

2022–2023

# SALES CATALOG

The Powder Diffraction File™ & JADE® Software



$2\theta$	$d$ (Å)	$I$	$h$	$k$	$l$
25.561	3.482030	646	0	1	2
35.129	<b>2.552430</b>	1000	1	0	4
37.753	2.380850	463	1	1	0
41.653	2.166500	5	0	0	6
43.327	<b>2.086610</b>	979	1	1	3
46.149	1.965350	19	2	0	2
52.518	1.741020	487	0	2	4

# Our collaborative partners include:

**Cambridge Crystallographic Data Centre (CCDC)** Cambridge, UK - Cambridge Structural Database (CSD)

**Fachinformationszentrum Karlsruhe (FIZ)** Karlsruhe, Germany - Inorganic Crystal Structure Database (ICSD)

**National Institute of Standards and Technology (NIST)**  
Gaithersburg, Maryland, USA

**Material Phases Data System (MPDS)**  
Vitznau, Switzerland - Linus Pauling File (LPF)

## PDF® Databases - Why We Are The Best!

- More data, higher quality, more content, many types of solid-state reference data
- The world's largest solid-state collection of minerals, metals and alloys, polymers, active pharmaceuticals, and commercial materials
- The world's largest and most diverse (by formula) collection of inorganic structures
- The world's largest collection of modulated structures
- Extensive bibliographic collections - thousands of journals, hundreds of thousands of authors
- Standardized data, nomenclature, and structural classifications plus brand names, trade names, mineral names, zeolite names, and common names of commercial materials
- Identify materials accurately by utilizing the PDF's extensive subfile system that classifies materials by chemistry and application
- New data is contributed annually by highly qualified grantees from around the world
- PDF products are compatible with major diffraction vendor's software



Quality Management System Certified  
to ISO 9001:2015 by DEKRA

## THE INTERNATIONAL CENTRE FOR DIFFRACTION DATA (ICDD®)

is a non-profit scientific organization dedicated to collecting, editing, publishing, and distributing powder diffraction data for the identification of materials. The membership of the ICDD consists of worldwide representation from academe, government, and industry.

## TABLE OF CONTENTS

Server Edition .....	1 – 2
JADE Standard/JADE Pro .....	3 – 4
Toolkit .....	5
Downloads and Budget Options .....	6
What's New .....	7 – 8
Scientific Database Products .....	9 – 15
■ Which Database is Right for You?	
■ Preferred Computer Specifications	
■ PDF-4+	
■ PDF-4+/Web	
■ PDF-4/Axiom	
■ PDF-4/Minerals	
■ PDF-4/Organics	
■ PDF-2	
Diffraction Analysis Software .....	17
Licensing Options .....	18 – 19
Website Links .....	20
■ Purchasing Products	
■ ICDD Licensed Distributors	
■ ICDD Education - XRF - XRD - Rietveld Clinics	
■ ICDD Conferences- Denver X-ray Conference, Pharmaceutical Powder X-ray Diffraction Symposium	
■ Resources- Advances in X-ray Analysis, Powder Diffraction Journal	
■ Grant-in-Aid	
Ordering/Shipping Fast Facts .....	21

## ONLINE RESOURCES

Visit our website at [www.icdd.com](http://www.icdd.com). Our goal is to help you solve your material analysis problems. We provide reference articles, technical bulletins, tutorials, and instructional videos. Many tutorials focus on capabilities of the database and others illustrate methods used to analyze pharmaceuticals, polymers, and minerals. Search and browse documents from ICDD's Pharmaceutical Powder X-ray Diffraction Symposium and the ICDD Spring Meetings for free. We also provide open access to over 1,000 full publications from Advances in X-ray Analysis (AXA)- the proceedings of the Denver X-ray Conference (DXC).



ICDD, the ICDD logo, PDF, Materials Data, JADE, Denver X-ray Conference, Denver X-ray Conference logo, and Materials Data-JADE-SM-WPF logo are registered in the U.S. Patent and Trademark Office. Powder Diffraction File, MDI, and the MDI-Materials Data logo are trademarks of the JCPDS-International Centre for Diffraction Data. ©2022 JCPDS-International Centre for Diffraction Data.

# Introducing a NEW Network Shareable PDF



**PDF-4 SERVER EDITION**

**DATABASE**

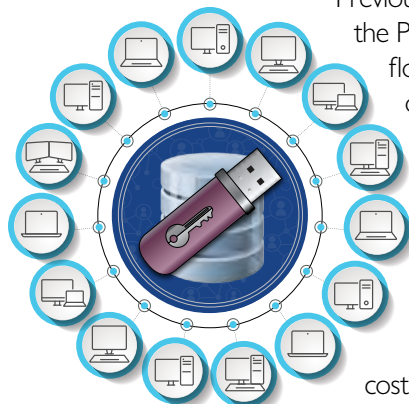
## Extend the Power of Your Database Built for Teams of Ten or More

Our workplaces and work habits have evolved from just a few years ago, and our new database licensing model provides the flexibility that large organizations and academics need to meet the varying demands of their clients, teams, and students.

Previously, our ICDD databases have all been tied to a single PC. But now for the first time, the PDF-4+ and PDF-4/Organics databases can float between users. We've taken the floating seat license model that has proven so popular from JADE Pro and applied it to our two most powerful database products, PDF-4+ and PDF-4/Organics.

Install on your server and as many computers as you wish. A 10-User license provides access to 10 computers at a time and floats among an unlimited number of systems. Deployment to new hires is seamless. When it's time for the latest database, your renewal is simplified with one single product. Ensure everyone in your organization is using the latest set of data with one shared floating 10 or more seat license. Additional benefits occur when access is granted to occasional use individuals without any added cost to your bottom line.

Your IT department will be happy as updates are streamlined all while offering savings for your budget. If you need to provide access to 10 or more systems, please contact us at [sales@icdd.com](mailto:sales@icdd.com) to consider how our new Server License would work best for your team.



### PDF-4+ 2023

**Phase Identification and Quantitation**

PDF-4+ combines the world's largest sources of inorganic diffraction data from crystals and powders into a single database.



### PDF-4/Organics 2023

**Solve Difficult Problems, Get Better Results**

PDF-4/Organics database is a highly targeted collection, with special focus on materials used in commercial and regulatory fields. It provides the best of both worlds by including single crystal and powder diffraction data together in a single, edited, and standardized database.

# Include JADE Pro Analysis Software on your Server Edition



**PDF-4 SERVER EDITION**

**DATABASE+JADE PRO**




## JADE Pro The Analysis Software Professionals Choose

The power of JADE Pro combined with PDF-4+ and PDF-4/Organics databases in a server license means a team can easily share a 10-seat license. The Server Edition can result in cost savings for your organization and a chance for you to extend the power to your team by providing access to BOTH the PDF databases and JADE Pro to as many individuals as you want. All database and software products offer the same functionality as the individual products. In coupling them in a 10 or more server license, important resources are available to more team members, and everyone is in sync, all while reducing costs.

Including JADE Pro to your server edition is a smart choice even if you have licenses to alternative analysis software. JADE is independent of hardware, widely embraced across all fields where XRD data matters and continues to provide unbiased results.



 If you are using software vendor/equipment manufacturer software to access the Powder Diffraction File, please contact your software vendor/equipment manufacturer to confirm compatibility of your software with the 2023 Powder Diffraction File Server Edition.



## JADE Pro

### JADE Pro is all-inclusive!

JADE Pro includes all of the features of JADE Standard, plus batch processing Whole Pattern Fitting (WPF) and Rietveld refinement tools that go beyond what is available in JADE Standard. JADE's One-Click-Analysis™ and the JADE Toolkit are only found in JADE Pro. Additionally, JADE Pro features a unique floating network license that allows access on one concurrent system at a time, so when a license is not in use, it is available to someone else in your organization. Discounted additional seats create access to more concurrent shareable licenses that work together.



## KEY POINTS

- All-inclusive - Everything in JADE Standard and so much more
- Phase ID (Search/Match)
- Batch processing Whole Pattern Fitting (WPF) and Rietveld
- One-Click-Analysis™ for Whole Pattern Fitting (WPF)
- Pattern Indexing (All Crystal Systems)
- Rietveld Structure Refinement (Atomic Parameters)
- Ab Initio Tools (Charge Flipping +)
- Cluster Analysis of Powder Patterns
- Hardware Independent - supports a wide range of diffractometers
- Floating Network License - can work as a shareable multi-seat license
- Discounted Additional Seats Available

## JADE Standard

JADE Standard provides a more limited set of tools than JADE Pro but without the annual updates and renewal costs. Available in three levels -

1. Basic Level
2. Add either Phase ID (S/M) or WPF + Rietveld
3. Add both Phase ID (S/M) and WPF + Rietveld.

Simulation and Visualization - All levels of JADE Standard Simulate powder patterns to create your own custom database. Visualize a structure in 3D with motion. Visual cues throughout to better help you and your team understand the materials you are analyzing.

Phase ID (S/M) - JADE Standard Level 2A or Level 3 Profile-based Search/Match with minor and trace phase ID or search on a single peak. Ability to include chemistry filters and unit cell data as well as preferred-orientation.

WPF + RIETVELD - JADE Standard Level 2B or Level 3 Quantify weight percentages and identify minor phases quickly and easily.



Level 1



Level 2 (A or B)



Level 3

Level 1	Level 2 (A or B)	Level 3
Base	Base	Base
	Phase ID (S/M)	Phase ID (S/M)
	WPF + Rietveld	WPF + Rietveld

## KEY POINTS - ALL LEVELS

- Reads all vendor pattern files
- Handles variable/fixed-slit data
- Auto peak search and multi-filter search
- Simulate powder patterns from crystal structures
- No annual renewal fee
- Individually licensed for workstations
- Hardware Independent - supports a wide range of diffractometers

## PHASE ID (SEARCH/MATCH)

- Found in Levels
  - 2A: Search/Match
  - 3: Search/Match and Whole Pattern Fitting
- Phase Identification (S/M)
- Minor and Trace Phase ID

## WPF + RIETVELD

- Found in Levels
  - 2B: Whole Pattern Fitting (WPF)
  - 3: Search/Match and WPF
- WPF & Rietveld Refinement



## JADE QA

Built for production line Quantitative Analysis (QA) typically carried out by a technician. Requires a setup file created by an analytical scientist using JADE Pro. JADE QA runs independently of JADE Pro and was designed to extend the power of Rietveld Quantitative Analysis (QA) to those in your organization responsible for overseeing consistencies in production who may or may not have a background in XRD.

