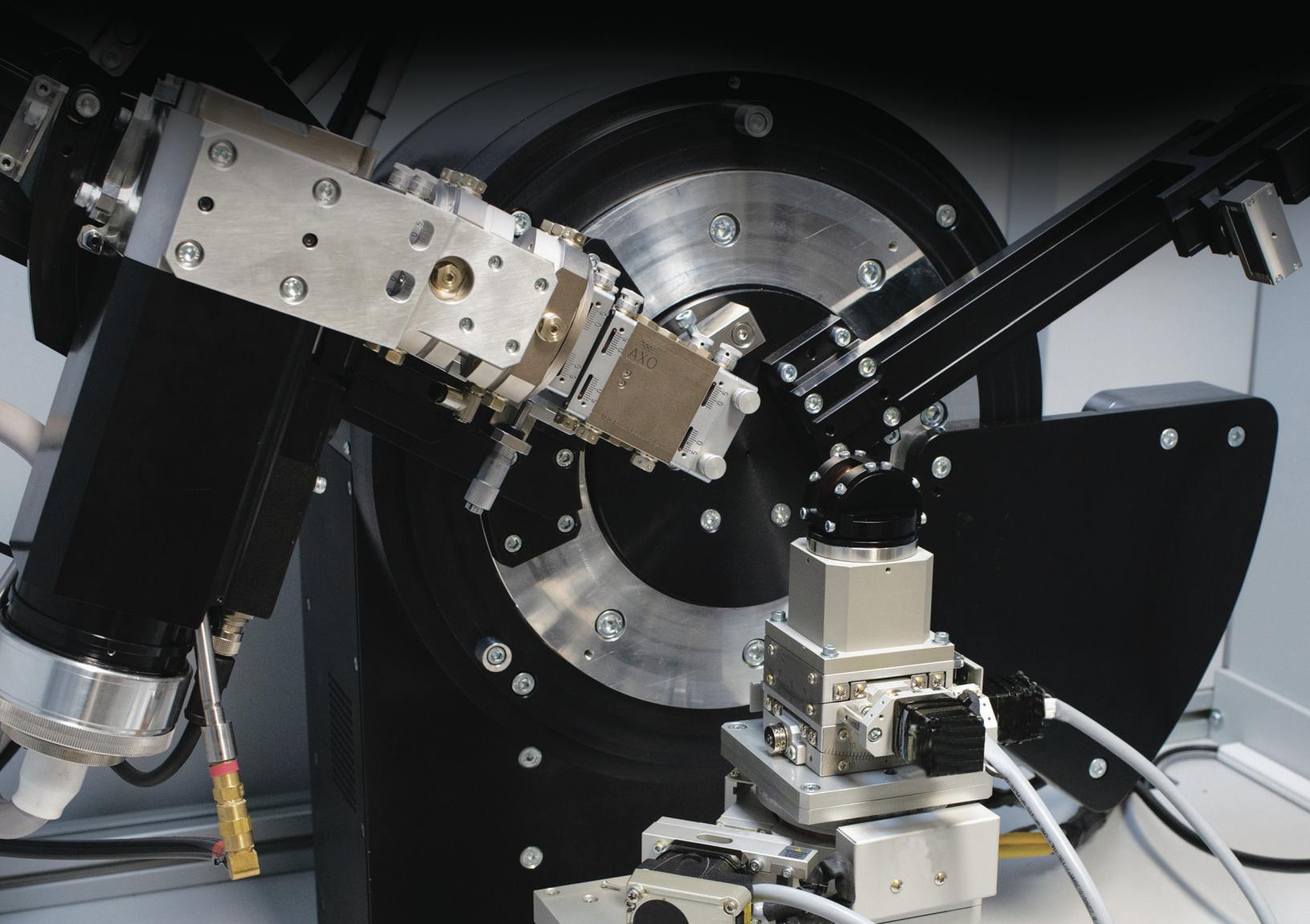
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