



# Statement of Ownership, Management, and Circulation (All Periodicals Publications Except Requester Publications)

1. Publication Title  Powder Diffraction	2. Publication Number  010 – 071	3. Filing Date  10/1/2021
4. Issue Frequency  Quarterly March, June, Sept, December	5. Number of Issues Published Annually  4	6. Annual Subscription Price  \$472.00
7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4®) Cambridge University Press 1 Liberty Plaza New York, NY 10006		Contact Person Nina Iammatteo  Telephone (Include area code) 212-337-5004

8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer)

Cambridge University Press  
Edinburgh Building, Cambridge CB2 2RU, England

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank)

*Publisher (Name and complete mailing address)*

Cambridge University Press  
1 Liberty Plaza  
New York, NY 10006

*Editor (Name and complete mailing address)*

Camden Hubbard, International Centre for Diffraction Data, 12 Campus Blvd, Newtown Square, PA 19073-3273 USA

*Managing Editor (Name and complete mailing address)*

10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)

Full Name	Complete Mailing Address
The International Centre for Diffraction Data	12 Campus Blvd.
	Newtown Square, PA 19073-3273
	USA

11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box  None

Full Name	Complete Mailing Address

12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one)

The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:

Has Not Changed During Preceding 12 Months

Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)

13. Publication Title		14. Issue Date for Circulation Data Below		
Powder Diffraction		JUNE 2021		
15. Extent and Nature of Circulation		Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date	
a. Total Number of Copies ( <i>Net press run</i> )		171	163	
b. Paid Circulation ( <i>By Mail and Outside the Mail</i> )	(1)	Mailed Outside-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies)	28	26
	(2)	Mailed In-County Paid Subscriptions Stated on PS Form 3541 ( <i>Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies</i> )	0	0
	(3)	Paid Distribution Outside the Mails Including Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid Distribution Outside USPS®	114	112
	(4)	Paid Distribution by Other Classes of Mail Through the USPS (e.g., First-Class Mail®)	0	0
c. Total Paid Distribution [ <i>Sum of 15b (1), (2), (3), and (4)</i> ] ▶		142	138	
d. Free or Nominal Rate Distribution ( <i>By Mail and Outside the Mail</i> )	(1)	Free or Nominal Rate Outside-County Copies included on PS Form 3541	0	0
	(2)	Free or Nominal Rate In-County Copies Included on PS Form 3541	0	0
	(3)	Free or Nominal Rate Copies Mailed at Other Classes Through the USPS (e.g., First-Class Mail)	0	0
	(4)	Free or Nominal Rate Distribution Outside the Mail ( <i>Carriers or other means</i> )	0	0
e. Total Free or Nominal Rate Distribution ( <i>Sum of 15d (1), (2), (3) and (4)</i> )		0	0	
f. Total Distribution ( <i>Sum of 15c and 15e</i> ) ▶		142	138	
g. Copies not Distributed ( <i>See Instructions to Publishers #4 (page #3)</i> ) ▶		29	25	
h. Total ( <i>Sum of 15f and g</i> )		171	163	
i. Percent Paid ( <i>15c divided by 15f times 100</i> ) ▶		100%	100%	

\* If you are claiming electronic copies, go to line 16 on page 3. If you are not claiming electronic copies, skip to line 17 on page 3.



# Statement of Ownership, Management, and Circulation (All Periodicals Publications Except Requester Publications)

16. Electronic Copy Circulation	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Paid Electronic Copies <span style="float: right;">▶</span>		
b. Total Paid Print Copies (Line 15c) + Paid Electronic Copies (Line 16a) <span style="float: right;">▶</span>		
c. Total Print Distribution (Line 15f) + Paid Electronic Copies (Line 16a) <span style="float: right;">▶</span>		
d. Percent Paid (Both Print & Electronic Copies) (16b divided by 16c × 100) <span style="float: right;">▶</span>		

I certify that 50% of all my distributed copies (electronic and print) are paid above a nominal price.

17. Publication of Statement of Ownership

If the publication is a general publication, publication of this statement is required. Will be printed in the December issue of this publication.  Publication not required.