## Get More Power With JADE Pro

JADE is available in Pro and Standard

### JADE FEATURE LIST

	Pro	1	2A	2B	3
Intuitive, State-of-the-Art UI	✓	✓	✓	✓	✓
Reads All Vendor Pattern Files	✓	✓	✓	✓	✓
Smart Column Data Importer	✓	✓	✓	✓	✓
Merge Multi-Scans/Segments	✓	✓	✓	✓	✓
1, 2 and 3D Pattern Overlay	✓	✓	✓	✓	✓
Déjà Vu ID Similar Pattern Files	✓	✓	✓	✓	✓
Handles Variable/Fixed-Slit Data	✓	✓	✓	✓	✓
Multiple Display Axes and Any Diffraction Wavelength	✓	✓	✓	✓	✓
Zero Offset Correction and Theta Calibration	✓	✓	✓	✓	✓
Background Fitting/Batch Fitting/Removal	✓	✓	✓	✓	✓
Auto Peak Search and Multi-Filter Search	✓	✓	✓	✓	✓
Wide Variety of Report and Print Options	✓	✓	✓	✓	✓
Includes Starter Database	✓	✓	✓	✓	✓
ICDD PDF Database Access (as well as other databases)	✓	✓	✓	✓	✓
Multitude of Data Choices for Database Retrieval	✓	✓	✓	✓	✓
View Crystal Structures and Reflection Planes	✓	✓	✓	✓	✓
View Polyhedra, Calculate Bond Distances and Angles	✓	✓	✓	✓	✓
Simulate Powder Patterns from Crystal Structures	✓	✓	✓	✓	✓
Individual Analyst/Shared Work Environments	✓	✓	✓	✓	✓
Support for Custom d-I% list for Phase Overlay	✓	✓	✓	✓	✓
Excellent Profile Fitting and Batch Profile Fitting	✓	✓	✓	✓	✓
RIR Quant, Size & Strain and Residual Stress	✓	✓	✓	✓	✓
Direct-Derivation Method in Quantitative Analysis	✓	✓	✓	✓	NEW
Line-Based Unit Cell and Batch Refinement	✓	✓	✓	✓	✓
Structure Database Manager	✓	✓	✓	✓	✓
Profile Based Search/Match (S/M)	✓	✓	✓	✓	✓
Subfile + Chemistry + Unit Cell Filters in S/M	✓	✓	✓	✓	✓
Minor and Trace Phase ID	✓	✓	✓	✓	✓
Single Peak and Severely-Oriented S/M	✓	✓	✓	✓	✓
Solid-Solution and Isotypical Phase ID	✓	✓	✓	✓	✓
Auto-S/M in background thread on loading a pattern file	✓	✓	✓	✓	NEW
Full pattern S/M on PD3 phases by correlation & similarity	✓	✓	✓	✓	NEW
WPF and Rietveld Refinement (Unlimited Phases)	✓	✓	✓	✓	✓
Gold Standard Quantitative Analysis	✓	✓	✓	✓	✓
Seamless Integration with Database Retrieval	✓	✓	✓	✓	✓
Auto-Loading of Structure Data from Database	✓	✓	✓	✓	✓
Combination of Phases with/without Structure Data Weight%	✓	✓	✓	✓	✓
Linking of Unit Cell, Phase Broadening Parameters	✓	✓	✓	✓	✓
Custom d-I% (hkl, FWHM, Skew) to Fit Clay Phases	✓	✓	✓	✓	✓
March-Dollase and Spherical Harmonics Orientation Function	✓	✓	✓	✓	✓
Amorphous Content with/without Internal Wt% Standards	✓	✓	✓	✓	✓
Atomic Occupancy and Bond Distance Constraints	✓	✓	✓	✓	✓
Polynomial and Spline Curve Background Fitting	✓	✓	✓	✓	✓

All levels of JADE Standard are perpetual licenses, and sold without benefit of updates or any of JADE Pro's extensive set of extra features like the ability to share a license. Since it is a subscription, JADE Pro has a lower buy-in than JADE Standard.



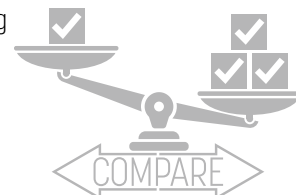
If you have JADE Classic, there still may be trade-in value for your JADE Classic towards the purchase of a current version of JADE Standard or JADE Pro.

### Additional JADE Features Only Available in JADE Pro

	Pro
One-Click-Analysis™ - Phase ID and WPF/Rietveld Analysis	✓
Size and Strain Analysis (Warren-Averbach & Williamson Hall)	✓
Pattern Indexing (All Crystal Systems)	✓
Simulate Series of Powder Patterns from Crystal Structures	✓
WPF and Rietveld Refinement Batch Processing	✓
Rietveld Structure Refinement (Atomic Parameters)	✓
Atomic Occupancy and Bond Distance Constraints	✓
Fourier Map Tools	✓
Ab Initio Tools (Charge Flipping +)	✓
Cluster Analysis of Powder Patterns	✓
Floating (Shareable) Network License	✓
All Updates via Subscription	✓
Extract Patterns from Area Detector 2D Images	✓
Digitize Any XRD Plot Image	✓
Cluster Analysis Visualization Dendrograms	✓
Toolkit App Version of ClaySim	✓
Toolkit App for Microstructure Analysis	✓
Toolkit App for Structure Solver Workflow	✓
Live Simulations and Visualization	✓
Toolkit App for Simulated Annealing	✓ NEW
Toolkit App for Regression Analysis	✓ NEW
Toolkit App for Pattern Matching	✓ NEW
Toolkit App for 3D Scatter Plot	✓ NEW

### Multiple Languages!

To better support diverse teams sharing a license of JADE Pro across their organization and to ensure consistent results regardless of language, JADE can switch on the fly to Chinese or Japanese languages.





# TOOLKIT

Only in JADE Pro

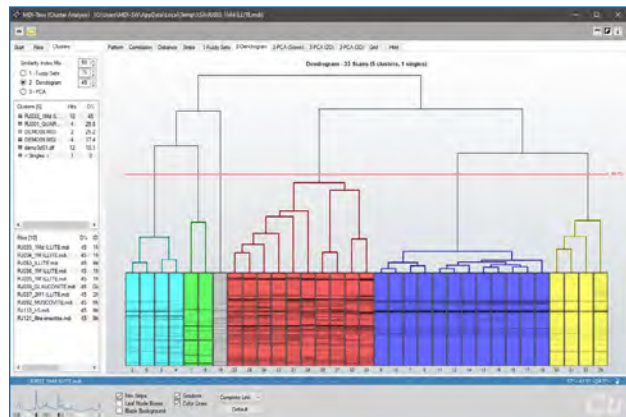
Toolkit currently includes these utilities designed for JADE.

## For Oriented Clays - ClaySim ▶

For (00l)-patterns. Performs simulations and analyses of oriented clays based on structure types introduced by R.C. Reynolds.

## XRD Digitizer

Just take a picture of an XRD plot and this tool will convert it to a digital format that you can now work with in JADE. Use advanced image editing options to tweak any imperfections or remove artifacts from your image.

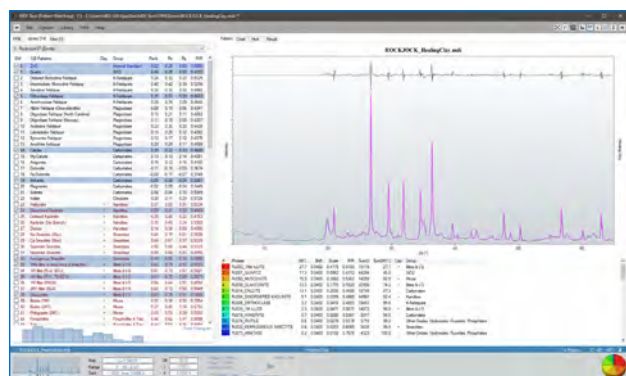


## Cluster Analysis ▲

Offers hierarchical Dendrogram Clustering with Principal Component Analysis in addition to Fuzzy Clustering

## Charge Flipper + Solve Structure

For structure solution using the charge flipping method.



## Pattern Matching ▲

Try the full Pattern Matching method used in ROCKJOCK and ClaySim.

## Regression Analysis

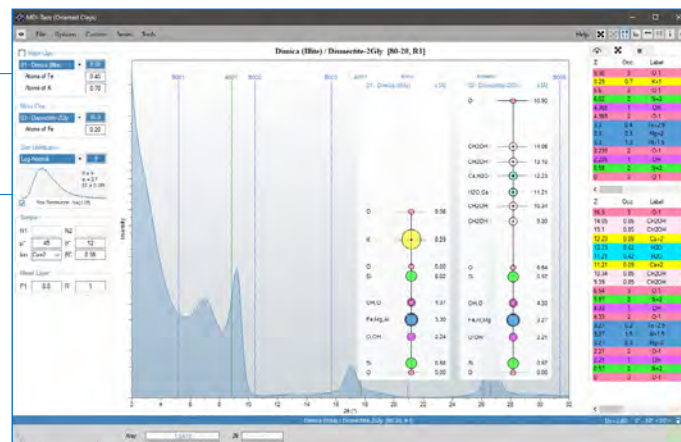
Perform regression analysis on data without leaving JADE Pro's Toolkit.

## 3D Scatter Plot

A scatter plot tool for xyz data sets from columnar data files.

## Lave Visualization ▶

Lave simulations, stereographic projections and alternative structure visualizations. This tool also exports multi-page Adobe PDF booklets.



## Microstructure Tool

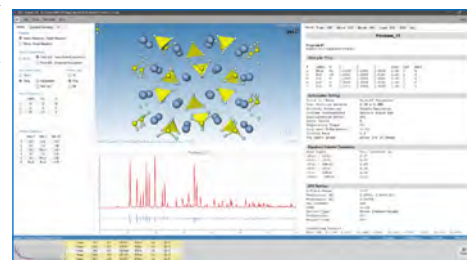
Provides methods for the analysis of the residual stress and microstructure defects for various diffraction geometries and is applicable to cubic phases (FCC, BCC) following a profile fitting in JADE. (D. Rafaja)

## MDI SizeStrain

Designed for crystallite size and micro-strain analysis using X-ray powder diffraction data. This Toolkit supports both Warren-Averbach and Williamson-Hall methods for crystallite size determination.

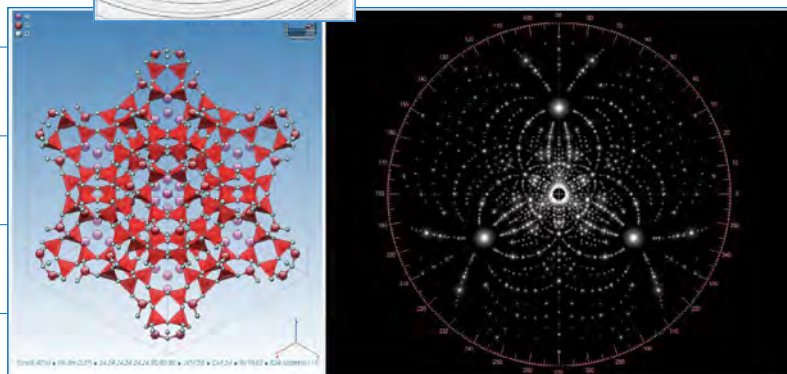
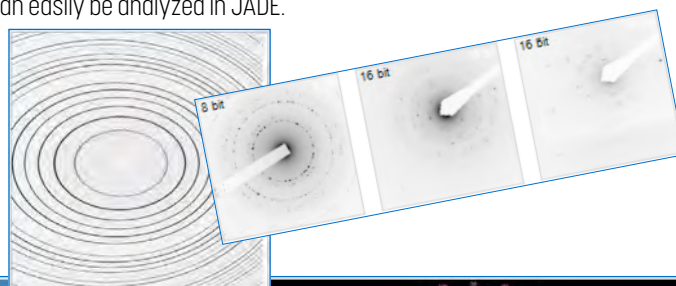
## Simulated Annealing ▶

An alternative direct space structure solution method (SA) designed for inorganic structures applying Coulomb interactions and repulsive potentials.



