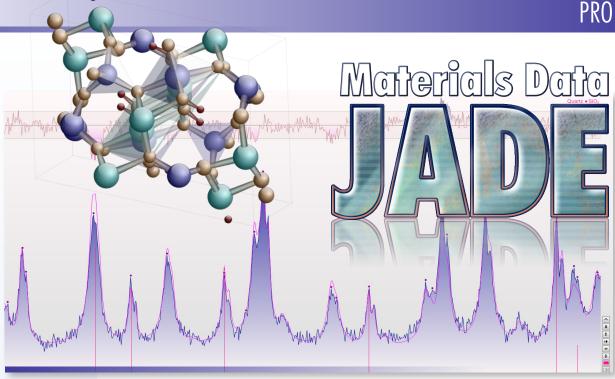
### **JADE**



#### RECOMMENDED CONFIGURATION

Intel® Core™ i7. i5 or i3. 8GB RAM, 24" or larger monitor, Windows 10 (or Windows 8 or 7)

JADE has been written to take full advantage of the Windows environment and ever more powerful hardware available today.

JADE makes many calculations and provides a tremendous amount of information back to the user. Your JADE experience will be richer on a larger screen.

JADE can read all current data formats from Synchrotron Beamlines, Rigaku, Bruker (Siemens), Malvern Panalytical (Philips) ARL Thermo Fisher Scientific (Scintag), Shimadzu, Proto, XOS, X-Y data and other formats.

JADE also understands the many reference patterns and structure databases and their formats including ICDD® PDF™ PDF-4+ PDF-4/Axiom PDF-4/Minerals PDF-4/Organics PDF-2 NIST Crystal Data, AMCSD \*.amc CIF, MOL, PDB, and others, including custom databases.

#### **Scientists Trust Materials Data**

California-based Materials Data has created XRD applications for over 30 years, enjoying a well-earned reputation fraction labs who are interested in the for being pioneers of implementing new most careful and thorough analysis of scientific ideas and novel approaches into our XRD Applications. We were the first to include Whole Pattern Fitting and Rietveld methods, long before others realized the impact. We were the earliest to create patterns from structures which showcased the importance of pattern simulation. We can claim the k-alpha cursor's many uses as part of our contribution to the XRD community.

We built tools for the XRD community that we wished existed for ourselves. Our products are used on every continent in the world across a broad spectrum of fields of research, education and exploration.

#### **The XRD World Knows JADE**

JADE has been sold extensively all around the world to X-ray powder diftheir XRD material samples.

JADE is a powerful, all-purpose powder XRD pattern viewer, processing and analysis program with great emphasis on quantification and phase ID. JADE has been developed over many years and generations. JADE makes the task of processing and understanding your collected data simple and your results concise and easy to understand. Those who have used JADE are especially pleased with our advanced methods for smoothing, profile fitting and background processing. We are committed to advancing XRD methods and continue to invest our time and attention into building ever more powerful products for XRD.

# Materials Da

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### **JADE**

# It's All-Inclusive So There's A LOT to Explore

The Professional version of JADE is All-Inclusive. Phase ID, Whole Pattern Fitting (WPF) and Rietveld refinement tools make quantifying weight percents and identification of even minor phases routine.

Interested in what happens when you simulate your own patterns? Do you need to run Rietveld in a batch processing mode? Want to explore ab-initio/charge flipping? Like to visualize a structure in 3D with animation? Want to see how Cluster Analysis arranges your data sets? It's all included, and new features continue to pour in as we push our development to include meaningful additions to our flagship product.

A whole new realm of possibilities is at your command, and we're anxious to put all this power in your hands to see what you can do with all the powerful XRD tools at your disposal.