18. Signature and Title of Editor, Publisher, Business Manager, or Owner	Date
Nina Iammatteo	10/1/2021

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).



12 Campus Boulevard • Newtown Square, PA 19073

(610) 325-9814

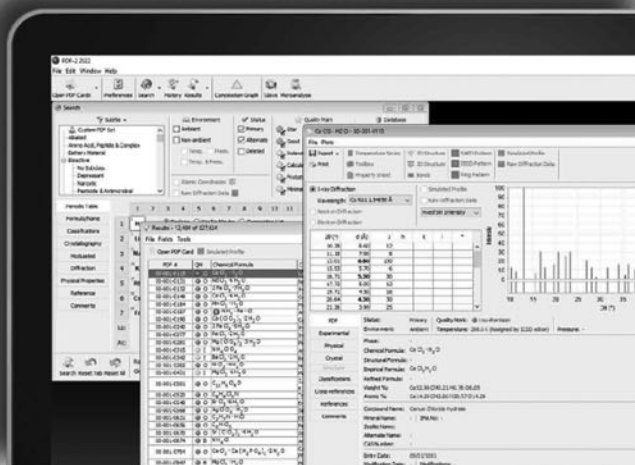
sales@icdd.com

www.icdd.com



## PDF-2 2022 Phase Identification + Value

Quality and subfile filters combined with 71 different searches and 57 display fields enable you to target your results for more accurate identification.



- NEW -

Download PDF-2 2022  
from the cloud!

Also available on USB & DVD

## ABOUT US

**DIFFRACTION DATABASES YOU CAN TRUST**  
The Powder Diffraction File™ (PDF®) is the only crystallographic database that is specifically designed for material identification and characterization. It is an analysis system that is comprised of crystallographic and diffraction data. These data with embedded data mining and analysis software have been through a quality and classification editorial review system.

### ISO CERTIFIED

The only crystallographic database organization in the world with its Quality Management System ISO 9001:2015 certified by DEKRA.



## KEY POINTS

- ✓ Featuring 327,600+ Entries
- ✓ Rapid, Accurate Phase Identification
- ✓ Stand Alone Database - includes added value software: data mining plus Sleve, search indexing software
- ✓ Cost-effective License (5-year)
- ✓ Quantify with Reference Intensity Ratio (I/Ic) \*  
\*3rd party software only

## ABOUT PDF-2

PDF-2 2022 is the most cost effective license! PDF-2 features a FREE stand-alone option using ICDD's integrated data-mining software, along with ICDD's search-indexing software, Sleve. Designed for inorganic materials analyses, PDF-2 also includes common organic materials from ICDD to facilitate rapid materials identification.

You can trust your diffraction data to ICDD. All ICDD databases are reviewed, edited, and standardized prior to publication. You can be confident with PDF-2 to get you the right answer.

The PDF-2 database is licensed for five (5) years and offers the highest value in the global marketplace. This value is due to its low annual cost amortized over the lifetime of the license, combined with its large content of powder and single crystal powder data, and its high level of quality with embedded software for data mining and search-indexing.

For more information, go to [www.icdd.com/pdf-2](http://www.icdd.com/pdf-2), or contact ICDD at [marketing@icdd.com](mailto:marketing@icdd.com).



@TheICDD



@TheICDD



@ICDDICDD



@TheICDD

ICDD, the ICDD logo, PDF, and JADE are registered in the U.S. Patent and Trademark Office. Powder Diffraction File, Materials Data, Materials Data-JADE logo, and Denver X-ray Conference logo are trademarks of the JCPDS-International Centre for Diffraction Data. ©2021 JCPDS-International Centre for Diffraction Data.