## Area Detector Tool ▼

Built to extract powder patterns from images obtained with flat area detectors, so that they can easily be analyzed in JADE.



# THE POWDER DIFFRACTON FILE IS NOW AVAILABLE FOR DOWNLOAD!

GET YOUR 2023 PDF DATABASE BY  
DOWNLOADING FROM THE CLOUD



PDF-4+



PDF-2



PDF-4/AXIOM



PDF-4/ORGANICS



PDF-4/MINERALS



Contact [info@icdd.com](mailto:info@icdd.com) for more information

## LICENSE OPTIONS TO FIT YOUR BUDGET!



- Extended multi-year license terms - Let us know what you need!
- You can customize the license for a 1 to 9-year license term
- 15% discount for new PDF-4+ or PDF-4/Organics and JADE Pro Bundles
- One-stop shopping: align PDF and JADE renewals for one billing and shipment
- **Save Money!** - Combine a new license for PDF-4+ and PDF-4/Organics
- PDF-2 10-year license - prepaid package
- PDF-4+Scholar - 10-year license for Academics
- PDF-4/Axiom 6-year and 9-year license - prepaid packages
- **SAVE time and money with ICDD's PDF-4 Subscriptions**
  - ICDD's subscriptions keep your database up-to-date with renewal pricing
  - ICDD offers automatic PDF-4 renewal shipments for convenience
  - Can't accept automatic shipments? ICDD will send a PDF-4 renewal reminder to keep you up-to-date with your subscription

# WHAT'S NEW FOR 2022-2023



## Introducing Release 2023 of the Powder Diffraction File

### THE PRODUCT LINE INCLUDES:

PDF-4+

PDF-4+/Web

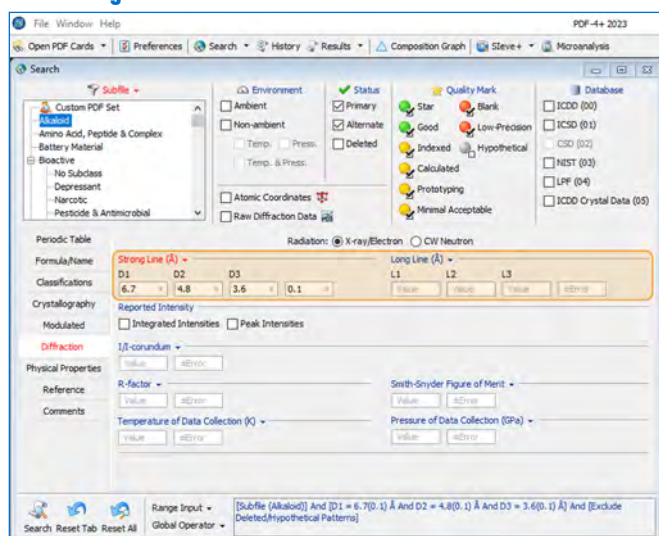
PDF-4/Axiom

PDF-4/Minerals

PDF-4/Organics

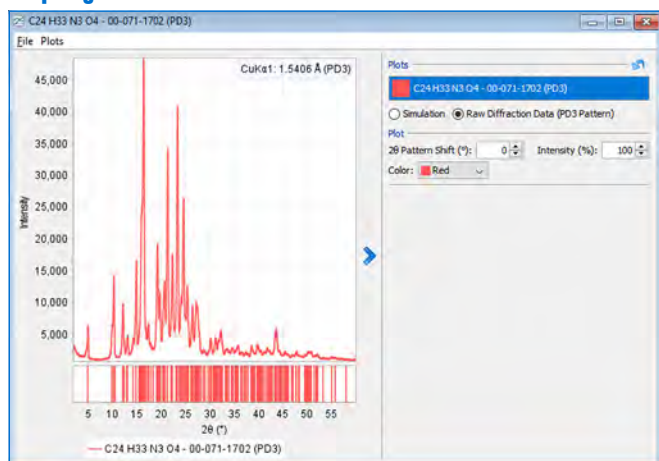
PDF-2

#### Data Mining Features



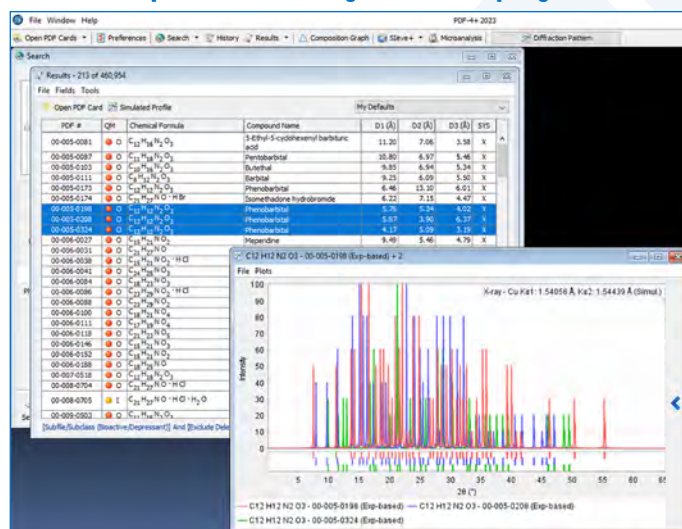
- Metal-Organic Subfile
- Select Periodic Table elements by typing element symbols or names
- Strong line and long line searches allow simultaneous input of three different search lines

#### Graphing Features



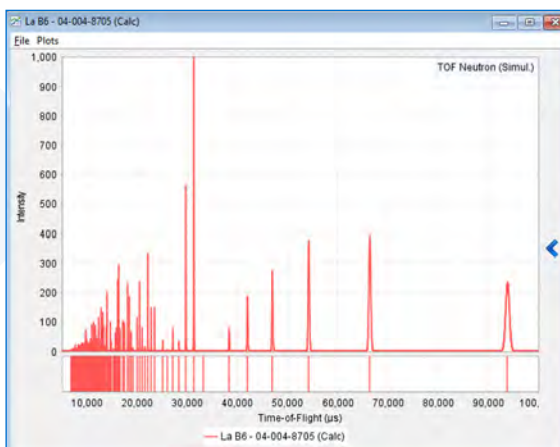
- Quickly switch between simulations and raw patterns (PD3) using the quick settings pane (PDF-4 only)
- Hold shift key to view x-y coordinates of the mouse

Three Phenobarbital entries from the search results table were dragged into the diffraction pattern window using the mouse Graphing Features



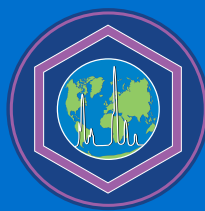
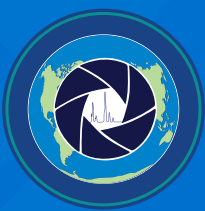
- Drag diffraction pattern files from the File Explorer directly into the program
- Drag PDF entries from any search results table to a diffraction pattern window (PDF-4 only)
  - Multiple entries supported
  - Simulated, raw (PD3), and stick patterns

#### Phase ID (Sieve/Sieve+)



- Import GSAS-II neutron TOF instrument parameters (PDF-4 only)
  - POWGEN cycles 2017-AB – 2022-A
- Import GNR \*.esg diffraction patterns
  - Analytical Instruments Group

# WHAT'S NEW FOR 2022-2023

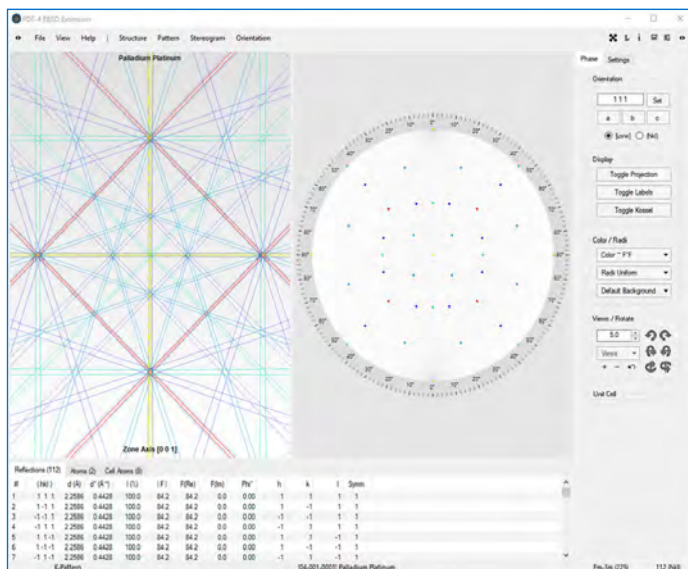


## Least squares RIR optimization of quantitative analysis of three phase mixture Phase ID (Sieve/Sieve+)

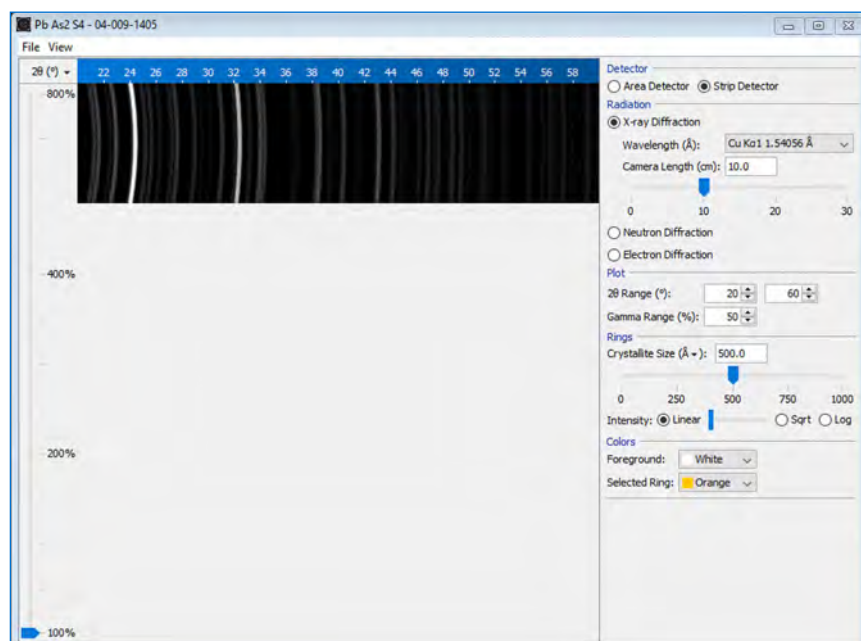


- Supports new internal standard SRM 640f
- Least squares RIR quantitative analysis can use all points for more accurate fitting of data (PDF-4 only)
- Matches filter displays the current search description