JADE	PRO
Floating (Shareable) Network License	ICDD PDF Database Access and Others
Cluster Analysis of Powder Patterns	Whole Pattern Based Search/Match
Ab Initio Tools (Charge Flipping+)	Use Chemistry and Unit Cell Data in S/M
Fourier Map Tools	Solid-Solution and Isotypical Phase ID
Rietveld Structure Refinement (Atomic Parameters)	Preferred-Orientation Data and Single Peak S/M
WPF and Rietveld Refinement Batch Processing	Fast and Effective Minor and Trace Phase ID
Simulate Series of Powder Patterns from Structures	Automated Background Fitting/Peak Search S/M
Line-Based or Series of Cell Refinement	Intuitive Visualization of S/M Results
Pattern Indexing (All Crystal Systems)	Structure Database Manager
Size and Strain Analysis (Warren-Averbach)	Profile Fitting with RIR Quant
One-Click Phase ID or Rietveld Analysis	Supports Custom d-I% list for S/M or WPF
Gold Standard Quantitative Analysis	View Crystal Structures and Reflection Planes
Seamless Integration with Phase ID Results	Multitude of Choices for Data Retrieval
Auto-Loading of Structure Data from Database	Wide Variety of Report and Print Options
Combination of Phases with/out Structure Data	Auto Peak Search and Multi-Filter Search
Linking of Unit Cell, Phase Broadening Parameters	Background Fitting/Batch Fitting/Removal
Custom d-I% (hkl,FWHM, Skew) to fit Clay Phases	Support for Multiple Axes/Wavelengths
March-Dollase & Spherical Harmonics Orientation	Déjà Vu ID Similar Pattern Files
Amorphous Content w/wo Internal wt% Standards	1, 2 and 3D Pattern Overlay
Atomic Occupancy and Bond Distance Constraints	Merge Multi-Scans/Segments
Polynomial and Spline Curve Background Fitting	Smart Column Data Importer
Unlimited Number of Phases to be Refined	Reads All Vendor Pattern Files

# Keep Up with Us! This JADE is Always up to Date

Since licenses for this version are serviced by subscription with scheduled renewals, you will always benefit from the latest ideas in XRD, as well as current operating systems and database compatibility. You won't have to wait to take advantage of the latest software offering. With each renewal you'll be up to date.

Every day we're hard at work improving and expanding our applications so that people like you can have the best possible set of tools designed for XRD, independent of hardware for truly unbiased results. As we continue to invest in building ever more powerful products for XRD, you will benefit from the constant innovation in JADE with regular software renewals.

### Flexible Network License Easy to Share and the Most Affordable Option

We recognize that most Scientists don't work alone. With this version of JADE and our floating license, it's now simple to let others in your organization have easy access to the tools they need. The Professional version of JADE was built with the collaborative nature of a Scientist in mind. Purchase a single copy and install it on as many systems as you need. JADE Professional will allow access on one concurrent system at a time, so when you aren't using it, someone else in your organization can. The purchase of additional seats is deeply discounted and creates access to more concurrent - and thus shareable licenses.

Floating seat licenses help save you money. For example, if there are five or six members of your team who all want to use JADE, we might suggest a more affordable 3-seat license which would provide access to JADE Pro on three systems at any given time. We offer significant discounts for each additional floating seat. Additional savings are possible through discounted multi-year licensing plans.



## Inspirational Intelligence Ideas Like One Click Analysis™ Mean Fast Answers

JADE automates your analysis, with our heuristic approach. We auto-sense file formats even if it's column separated values that are absolutely unique to your field and have never been seen before. When loading a pattern with the phase tab open, JADE Pro auto-fits background, finds peaks, and identifies phases and assigns figure of merit or FOM.

You'll be amazed at the speed and power of our
One-Click-Analysis™ for whole pattern fitting. In
many cases, it's just one click and you're done. Often
these results are better than those an experienced
analyst could report and are completed in a more timely
manner. At the very least, One Click Analysis serves
as an excellent starting point for further in-depth
analysis and enables you to efficiently move
through stacks of samples in a streamlined
manner with JADE's batch processing
tool. Use the time saved to document
your results for publication or presentation using the feature-rich set
of graphic tools designed to make
you and your results stand out.



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"We long ago gave up the idea that our XRD manufacturer could keep us on the cutting edge of what we wanted from our XRD software."

X-Y, Data Formats

#### **Hardware Independent**

**Unbiased Results** 

As XRD application software developers independent of any hardware manufacturer, we have the luxury of focusing solely on the data. Since we don't sell diffractometers, we do not need to make any particular piece of hardware look good. Because we build our applications independent of any hardware manufacturer, our tools must work across a very wide range of diffractometers so our results must be unbiased towards any brand of diffractometer. Our pursuit is the most accurate XRD analysis and results, independent of any equipment manufacturer.



"Finally switched from Classic JADE to JADE Pro. I can see how much more productive we will be, we should have done it sooner!

One Interface
Unified Results

If you're in a lab with multiple pieces of hardware from various manufacturers, an independent software solution can help unify your efforts and minimize time spent switching between a variety of interfaces. If your diffractometer is older, it's likely that it's still a good solid instrument that could (and should) continue to have a very long and productive life. Novel ways of looking at data and new methods of analysis fall to the responsibility of the XRD application software. Even if you've got a new diffractometer, every week, we get requests to replace or supplement the analysis software created by the hardware manufacturer.

"Outstanding Technical Support Thank You!"

Synchrotron Beamlines

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