

INTERNATIONAL CENTRE FOR DIFFRACTION DATA

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

Rietveld Refinement & Indexing Workshop: Basic Workshop – 28-30 September 2015 / *Advanced Workshop – 1-2 October 2015

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 workshop introduces the theory and formalisms of various indexing methods and structural refinement techniques. One unique aspect of this workshop is the extensive use of computer laboratory problem solving and exercises that teach method development in a hands-on environment.

Take the three-day basic workshop, the two-day advanced workshop or both together for a full week of hands-on training.

NEW! Polymer Diffraction 13- 15 October 2015

This three-day workshop is designed to provide more in-depth understanding of Polymer Diffraction. Learn the basics of XRD, polymer structure, morphology and diffraction data collection, polymer crystallinity, diffraction peak shape analysis, orientation analysis, small-angle scattering, special methods and advanced techniques.

Practical X-ray Fluorescence: 25 – 29 April 2016

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. Emphasizing 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 16 – 20 May 2016

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. Hands-on use of personal computers for demonstration of the latest software; data mining with the PDF. The powder diffractometer: optical arrangement, factors affecting instrumental profile width, choice and function of divergence slit, calibration and alignment, detectors, X-ray optics.

Advanced Methods in X-ray Powder Diffraction 23 – 27 May 2016

For the experienced XRD scientist, this session offers enhanced analysis skills through intense problem solving, as well as an introduction to the Rietveld Method. Emphasizing 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: unit cell, crystal structure, and solid solutions, as well as factors affecting diffraction-line intensities: relative and absolute intensities; structure-sensitive properties (atomic scattering and structure factors), polarization effects, and multiplicity; specimen-sensitive effects (orientation, particle size), measurement-sensitive effects (use of peak heights and peak areas), and choice of scanning conditions.



Register Today at WWW.ICDD.COM/EDUCATION

* See the ICDD web site for prerequisites for advanced courses.



LOCATION

ICDD Headquarters, 12 Campus Boulevard
Newtown Square, Pennsylvania 19073-3273 U.S.A.

FOR MORE INFORMATION CONTACT
Eileen Jennings, Education Coordinator
Tel: **610.325.9814** Fax: **610.325.9823**
Email: **clinics@icdd.com**

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GRANT-IN-AID Program

JOIN ICDD'S ELITE GROUP OF SCIENTISTS
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- Financial support to aid current research
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- Receive calibration standards
- Purchase certain ICDD products at reduced prices
- Web-based access to the list of compounds in the ICDD master database—includes published patterns, as well as patterns still in the editorial process
- First-time grantees receive a complimentary one-year subscription to *Powder Diffraction*

For over 50 years, ICDD has supported a well-developed program of grants to researchers around the world. One of our main objectives is to expand the range of reference materials by producing and cataloging high-quality X-ray diffraction patterns in our internationally renowned database, the Powder Diffraction File. Thanks to the longevity of this program, these contributions account for approximately a quarter of the current experimental file. ICDD awards financial support to qualified investigators in the form of grant-in-aid on a competitive proposal basis. The duration of a grant is 12 months with two cycles per year. Cycle I begins 1 April and Cycle II begins 1 October.

Geographic Locations of Grants for the Past 15 Years:

Argentina
Austria
Canada
Chile
Columbia
Czech Republic
France
Germany
India
Israel
Italy
Japan
Malaysia
Netherlands
P.R. of China
Poland
Portugal
Russia
Spain
Switzerland
Taiwan
Tunisia
Ukraine
United Kingdom
United States
Uruguay

Total Proposals Funded for the
Past Fifteen Years: 699

Distinguished Grantees



2013
Professor Xinkan Yao



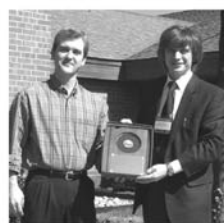
2010
Dr. Tom Blanton
presenting to
Professor Bogdan Lazoryak



2007
Dr. Miguel Delgado
presenting to
Dr. Sergei Kirik



2004
Dr. Tom Blanton
presenting to
Professor Shao-Fan Lin



2001
Dr. Tom Blanton
presenting to
Professor Evgeny Antipov



1998
Dr. Ekkehart Tillmanns



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*Rietveld Refinement & Indexing Workshops:

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23–27 May 2016

• LIVE INSTRUMENTATION • HANDS-ON TRAINING • THEORETICAL LECTURES



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FOR MORE INFORMATION CONTACT

Eileen Jennings, Education Coordinator

Email: clinics@icdd.com

Tel: **610.325.9814**

Toll-free: **866.378.9331** (US & Canada)

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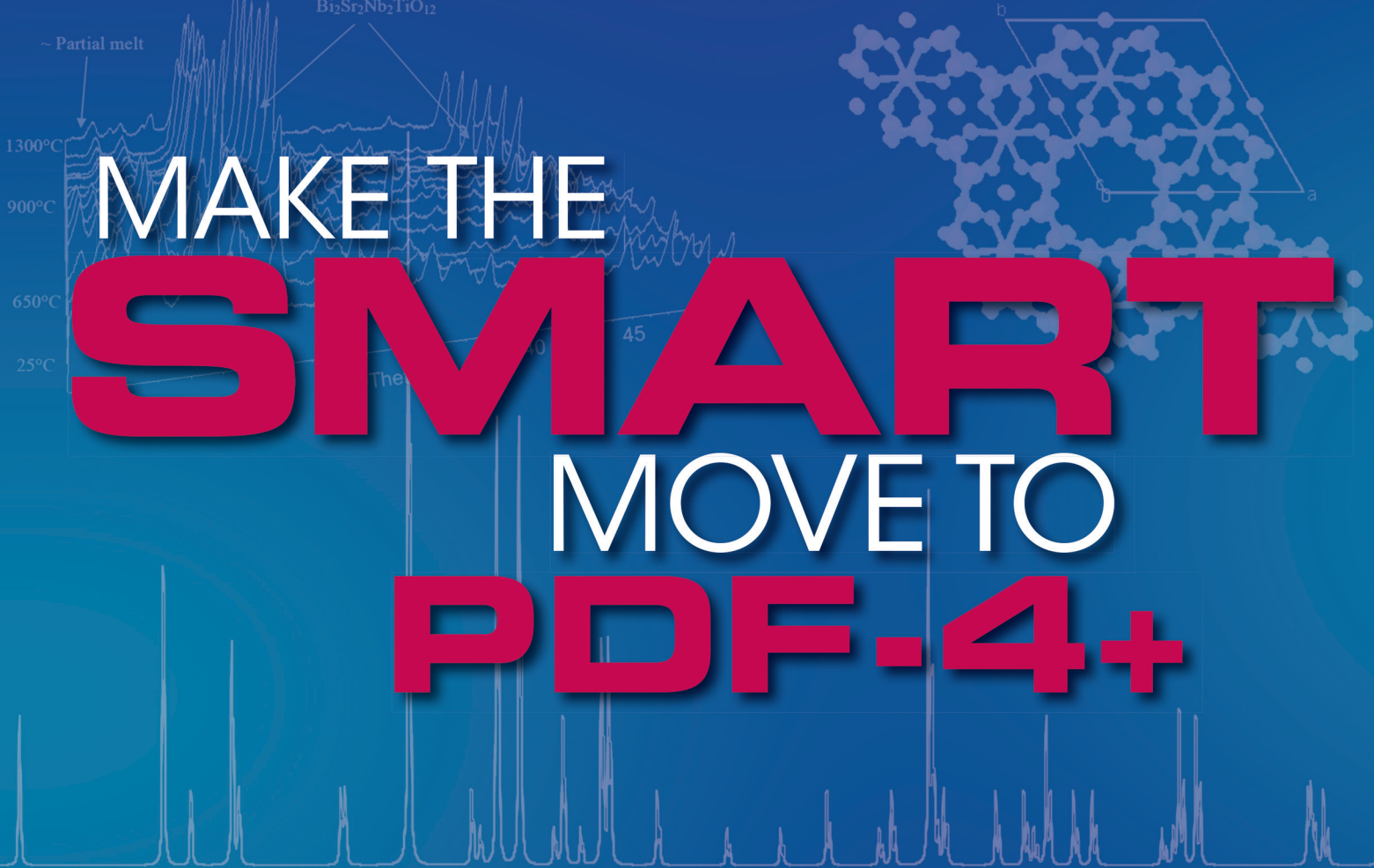
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