## EBSD Extension (PDF-4 only)



- The EBSD extension is designed to plot K-patterns (Kikuchi & Kossel patterns)
- Toggle between gnomonic projection and stereographic projection
- For Kossel patterns, up to three Ka1-wavelengths of elements in the chemical formula are used
- Can be accessed on the PDF card window or EBSD window



## Strip detector simulation of Lead Arsenic Sulfide 2D Ring Pattern Features

- Strip detector simulations
  - 2θ range setting
  - Gamma range setting
- Intensity scale settings
  - Linear
  - Square root
  - Logarithmic
- Highlight rings using the mouse
- Optimized drawing routines for faster performance
- Enhance imported 2D images using contrast stretching algorithm

# WHICH ICDD DATABASE IS RIGHT FOR YOU?

	PDF-4+ 2023	PDF-4+/ WEB 2023	PDF-4/ Axiom 2023	PDF-4/ Minerals 2023	PDF-4/ Organics 2023	PDF-2 2023
I work primarily with inorganic compounds	✓	✓	✓			✓
I work primarily with organic compounds					✓	
I work primarily with minerals				✓		
I work with electron diffraction/Synchrotron	✓	✓		✓	✓	
I need to work at the office and home		✓				
I need to do quantitative analysis						
Rietveld	✓ *	✓ *	✓ *	✓ *	✓ *	
Reference Intensity Ratio (RIR)	✓ †	✓ †	✓ *	✓ †	✓ †	✓ †
Pattern Fitting	✓ *	✓ *	✓ *	✓ *	✓ *	
I need a database with atomic coordinates	✓	✓	✓	✓	✓	
How many entries are in the database?	480,309	480,309	105,278	50,950	608,749	339,549
How many entries are new?	19,355	19,355	3,305	1,035	48,554	11,925
<b>I am using vendor software for my analysis. Which databases will work with my vendor software?</b> Global software vendors provide search/match software that interfaces with our databases. Please check with your software vendor for compatibility.	✓	✓	✓	✓	✓	✓
What is the license term for the database?	1 year	1 year	3 year	1 year	1 year	5 year
Multi-year license available	✓	✓		✓	✓	
Site license available	✓	✓			✓	✓

\* Using diffraction equipment manufacturer or vendor software.

† Using Sleeve or Sleeve+, diffraction equipment manufacturer or vendor software.

Extended multi-year license terms – let us know what you need!

**Do you have 10 or more concurrent users on a network? See pages 1 - 3 for Server License details.**

## SYSTEM REQUIREMENTS:

- Intel® Core™ 2 Duo processors (recommended minimum) or better
- 4 GB system memory

## JADE:

- Intel® Core™ i7, i5, or i3
- 8 GB system memory
- 24" or larger monitor - Your JADE experience will be richer on a larger screen.

## HARD DISK SPACE REQUIREMENTS

- PDF-2 2023 – 5 GB
- PDF-4+ 2023 – 12 GB
- PDF-4+/Web 2023 – 600 MB
- PDF-4/Minerals 2023 – 2 GB
- PDF-4/Organics 2023 – 24 GB
- PDF-4/Axiom 2023 – 3 GB
- JADE/JADE Pro – 400 MB

## SUPPORTED MICROSOFT® OPERATING SYSTEMS:

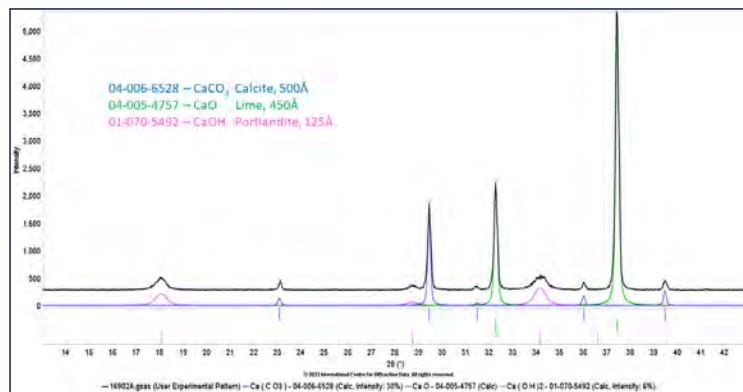
- Windows® 7 SP1
- Windows® 8/ 8.1
- Windows® 10
- Windows® 11



# PDF-4+ 2023

## Phase Identification and Quantitation

PDF-4+ combines the world's largest sources of inorganic diffraction data from crystals and powders into a single database.



Powder sample found to contain major calcium by XRF. Phases identified by XRD are  $\text{CaCO}_3$ ,  $\text{CaO}$  and  $\text{CaOH}$ .

## KEY POINTS

- Rapid phase identification designed to support automated quantitative analyses
- Features 480,300+ entries with over 369,500+ having atomic coordinates
- 55,800+ entries for organic materials
- Integrated data mining software
- All entries have digital patterns for use in total pattern analysis
- More than 376,300+ entries have  $I/I_c$  values for quantitative analysis by Reference Intensity Ratio (RIR)
- Combines powder and single crystal data
- Includes crystalline, semi-crystalline, and amorphous solid-state materials
- World's largest and most diverse collection of structures for inorganic materials
- Extensive data mining is facilitated with 134 display fields coupled with 80 searches
- One (1) year license serviced by subscription

## PDF-4+ Purchase Options

PDF-4+ 2023	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New - Single License	F4D23	F4S23	F4L23	\$8,985	\$5,975
Renewal from 2022 to 2023	F4RD23	F4RS23	F4RL23	\$1,985	\$1,275
<b>PDF-4+ and JADE Pro Bundle*</b>					
New - Single License	BUJPF4D23	BUJPF4S23	BUJPF4L23	\$15,755	\$11,071
*Purchase a new license for PDF-4+ and JADE Pro					
<b>PDF-4+ 2023 Multi-year License*</b>					
Renewal - 3 year License	F4D24MR26	F4S24MR26	F4L24MR26	\$5,360	\$3,445
Renewal - 5 year License	F4D24MR28	F4S24MR28	F4L24MR28	\$8,440	\$5,420
<b>PDF-4+ Scholar 2023 (10-Year License Package)*</b>					
PDF-4+ New - Single License	F4D23	F4S23	F4L23	NA	\$5,975
Sleeve+ New - Single License	SWS423N	SWS423N	SWS423N	NA	\$500
Scholar Multi-year	F4SPD24MR28	F4SPS24MR28	F4SPL24MR28	NA	\$6,225
					\$12,700

**Save Money! Take advantage of ICDD's Combo Site License - Request a quote today!**

PDF-4+ 2023 Site License*	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New - Master License	F4D23M	F4S23M	F4L23M	\$8,985	\$5,975
New - additional Licenses, each	F4D23C	F4S23C	F4L23C	\$1,985	\$1,275
Renewal - Yearly Master License	F4RD23M	F4RS23M	F4RL23M	\$1,985	\$1,275
Renewal - additional Licenses, each	F4RD23C	F4RS23C	F4RL23C	\$775	\$520
<b>PDF-4+ 2023 Site/Multi-year License*</b>					
Renewal - 3 year Master Site License	F4D24MR26M	F4S24MR26M	F4L24MR26M	\$5,360	\$3,445
Renewal - 3 year additional Licenses, each	F4D24MR26M	F4S24MR26M	F4L24MR26M	\$2,325	\$1,560
Renewal - 5 year Master Site License	F4D24MR28M	F4S24MR28M	F4L24MR28M	\$8,440	\$5,420
Renewal - 5 year additional Licenses, each	F4D24MR28C	F4S24MR28C	F4L24MR28C	\$3,875	\$2,600
<b>PDF-2 to PDF-4+ Conversion</b>					
PDF-2 2022 to PDF-4+ 2023	F2422RDU23	F2422RSU23	F2422RLU23	\$1,985	\$1,275
PDF-2 2021 to PDF-4+ 2023	F2421RDU23	F2421RSU23	F2421RLU23	\$3,970	\$2,550
PDF-2 2020 to PDF-4+ 2023	F2420RDU23	F2420RSU23	F2420RLU23	\$5,955	\$3,825
PDF-2 2019 to PDF-4+ 2023	F2419RDU23	F2419RSU23	F2419RLU23	\$7,940	\$5,100

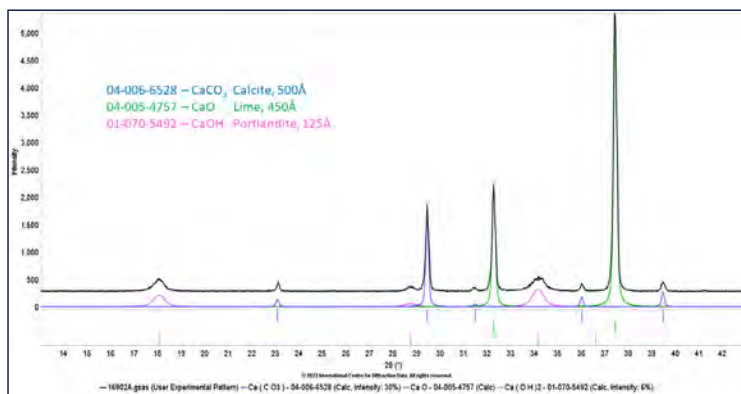
\*Please see product policies on pages 16 and 17



# PDF-4+/WEB 2023

## Data on the Go

PDF-4+/Web provides portability to the PDF-4+ database via the internet. It enables access to the entire suite of programs and data files, so that it is equivalent to PDF-4+ 2023.



Powder sample found to contain major calcium by XRF. Phases identified by XRD are  $\text{CaCO}_3$ ,  $\text{CaO}$  and  $\text{CaOH}$ .

