

Introducing the 2019 Powder Diffraction File™

Diffraction Data You Can Trust

ICDD databases are the only crystallographic databases in the world with quality marks and quality review processes that are ISO certified.

PDF-4+

Phase Identification and Quantitate

412,000+ Entries
311,200+ Atomic coordinates

Combines Powder and Single Crystal Data

Digitized Patterns

Molecular Graphics

Analyze Neutron, Electron, X-ray, Synchrotron Data

Standardized Data

More Coverage

All Data Sets Evaluated For Quality

Reviewed, Edited and Corrected Prior To Publication

Targeted For Material Identification and Characterization

www.icdd.com



www.icdd.com | marketing@icdd.com

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PDF-4/Organics



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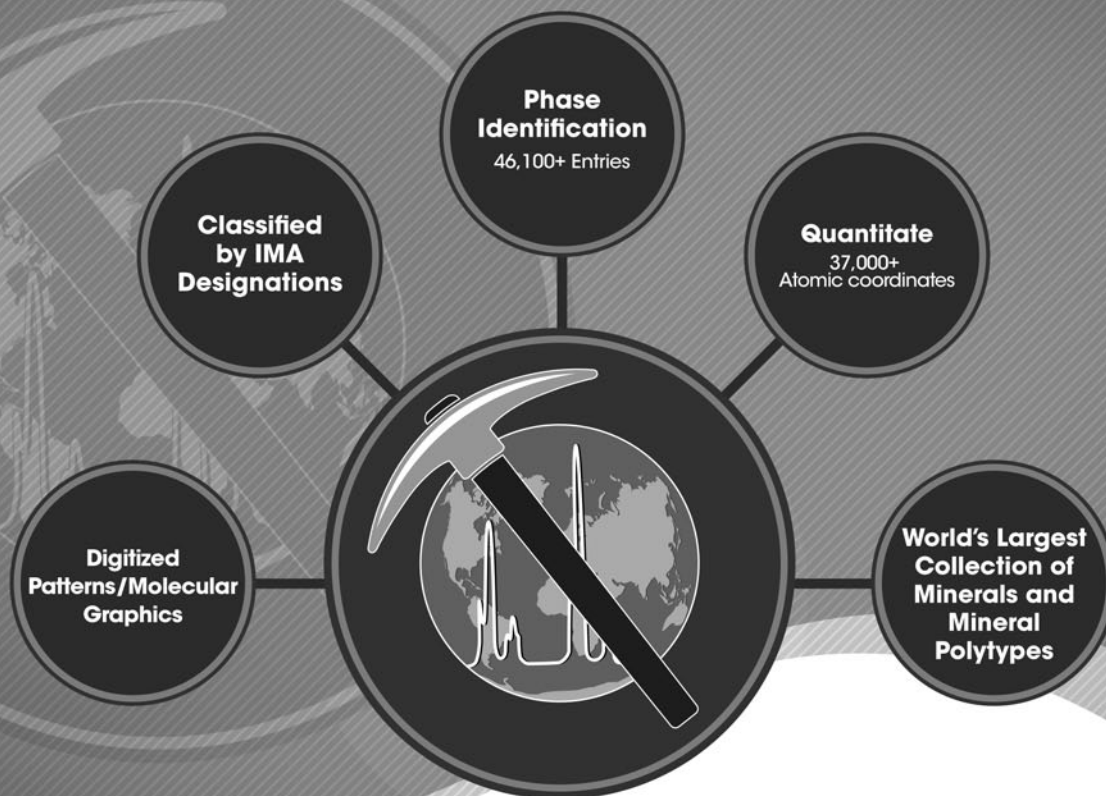
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PDF-4/Minerals



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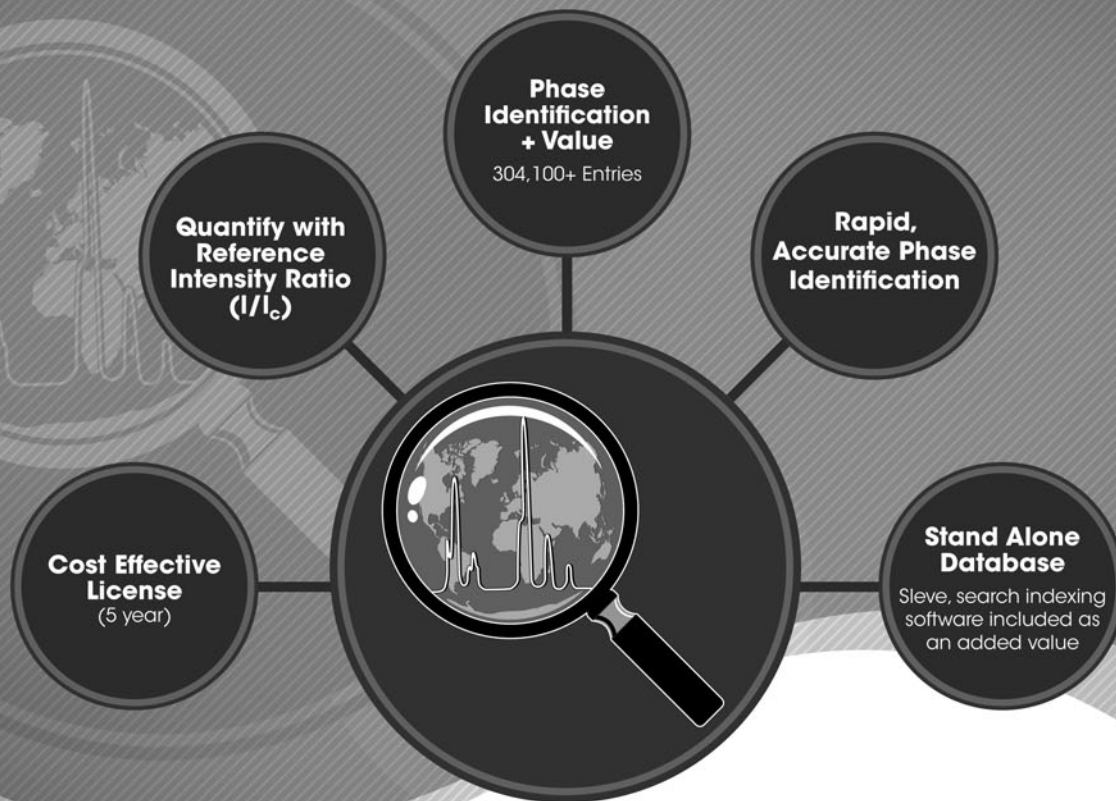
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PDF-2



Standardized Data

More Coverage

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



Please visit the ICDD website for more information.

Rietveld Refinement & Indexing Workshop:

Rietveld Refinement & Indexing Workshop I & II: 24 – 28 September 2018

Basic (I) Workshop: 24 – 26 September 2018

*Advanced (II) Workshop: 26 – 28 September 2018

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 along with quantitative analysis. 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 three-day advanced workshop or attend both for a full week of hands-on training.

*See the ICDD website for prerequisites for the advanced Rietveld course.

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.

Register today at WWW.ICDD.COM/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 6/18

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PDF-4/Axiom Enhance Your Benchtop Performance

Focused Identification and Quantitation

87,988 Entries
59,683 Atomic coordinates

Cost Effective
3 Year License

Combines
Powder and
Single Crystal
Data

Two Additional
Seats - Low Cost

Requires
Vendor
Software

Standardized Data

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improve your science

with the AXRD Theta-Theta Powder Diffractometer



Compact Platform
for High-Temperature
Diffraction.

PROTO

x-ray diffraction systems & services

For more information and to
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