

## International Centre for Diffraction Data

The International Centre for Diffraction Data is a non-profit scientific organization dedicated to collecting, editing, publishing, and distributing powder diffraction data for the identification of crystalline materials. Our mission is to continue to be the world center for quality diffraction and related data to meet the needs of the technical community. We promote the application of materials characterization methods in science and technology by providing forums for the exchange of ideas and information. We sponsor the Pharmaceutical Powder X-ray Diffraction Symposium (PPXRD), Denver X-ray Conference; its proceedings, *Advances in X-ray Analysis*; and the journal, *Powder Diffraction*. ICDD and its members conduct workshops and clinics on materials characterization at our headquarters in Newtown Square, Pennsylvania and at X-ray analysis conferences around the world.

- Release 2012 of the Powder Diffraction File (PDF) contains 760,019 unique material data sets. Each data set contains diffraction, crystallographic and bibliographic data, as well as experimental, instrument and sampling conditions, and select physical properties in a common standardized format. All ICDD databases use an integrated editorial quality review for all data sets. This is the only crystallographic database that evaluates the quality and provides the results of the assessment to the user in the comment section of each reference. The database is designed and produced in several different formats in order to serve different groups of users.
- PDF-2 is designed for inorganic materials analyses. Many common organic materials from ICDD are added to this database to facilitate rapid material identification. Our data mining software is now integrated into PDF-2, free of charge, as an added value to our customers.
- PDF-4+ is our most advanced database, designed for both phase identification and quantitative analysis. This database has comprehensive material coverage for inorganic materials and it contains numerous additional features such as digitized patterns, molecular graphics, and atomic parameters. Features to enhance the ability to do quantitative analysis have been incorporated into PDF-4+.
- WebPDF-4+ provides the needed portability to the PDF-4+ database via the internet. It enables full functionality of the PDF-4+ database using a high-speed internet connection. WebPDF-4+ is delivered as a USB compatible dongle.
- 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, as well as many unclassified minerals. PDF-4/Minerals is a subset of the PDF-4+ database, which includes all of the software features incorporated into PDF-4+.
- PDF-4/Organics is the world's largest X-ray powder diffraction database for organics. It is designed for a multitude of applications in pharmaceutical, regulatory, specialty chemical, biomaterials, and forensic fields. The product has all of the display software and data mining capabilities contained in the PDF-4 family of products.

Printed Books and Indexes include ICDD's experimentally collected diffraction patterns and search manuals. These materials have been produced annually for 62 years and are commonly used as reference books.

The Powder Diffraction File (PDF) can be found worldwide in academic, government and industrial markets. From a general testing lab to semiconductors, the PDF has been the primary reference for powder diffraction data since 1941. The PDF is interfaced with leading manufacturers of X-ray equipment. To meet the needs of diffractionists worldwide, the PDF is continually revised and updated with new and improved information.



### How to find us

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