## KEY POINTS

- PDF-4+ database via the Internet
- Access to the entire suite of PDF-4+ programs and data files
- Can be used on any computer that meets the specifications
- Requires access to a high-speed internet connection
- Delivered as a USB compatible dongle\*
- Installation and renewals are handled via the internet
- One (1) year license serviced by subscription



## SYSTEM REQUIREMENTS

- PDF-4+/Web 2023 requires a fully-powered USB port, web browser, and ability to open TCP/IP ports through any existing firewalls. Connectivity speed should be at least 10 Mbps or higher.\*

\*see Preferred Computer Specifications, page 10



## SUPPORTED BROWSERS



Edge



Chrome



Firefox

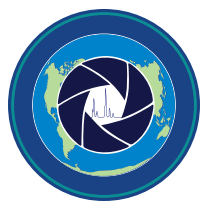
## PDF-4+/Web Purchase Options

PDF-4+/Web 2023	Dongle Code	2022-2023 List \$	2022-2023 Academic \$
New - Single License	W423	\$8,985	\$5,975
Renewal from 2022 to 2023	W4R23	\$1,985	\$1,275
<b>PDF-4+/Web 2023 Multi-year License*</b>			
Renewal - 3 year license	W423MR26	\$5,360	\$3,445
Renewal - 5 year license	W423MR28	\$8,440	\$5,420
<b>PDF-4+/Web 2023 Site License*</b>			
Renewal - 3 year license	W423M	\$8,985	\$5,975
New - additional licenses, each	W423C	\$1,985	\$1,275
Renewal - Yearly Master License	W4R23M	\$1,985	\$1,275
Renewal - additional licenses, each	W4R23C	\$775	\$520

**Save Money! Take advantage of ICDD's Combo Site License - Request a quote today!**

PDF-4+/Web 2023 Site/Multi-year License*	Dongle Code	2022-2023 List \$	2022-2023 Academic \$
Renewal - 3 year Master Site License	W423MR26M	\$5,360	\$3,445
Renewal - 3 year additional licenses, each	W423MR26C	\$2,325	\$1,560
Renewal - 5 year Master Site License	W423MR28M	\$8,440	\$5,420
Renewal - 5 year additional licenses, each	W423MR28C	\$3,875	\$2,600
<b>PDF-4+/Web Conversion</b>			
PDF-2 2022 to PDF-4+/Web 2023	W2W22RU23	\$1,985	\$1,275
PDF-2 2021 to PDF-4+/Web 2023	W2W21RU23	\$3,970	\$2,550
PDF-2 2020 to PDF-4+/Web 2023	W2W20RU23	\$5,955	\$3,825
PDF-2 2019 to PDF-4+/Web 2023	W2W19RU23	\$7,940	\$5,100
PDF-4+ 2022 to PDF-4+/Web 2023	W4W22RU23	\$1,985	\$1,275

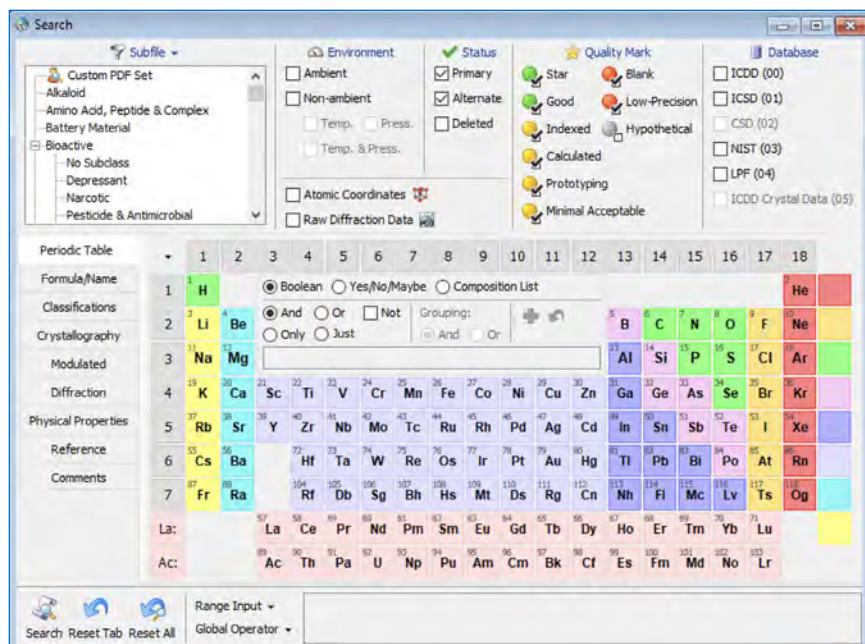
\*Please see product policies on pages 16 and 17



# PDF-4/AXIOM 2023

## Quality plus Value

PDF-4/Axiom is focused on identification and quantitation with data entries selected for benchtop users.



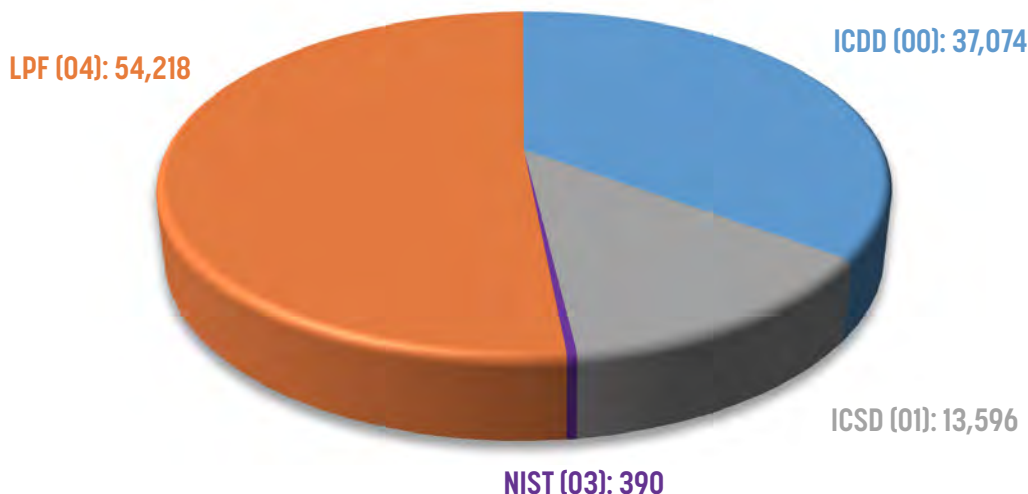
## KEY POINTS

- Cost-effective
- Single License: Three (3) year license term
- Optional: Two additional seats (three (3) year license term)
- Six (6) year and nine (9) year prepaid packages
- No subscription
- Featuring 105,200+ entries, including inorganic and organic entries
- 76,400+ entries with atomic coordinates
- Data focused on ambient entries
- Fundamental mineral entries
- ICDD data mining software
- ICDD's search identification software (Sieve+) is not included (Available with PDF-4+, PDF-4/Minerals, and PDF-4/Organics)

**Requires JADE, diffraction equipment manufacturer, or vendor software for phase identification applications**

## Database Sources

(See inside front cover for ICDD's collaborative partners)



## PDF-4/Axiom Purchase Options

PDF-4/Axiom 2023	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New License - 3 years	AX4D23	AX4S23	AX4L23	\$3,625	\$2,600
Two Additional Seats (each seat: single PC installation)	AX4D23MS	AX4S23MS	AX4L23MS	\$1,025	\$525
<b>PDF-4/Axiom 2023 Packages*</b>					
PDF-4/Axiom - 6 years	AX4D6YR	AX4S6YR	AX4L6YR	\$7,250	\$5,200
PDF-4/Axiom - 9 years	AX4D9YR	AX4S9YR	AX4L9YR	\$10,875	\$7,800

\*Purchase two or three Single Licenses (Release 2023, Release 2026, and Release 2029)

- Each PDF-4/Axiom product is licensed for three (3) years
- Shipping fees for all databases billed on the original invoice

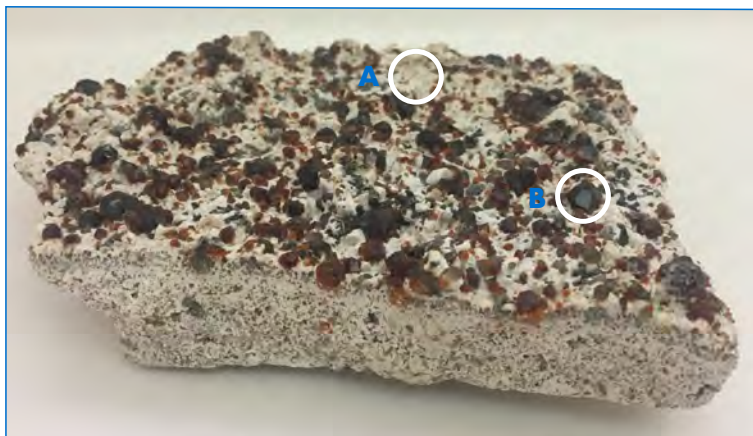
\*Please see product policies on pages 16 and 17



# PDF-4/MINERALS 2023

## Comprehensive Mineral Collection

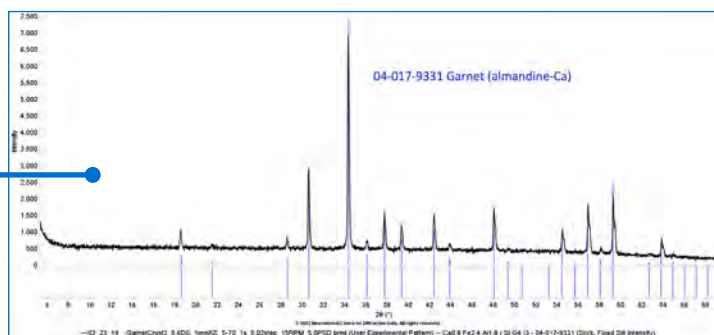
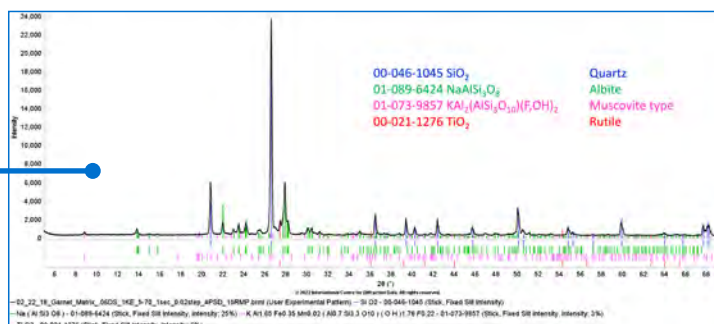
PDF-4/Minerals is the most comprehensive collection of mineral data in the world! Ninety-seven percent of all known mineral types, as defined by the International Mineralogical Association (IMA), are represented in the database.



Almandine garnets on a matrix comprised of quartz, albite, muscovite and rutile.