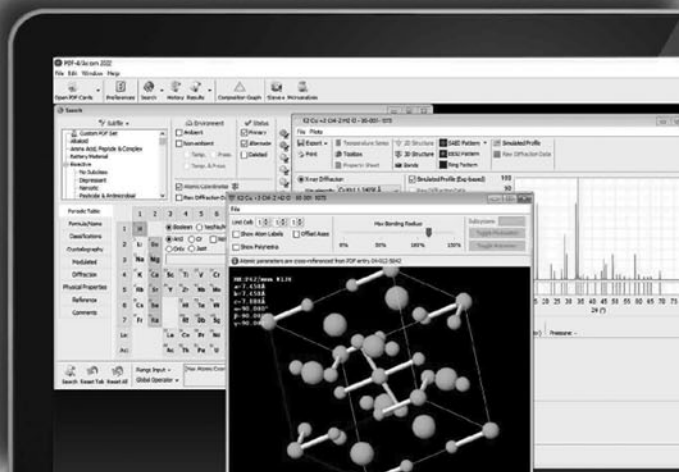


12 Campus Boulevard • Newtown Square, PA 19073 ☉  
 (610) 325-9814 ☎  
 sales@icdd.com ✉  
 www.icdd.com 🌐



## PDF-4/Axiom 2022 Quality + Value

Cost effective database designed for  
phase identification and quantitation.



- NEW -

Download PDF-4/Axiom  
2022 from the cloud!

Also available on USB & DVD

### ABOUT US

DIFFRACTION DATABASES YOU CAN TRUST  
 The Powder Diffraction File™ (PDF®) is the only crystallographic database that is specifically designed for material identification and characterization. It is an analysis system that is comprised of crystallographic and diffraction data. These data with embedded data mining and analysis software have been through a quality and classification editorial review system.

#### ISO CERTIFIED

The only crystallographic database organization in the world with its Quality Management System ISO 9001:2015 certified by DEKRA.



### KEY POINTS

- ✓ Featuring 101,900+ Entries, including 71,560+ Entries with Atomic Coordinates
- ✓ Combines Powder & Single Crystal Data
- ✓ Cost-Effective 3-Year License\*  
\*Contact us for our 6-year and 9-year license packages
- ✓ Two Additional Seats - Low Cost
- ✓ ICDD's data mining software is included!\*  
\*Requires Vendor Software for phase identification and quantitation

### ABOUT PDF-4/Axiom

PDF-4/Axiom 2022 is designed for phase identification and quantitation. This cost effective database includes 101,900+ selected data entries and 71,560+ entries with atomic coordinates selected for benchtop users. PDF-4/Axiom features 73,140+ entries with I/lc values for quantitative phase analysis by Reference Intensity Ratio. PDF-4/Axiom is useful for routine phase identification and quantitation (both by Rietveld and RIR method). PDF-4/Axiom data is focused on ambient entries.

ICDD's search-identification software, Sleve+, is not included (available with PDF-4+). PDF-4/Axiom requires diffraction equipment manufacturer or vendor software for phase identification and quantitation. If you are using OEM/developer software that depends on PDF-4/Axiom, check that the OEM/developer applications function properly with the new database, and then uninstall the previous version of the PDF-4/Axiom. PDF-4/Axiom offers an option to purchase two additional seats licensed for three years.

For more information, go to [www.icdd.com/pdf-4-axiom](http://www.icdd.com/pdf-4-axiom), or contact ICDD at [marketing@icdd.com](mailto:marketing@icdd.com).



ICDD, the ICDD logo, PDF, and JADE are registered in the U.S. Patent and Trademark Office. Powder Diffraction File, Materials Data, Materials Data-JADE logo, and Denver X-ray Conference logo are trademarks of the JCPDS-International Centre for Diffraction Data. ©2021 JCPDS-International Centre for Diffraction Data.

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



## Fundamentals of X-ray Powder Diffraction Clinic:

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.

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



## Advanced Methods in X-ray Powder Diffraction Clinic:

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



## Rietveld Refinement & Indexing Clinic:

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 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.

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



## Practical X-ray Fluorescence Clinic:

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.

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

More information at [www.icdd.com/icdd-education](http://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:

Eileen Jennings, Education Coordinator  
Tel: 610.325.9814 Fax: 610.325.9823  
Email: [clinics@icdd.com](mailto:clinics@icdd.com)

## Location

ICDD Headquarters  
12 Campus Boulevard  
Newtown Square, Pennsylvania 19073-3273 USA





A Proven Pattern  
of Success.

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

**PROTO**  
X-RAY DIFFRACTION