## KEY POINTS

- Rapid phase identification, plus support for automated quantitative analyses
- Features 50,900+ entries, including 42,000+ entries with atomic coordinates
- Integrated data mining software
- All entries have digital patterns for use in total pattern analysis
- More than 39,200+ entries have  $I/I_c$  values for quantitative analysis by Reference Intensity Ratio (RIR)
- Combines powder and single crystal data
- Classified by IMA designations
- A subset of the PDF-4+ database with all the features and capabilities, targeted to minerals and mineral related compounds
- Extensive data mining is facilitated with 134 display fields coupled with 80 searches
- One (1) year license serviced by subscription



## PDF-4/Minerals Purchase Options

PDF-4/Minerals 2023	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New - Single License	MN4D23	MN4S23	MN4L23	\$1,795	\$1,220
Renewal from 2022 to 2023	MNR4D23	MNR4S23	MNR4L23	\$960	\$635
<b>PDF-4/Minerals 2023 Multi-year License*</b>					
Renewal - 3 year license	MND424MR26	MNS424MR26	MNL424MR26	\$2,880	\$1,905
Renewal - 5 year license	MND424MR28	MNS424MR28	MNL424MR28	\$4,800	\$3,175

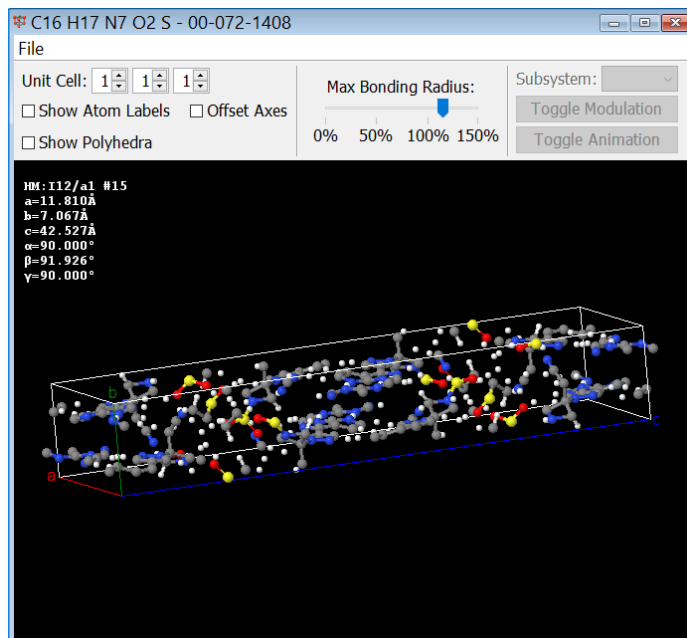
\*Please see product policies on pages 16 and 17



# PDF-4/ORGANICS 2023

## Solve Difficult Problems, Get Better Results

PDF-4/Organics database is a highly targeted collection with a special focus on materials used in commercial and regulatory fields. It provides the best of both worlds by including single crystal and powder diffraction data together in a single, edited, and standardized database.



PDF entry 00-072-1408 3D structure for active pharmaceutical ingredient Baricitinib.

## KEY POINTS

- Collection includes pharmaceuticals, excipients, and polymers
- Featuring 608,700+ entries and 204,252 entries with atomic coordinates
- Integrated data mining software
- Sieve+ search-indexing software included as an added value
- Combines crystalline, semi-crystalline, and amorphous solid-state materials
- Combines powder and single crystal data
- Highly targeted collection with special focus on materials used in commercial and regulatory fields
- Enhanced identification for crystalline, nano, and amorphous materials
- One (1) year license serviced by subscription

## PDF-4/Organics Purchase Options

PDF-4/Organics 2023	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New - Single License	OR4D23	OR4S23	OR4L23	\$8,985	\$5,975
Renewal from 2022 to 2023	OR4RD23	OR4RS23	OR4RL23	\$1,985	\$1,275
<b>PDF-4/Organics and JADE Pro Bundle*</b>					
New - Single License	BUJPOR4D23	BUJPOR4S23	BUJPOR4L23	\$15,755	\$11,071
<b>PDF-4/Organics 2023 Multi-year License*</b>					
Renewal - 3 year license	OR4D24MR26	OR4S24MR26	OR4L24MR26	\$5,360	\$3,445
Renewal - 5 year license	OR4D24MR28	OR4S24MR28	OR4L24MR28	\$8,440	\$5,420

\*Purchase a new license for PDF-4/Organics and JADE Pro

**Save Money! Take advantage of ICDD's Combo Site License - Request a quote today!**

PDF-4/Organics 2023 Site License*	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New - Master License	OR4D23M	OR4S23M	OR4L23M	\$8,985	\$5,975
New - additional licenses, each	OR4D23C	OR4S23C	OR4L23C	\$1,985	\$1,275
Renewal - Yearly Master License	OR4RD23M	OR4RS23M	OR4RL23M	\$1,985	\$1,275
Renewal - additional licenses, each	OR4RD23C	OR4RS23C	OR4RL23C	\$775	\$520
<b>PDF-4/Organics 2023 Site/Multi-year License*</b>					
Renewal - 3 year Master Site License	OR4D24MR26M	OR4S24MR26M	OR4L24MR26M	\$5,360	\$3,445
Renewal - 3 year additional licenses, each	OR4D24MR26C	OR4S24MR26C	OR4L24MR26C	\$2,325	\$1,560
Renewal - 5 year Master Site License	OR4D24MR28M	OR4S24MR28M	OR4L24MR28M	\$8,440	\$5,420
Renewal - 5 year additional licenses, each	OR4D24MR28C	OR4S24MR28C	OR4L24MR28C	\$3,875	\$2,600

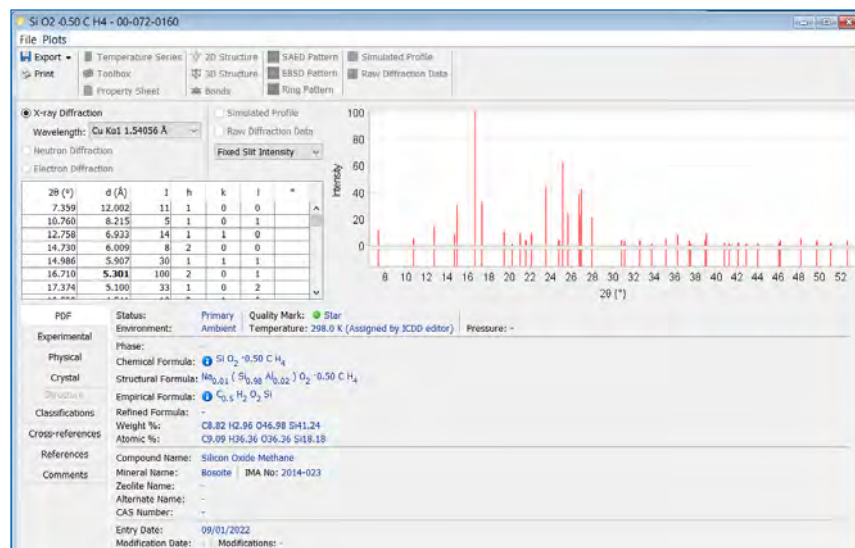
\*Please see product policies on pages 16 and 17



# PDF-2 2023

## Phase Identification + Value

PDF-2 is designed for inorganic materials analyses. In addition, common organic materials from ICDD are added to the database to facilitate rapid materials identification.



PDF entry 00-072-0160, mineral Bosotte,  $\text{SiO}_2 \cdot 0.5\text{CH}_4$

## KEY POINTS

- Features 339,500+ entries
- 235,600+ entries have  $I/I_c$  values for quantitative analysis by Reference Intensity Ratio (RIR)
- Integrated data mining software
- Sieve search-indexing software included as an added value
- Combines powder and single-crystal data
- Rapid data mining with our 57 display fields coupled with 71 searches
- Five (5) year license

**Take Advantage of ICDD's PDF-2  
10-Year License Package  
REQUEST A QUOTE TODAY!**

## PDF-2 Purchase Options

PDF-2 2023: Five (5) year License	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New - Single License	C2D23PN	C2S23PN	C2L23PN	\$8,985	\$5,975
Renewal from 2022 to 2023	C2D22PU23	C2S22PU23	C2L22PU23	\$1,985	\$1,275
Renewal from 2021 to 2023	C2D21PU23	C2S21PU23	C2L21PU23	\$3,970	\$2,550
Renewal from 2020 to 2023	C2D20PU23	C2S20PU23	C2L20PU23	\$5,955	\$3,825
Renewal from 2019 to 2023	C2D19PU23	C2S19PU23	C2L19PU23	\$7,940	\$5,100
<b>PDF-2 2023: Ten (10) year License Package</b>					
New Licenses (2023 and 2028)	PD2D10YR	PD2S10YR	PD2L10YR	\$17,970.00	\$11,950.00
Purchase Two (2) New PDF-2 Single Licenses (Release 2023, Release 2028)					
<b>PDF-2 2023 Site License*</b>					
New - Master License	C2D23PNM	C2S23PNM	C2L23PNM	\$8,985	\$5,975
New - additional licenses, each	C2D23PNC	C2S23PNC	C2L23PNC	\$1,985	\$1,275
Renewal - Yearly Master License	C2D22PU23M	C2S22PU23M	C2L22PU23M	\$1,985	\$1,275
Renewal - additional licenses, each	C2D22PU23C	C2S22PU23C	C2L22PU23C	\$775	\$520
<b>PDF-2 to PDF-4+ Conversion</b>					
PDF-2 2022 to PDF-4+ 2023	F2422RDU23	F2422RSU23	F2422RLU23	\$1,985	\$1,275
PDF-2 2021 to PDF-4+ 2023	F2421RDU23	F2421RSU23	F2421RLU23	\$3,970	\$2,550
PDF-2 2020 to PDF-4+ 2023	F2420RDU23	F2420RSU23	F2420RLU23	\$5,955	\$3,825
PDF-2 2019 to PDF-4+ 2023	F2419RDU23	F2419RSU23	F2419RLU23	\$7,940	\$5,100

\*Please see product policies on pages 18 and 19

# SIEVE/SIEVE+ 2023

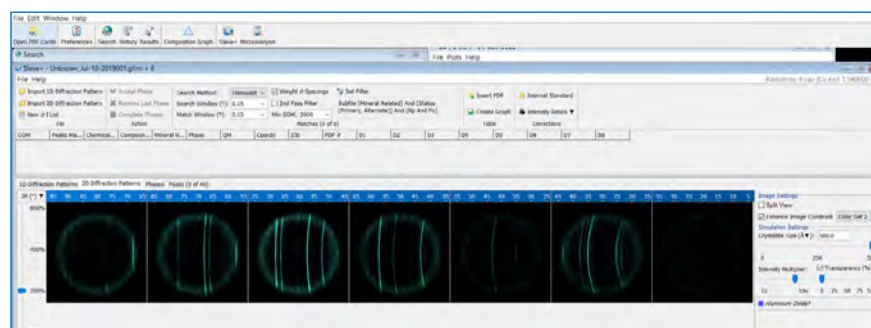
## Search and Identify

ICDD's search identification programs, Sieve for PDF-2 and Sieve+ for PDF-4, are designed to search and identify unknown materials. Sieve/Sieve+ are integrated into the ICDD databases to allow the use of the extensive data mining interfaces, searches, and sorts available to improve the accuracy and precision of the identification process.

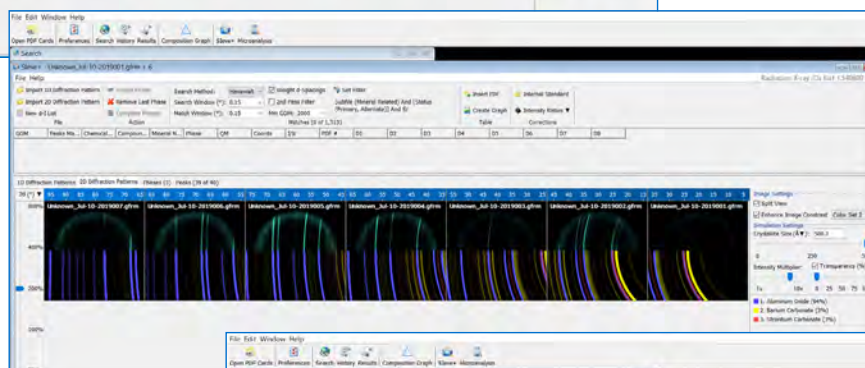
## KEY POINTS

- Designed to search and identify unknown materials
- Complementary with most commercial software programs
- Match filter algorithms - better results, more accuracy
- Identify non-crystalline materials and complex multi-phase specimens
- Strength of Sieve/Sieve+ is evident in the analysis of minor and trace phases
- Supports X-ray, synchrotron, electron<sup>†</sup>, and neutron<sup>†</sup> data
- "Intelligent" RIR for semi-quantitative analysis<sup>†</sup>

<sup>†</sup> PDF-4 only

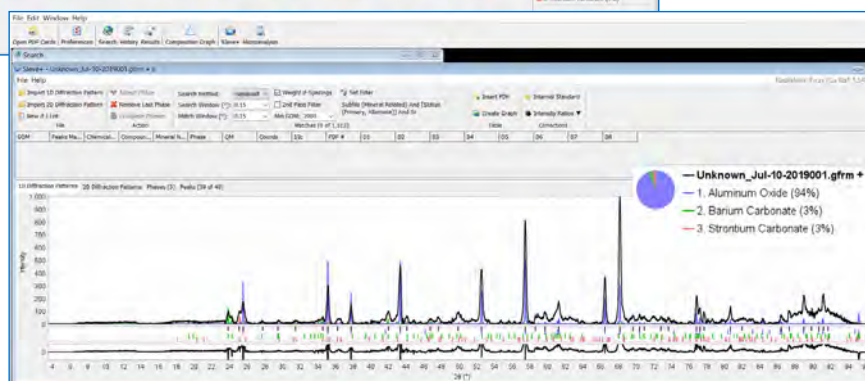


Seven 2D XRD raw data patterns imported and displayed using Sieve+. Data collected on a single sample with different detector positions using CuK $\alpha$  radiation.



Seven 2D XRD raw data patterns with phase identification overlay using Sieve+. Data collected on a single sample with different detector positions using CuK $\alpha$  radiation.

Phase identification results from 2D XRD data merged and plotted in 1D format, using Sieve+. Data collected on a single sample with different detector positions using CuK $\alpha$  radiation.



## Sieve+ Purchase Options

Sieve+ 2023	DVD CODE	USB CODE	DOWNLOAD CODE	2022-2023 List \$	2022-2023 Academic \$
New - Single License	SWS423N	SWS423N	SWS423N	\$760	\$500
Renewal from 2022 to 2023	SWS423U	SWS423U	SWS423U	\$450	\$280
<b>Sieve+ 2023 Multi-year License*</b>					
Renewal - 3 year license	SWS424MR26	SWS424MR26	SWS424MR26	\$1,215	\$760
Renewal - 5 year license	SWS424MR28	SWS424MR28	SWS424MR28	\$1,915	\$1,190

\*Please see product policies on pages 16 and 17

# LICENSE

ICDD single user databases and software products are licensed for use on a single PC (see page 12 in this catalog for information on PDF-4+/Web licensing). Database and software licenses grant end-users a limited, nonexclusive, and nontransferable license to access the contents of the product for personal or internal business purposes; and to download such contents on the hard drive of a single computer, as needed, to facilitate data processing. It cannot be installed, accessed, or displayed on more than one PC without purchasing additional licenses or a multi-user server license (see pages 1-3 for server license information). License terms vary by product.

**Installation & Registration:** ICDD databases require registration to comply with the legal requirements of our collaborative agreements. Registration is required upon installation. This will ensure that your database license will correspond closely with your product subscription. Please note that your product subscription is based on the month of the original invoice, not the date of the license registration key. The integrated registration software will guide users through the registration process. The registration information can be sent to ICDD using the internet (preferred), email, fax, or mail. A registration key for the full license will be sent to the user within 48 hours of receipt of the registration information (Monday through Friday). If you have not heard from ICDD within 48 hours, please send a communication noting that it is a second request. You can contact ICDD by email: [registration@icdd.com](mailto:registration@icdd.com); fax: 610.325.9823; or call us at 610.325.9814.

**Registration License Key:** Registration is required upon installation. The license key is issued on the date of registration and will allow access to the database in accordance with the purchased product license term.

Contact ICDD for PDF-4+/Web registration information - [info@icdd.com](mailto:info@icdd.com)

**Database License Term:** This is the amount of time available for access to the purchased database (see License terms).

**Product Subscription:** The PDF-4 product line, as well as all database site and multi-year licenses, are serviced by subscription. All subscriptions are based on the original invoice date. This means that PDF-4 renewals, site licenses, and multi-year licenses are due on the month of the original invoice. For example, if your original invoice was in May 2022, then your renewal will be due in May 2023.

**PDF-2:** The license term for PDF-2 with Sleve is five (5) years.

**PDF-4/Axiom:** The license term for PDF-4/Axiom is three (3) years.

**PDF-4+, PDF-4+/Web, PDF-4/Minerals, and PDF-4/Organics** are licensed for one (1) year. ICDD offers a subscription service that provides automatic renewals for your PDF-4 product(s). Prior to the expiration of your license, ICDD will automatically invoice and ship your PDF-4 renewal based on your original invoice date. If you cannot take advantage of the automatic subscription, contact [sales@icdd.com](mailto:sales@icdd.com).

**NOTE:** When renewing your PDF license, ICDD recommends that you contact ICDD or your software vendor to determine your data analysis software requirements.

## RELEASE 2023

### LICENSE TERMS

Product	License Term
PDF-2 with Sleve	5 years
PDF-4/Axiom	3 years
PDF-4 products*	1 year
Sleve+*	1 year
PDF-4 Standalone Server	1 year
PDF-4 and JADE Pro Bundle Server	1 year

\* Serviced by subscription featuring automatic annual renewals.

# PRODUCT LICENSE POLICIES

## Academic Pricing Policy

An academic price is awarded to degree-granting (Assoc., B.S., M.S., Ph. D.) institutions and organizations that provide resources for student's course work that are affiliated with the degree-granting institution. Institutions may be required to submit documentation to verify eligibility. Please consult ICDD's price list for eligible products.

## Site License Policy

ICDD's standard site license policy is designed for a multi-user laboratory to facilitate multiple licenses of the PDF-2 or PDF-4 databases at a single site. A single site is defined by the building where the database will be installed. Multiple users in different buildings need to purchase separate site licenses for each building.

A standard ICDD site license includes the purchase of a Master License, and the purchase of Secondary Licenses (discounted additional licenses). Customers may purchase an unlimited number of additional licenses at discounted pricing. The number of computers that will be running the database in a single building determines the number of licenses.

An ICDD multi-user server license is a bundled software product that includes ICDD's JADE Pro and either PDF-4+, PDF-4/Organics, or both. The bundle server license is scaled to serve high-volume research environments (10-license minimum required) and is a floating, remotely accessible, and network-shareable license.

**NOTE: PDF-4/Axiom and PDF-4/Minerals are excluded from site license options.**

## Single License → Site License

Customers with a single license may add additional licenses to create a site. To qualify for additional license pricing, the single license must be current. If necessary, customers may need to renew their single license to the current release, then add an additional license to create the site.

## Site License Renewals

In order to take advantage of the site license renewal pricing, both the Master License and the Secondary Licenses of the database must be renewed yearly. To renew a site license, ICDD requires that the Master License and all Secondary Licenses be purchased concurrently on a single purchase order.

## Combo Site License Subscription

ICDD offers combination site licenses that allows for multiple licenses of the PDF-2, PDF-4+, PDF-4+/Web, or PDF-4/Organics databases at a single site. The combo site licenses are serviced by subscription with yearly automatic renewals based on the anniversary of the original invoice date for the PDF-2, PDF-4+, PDF-4+/Web, or PDF-4/Organics databases. ICDD will automatically bill and ship renewal licensed products as specified in ICDD's then-current price list. If you cannot take advantage of the automatic subscription, contact [sales@icdd.com](mailto:sales@icdd.com).

**NOTE:** PDF-2 can only be combined with PDF-4+ or PDF-4+/Web.

## Multi-year Site License

In response to customer requests, ICDD offers multi-year site licenses. The multi-year site license is offered as a convenience to our customers using site license pricing. This license is serviced by subscription and is available for a PDF-4+, PDF-4+/Web, or PDF-4/Organics site.

**NOTE:** (PDF-2, PDF-4/Axiom, and PDF-4/Minerals databases are not eligible).

## Multi-year License Policy

To assist customers with their yearly renewals, ICDD offers multi-year licenses that allow you to prepay for future renewals. The multi-year license renewal pricing provides savings on yearly license renewals, along with fixed pricing on the renewal for the purchased license term. Multi-year pricing is available for PDF-4+, PDF-4+/Web, PDF-4/Minerals, and PDF-4/Organics. If the price for these products increases during your multi-year license period, you will not be billed the difference.

To purchase a multi-year license, users need to purchase a new license to the current release of the PDF or renew their license to the current release using the current prices. Users may then purchase additional years for their license. All shipping charges will be billed on the original invoice. The multi-year license is serviced by subscription with yearly automatic renewals based on the anniversary of the original invoice date for PDF-4 databases. For each year in your multi-year license, you will receive the newest release of your PDF product. You will need to install and register your new product for each release.

Sleve+, ICDD's search-indexing software is linked to the PDF-4 release year. Customers utilizing this software are encouraged to purchase a multi-year license for the software along with their multi-year license for the database. The multi-year license for Sleeve+ is serviced by subscription as described in the paragraph above.

Multi-year license renewal pricing for PDF-4/Minerals is offered as a convenience to our customers. It is not subject to the discount offered with our other multi-year licenses.

**NOTE:** PDF-2 and PDF-4/Axiom databases are not eligible for multi-year licensing options; however ICDD offers prepaid packages. Visit page 13 for PDF/Axiom and page 16 for PDF-2. (See below)

## PDF-4+Scholar Multi-year License for Academics 10-Year License



PDF-4+Scholar is an incentive available solely for our academic customers who qualify under ICDD's academic license policy.

PDF-4+Scholar is a ten (10) year multi-year license package for PDF-4+, which includes a license for Sleeve+. It is identical to PDF-4+ in content and capability. The 10-year license

includes purchases of PDF-4+ and Sleeve+ (new or renewal to the current product release), plus the PDF-4+Scholar multi-year license. During your 10-Year license, you will receive six (6) products of the newest release of the PDF-4+ and Sleeve+. The first five (5) PDF-4+ products will be licensed for one (1) year. The final sixth (6th) PDF-4+ product will be the PDF-4+Scholar product, which is licensed for five years.

The 10-Year license is available on DVD, USB, or download.

Like all PDF-4 products, the 10-Year license is handled by automatic subscription. The yearly automatic renewals will be shipped based on the anniversary of the original invoice for the 10-Year license. Shipping fees for all databases are billed on the original invoice.

**For more information, please visit:**  
[www.icdd.com/pricing-policies/](http://www.icdd.com/pricing-policies/)

Product warranty is on the preferred computer specifications associated with the product release. If you need to change your computer specifications, ICDD recommends that you reference the ReadMe.txt or product insert for your product release to check for compatibility.

## Take advantage of ICDD's prepaid packages:

- **PDF-2:** 10-Year license – Page 16
- **PDF-4+Scholar:** 10-Year license for Academics – Page 12
- **PDF-4/Axiom:** 6-Year and 9-Year license prepaid – Page 13

# VISIT [WWW.ICDD.COM](http://WWW.ICDD.COM) FOR MORE INFORMATION

## PURCHASING PRODUCTS

[www.icdd.com](http://www.icdd.com) → Products → Purchase Products

## ICDD Licensed Distributors

ICDD works with a global network of licensed distributors to provide ICDD products throughout the world. Our network includes equipment manufacturers, regional distributors, and licensed software developers who program commercial data analysis programs that work seamlessly with our databases.

[www.icdd.com/distributors/](http://www.icdd.com/distributors/)

## ICDD EDUCATION

ICDD offers a variety of educational opportunities designed for both the new and experienced user. Our clinics boast a high instructor-to-student ratio. Our experienced instructors have diverse scientific backgrounds, which give the attendees a blend of both theory and results-oriented practical experience. The week-long training of each clinic will set you up for success with a mix of lecture and hands-on sessions.

[www.icdd.com/icdd-education](http://www.icdd.com/icdd-education)

## 2023 EDUCATIONAL CLINICS\*

### Practical X-ray Fluorescence

Spring 2023

[www.icdd.com/xrf](http://www.icdd.com/xrf)

### Fundamentals of X-ray Powder Diffraction

Summer 2023

[www.icdd.com/xrd](http://www.icdd.com/xrd)

### Advanced Methods in X-ray Powder Diffraction

Summer 2023

[www.icdd.com/xrd](http://www.icdd.com/xrd)

### Rietveld Refinement & Indexing

Fall 2023

[www.icdd.com/rietveld](http://www.icdd.com/rietveld)



\*Dates, location, and format of clinics and conferences may be subject to change due to COVID-19.

## CONFERENCES\*

[www.icdd.com](http://www.icdd.com) → Conferences

## 72<sup>nd</sup> Denver X-ray Conference

**The Westin Chicago Lombard,  
Lombard, Illinois, USA**

**7-11 August 2023**

DXC is the world's largest annual conference dedicated to the fields of X-ray analysis. Experts in the fields of X-ray diffraction and X-ray fluorescence gather for a week of workshops, technical sessions, and manufacturer's exhibits. DXC attendees will have access to sessions on the latest advancements in XRD and XRF.

[www.dxcicdd.com](http://www.dxcicdd.com)

## Pharmaceutical Powder X-ray Diffraction Symposium

XRD Training for the Pharmaceutical Scientist! ICDD sponsors this symposium designed to create a forum for the exchange of knowledge and cutting-edge ideas among those interested in the combined fields of XRD and pharmaceutical sciences. Visit the PPXRD website for news on the next symposium. Search and browse presentations from past PPXRD for free.

[www.icdd.com/ppxrd](http://www.icdd.com/ppxrd)

## RESOURCES

[www.icdd.com](http://www.icdd.com) → Resources

### Advances in X-ray Analysis

Register for free access to over 1,000 full publications from Advances in X-ray Analysis (AXA)- the proceedings of the Denver X-ray Conference (DXC). Access to AXA is provided by ICDD in cooperation with the authors and presenters of the DXC for the express purpose of educating the scientific community.

[www.icdd.com/axa-allvolumes](http://www.icdd.com/axa-allvolumes)

### Powder Diffraction Journal

ICDD's international journal, *Powder Diffraction*, focuses on materials characterization employing X-ray powder diffraction and related techniques. Cambridge University Press publishes it quarterly and with special topical issues. See freshly approved manuscripts online-since 2013, authors have utilized First View to speed approval of their manuscripts.

[www.icdd.com/pdj](http://www.icdd.com/pdj)

### Grant-in-Aid

Join ICDD's elite group of scientists who contribute experimental powder diffraction patterns to the Powder Diffraction File. One of our main objectives is to expand the range of reference materials by producing and cataloging high-quality diffraction patterns in our internationally renowned database, the Powder Diffraction File.

[www.icdd.com/grant-in-aid/](http://www.icdd.com/grant-in-aid/)

# ORDERING & SHIPPING

## Contact Information

### ICDD Pennsylvania Office

<b>phone</b>	1.610.325.9814
<b>toll free</b> (USA & Canada)	1.866.378.9331
<b>fax</b>	1.610.325.9823
<b>email</b>	<a href="mailto:info@icdd.com">info@icdd.com</a>
<b>registration</b>	<a href="mailto:registration@icdd.com">registration@icdd.com</a>
<b>sales</b>	<a href="mailto:sales@icdd.com">sales@icdd.com</a>
<b>technical support</b>	<a href="mailto:support@icdd.com">support@icdd.com</a>
<b>web</b>	<a href="http://www.icdd.com">www.icdd.com</a>
<b>mail</b>	International Centre for Diffraction Data 12 Campus Boulevard Newtown Square, PA 19073-3273 USA

### ICDD California Office

<b>phone</b>	1.925.449.1084
<b>fax</b>	1.925.373.1659
<b>email</b>	<a href="mailto:mdi@materialsdata.com">mdi@materialsdata.com</a>
<b>technical support</b>	<a href="mailto:support@materialsdata.com">support@materialsdata.com</a>
<b>web</b>	<a href="http://www.materialsdata.com">www.materialsdata.com</a>
<b>mail</b>	International Centre for Diffraction Data DBA Materials Data 2551 Second Street Livermore, CA 94550 USA

## Easy Ways to Order

<b>online</b>	<a href="http://icdd.mybigcommerce.com">icdd.mybigcommerce.com</a>
<b>email</b>	<a href="mailto:sales@icdd.com">sales@icdd.com</a>
<b>fax</b>	1.610.325.9823

Please send us a sales order via fax, email, or mail. ICDD requires the name of the end user on all orders. Use product codes in your order, if possible. A convenient order/quote can be found on our website at

**[www.icdd.com](http://www.icdd.com) → Products → Purchase Products → Order/Quote Form.**

The Powder Diffraction File databases are licensed, copyrighted databases. In order to purchase an ICDD database license, an end-user must purchase the license directly through the ICDD or place an order directly through one of our licensed distributors ([www.icdd.com/distributors](http://www.icdd.com/distributors)).

## E-commerce

- Secure transmission using SSL encryption
- Customer online order history
- Online order tracking
- Email order confirmation
- Email shipping notification
- Customer satisfaction

## Pricing

The prices listed herein supersede all others previously published and are subject to change without notice. ICDD reserves the right to discontinue any product at its discretion. Visit our website at [www.icdd.com](http://www.icdd.com) or contact our Customer Service Department for the most recent product information and pricing.

## Return Policy

Products may be returned within 30 days from the invoice date for a full refund or credit (excluding shipping/handling). Products must be returned in original condition to qualify for a refund or credit. Registered products cannot be returned. Please complete a Return Merchandise Authorization (RMA) form to receive approval prior to returning product. Defective products will be replaced promptly but must be returned for testing.

## Warranty Policy

Customers' sole remedy for any defective Licensed Product shall be replacement of the Licensed Product, which right must be exercised by written notice given within 30 days of purchase. Defective products will be replaced promptly but must be returned for testing.

Product warranty is on the system requirements associated with the product release. If you need to change your computer specifications, ICDD recommends that you reference the ReadMe.txt or product insert for your product release to check for compatibility.

## Payment Terms

Wire transfers, credit cards (MasterCard, Visa, American Express), and checks in USD and drawn on USA banks are acceptable forms of payment. Letters of credit will not be accepted. Payment is due within 30 days from invoice date. Finance charges of 1.5% per month (annual percentage rate of 18%) may be applied to overdue balances.

## Licensing

ICDD licenses the use of the Powder Diffraction File, associated software, and JADE software packages. Licensing for the Powder Diffraction File, associated software, and JADE software packages are provided via DVD, USB, USB dongle, or Download. ICDD's product licenses are nontransferable and intended for use on a single computer. Server licenses are available for use on multiple PCs. Please refer to the sales descriptions and product policies for further information on licensing.

\*Contact ICDD for PDF-4+/Web licensing at [info@icdd.com](mailto:info@icdd.com)

## Orders

Orders which include terms and conditions are reviewed prior to order acceptance. Once orders are accepted, they are processed on a first-in/first-out basis.

**NOTE:** Customers in Japan and South Korea, must order through an ICDD licensed vendor.

## Shipment

The ICDD ships via INCOTERM: EXW / EXWORKS

Import duties and all taxes are not included in pricing and are the sole responsibility of the customer. Shipment will be made by a commercial carrier chosen by ICDD. For your convenience, shipping charges will be added to all invoices. Shipments can be insured upon request; additional charges will apply.

## ICDD Licensed Distributors

**[www.icdd.com](http://www.icdd.com) → Products → Purchase Products → Distributors or [www.icdd.com/distributors](http://www.icdd.com/distributors)**

## Return Merchandise Authorization (RMA)

**[www.icdd.com](http://www.icdd.com) → Products → Purchase Products → Ordering Information → Return Policy → ICDD\_RMA\_form.pdf or [www.icdd.com/assets/files/ICDD\\_RMA\\_form.pdf](http://www.icdd.com/assets/files/ICDD_RMA_form.pdf)**





**ICDD Pennsylvania:**

12 Campus Boulevard  
Newtown Square, PA 19073-3273, USA  
Tel: 610.325.9814 • Fax: 610.325.9823  
Toll Free: 866.378.9331 (US & Canada only)  
[www.icdd.com](http://www.icdd.com)



**ICDD California:**

DBA Materials Data  
2551 Second Street  
Livermore, CA 94550, USA  
Tel: 925.449.1084 • Fax: 925.373.1659  
[www.materialsdata.com](http://www.materialsdata.com)