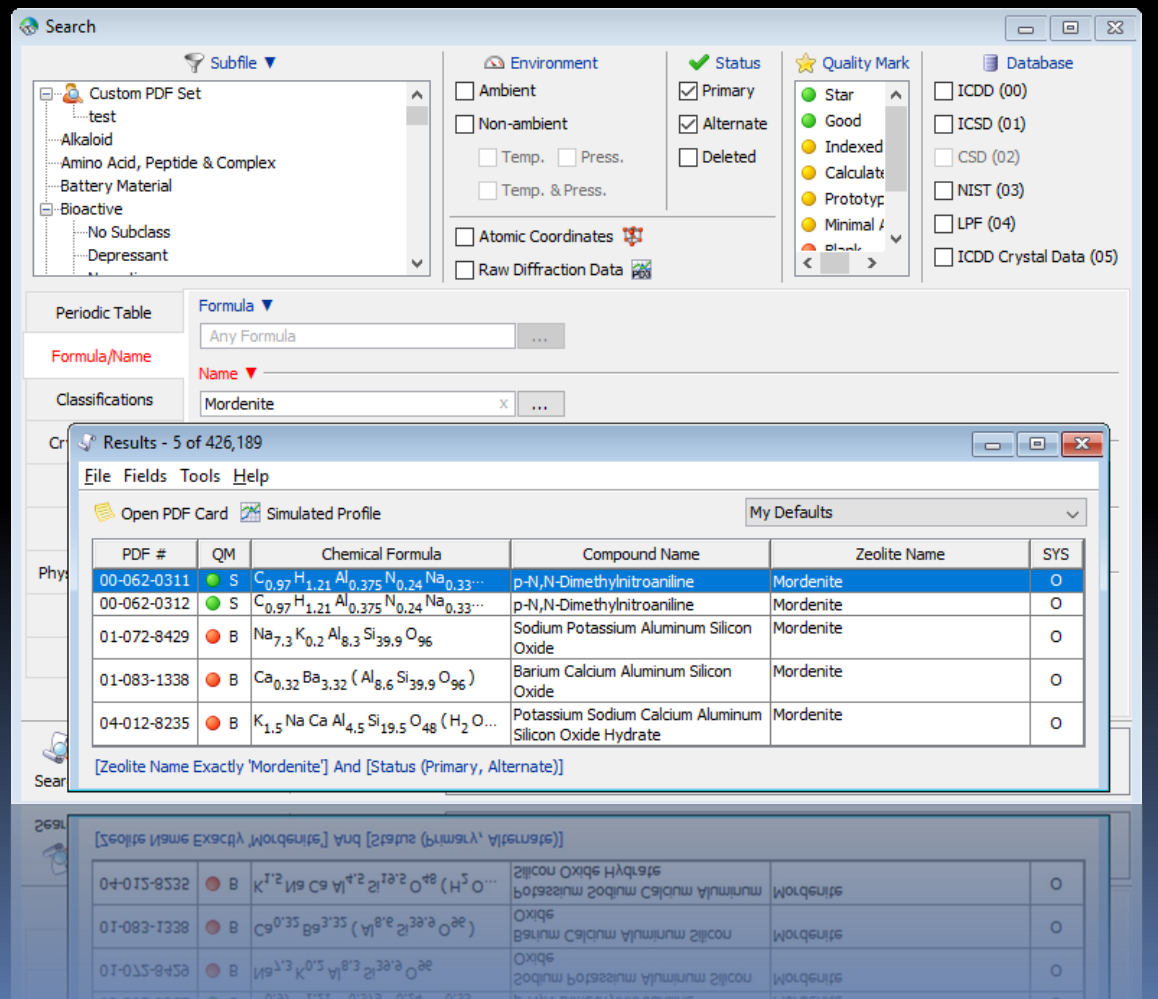
New Features for Release 2020

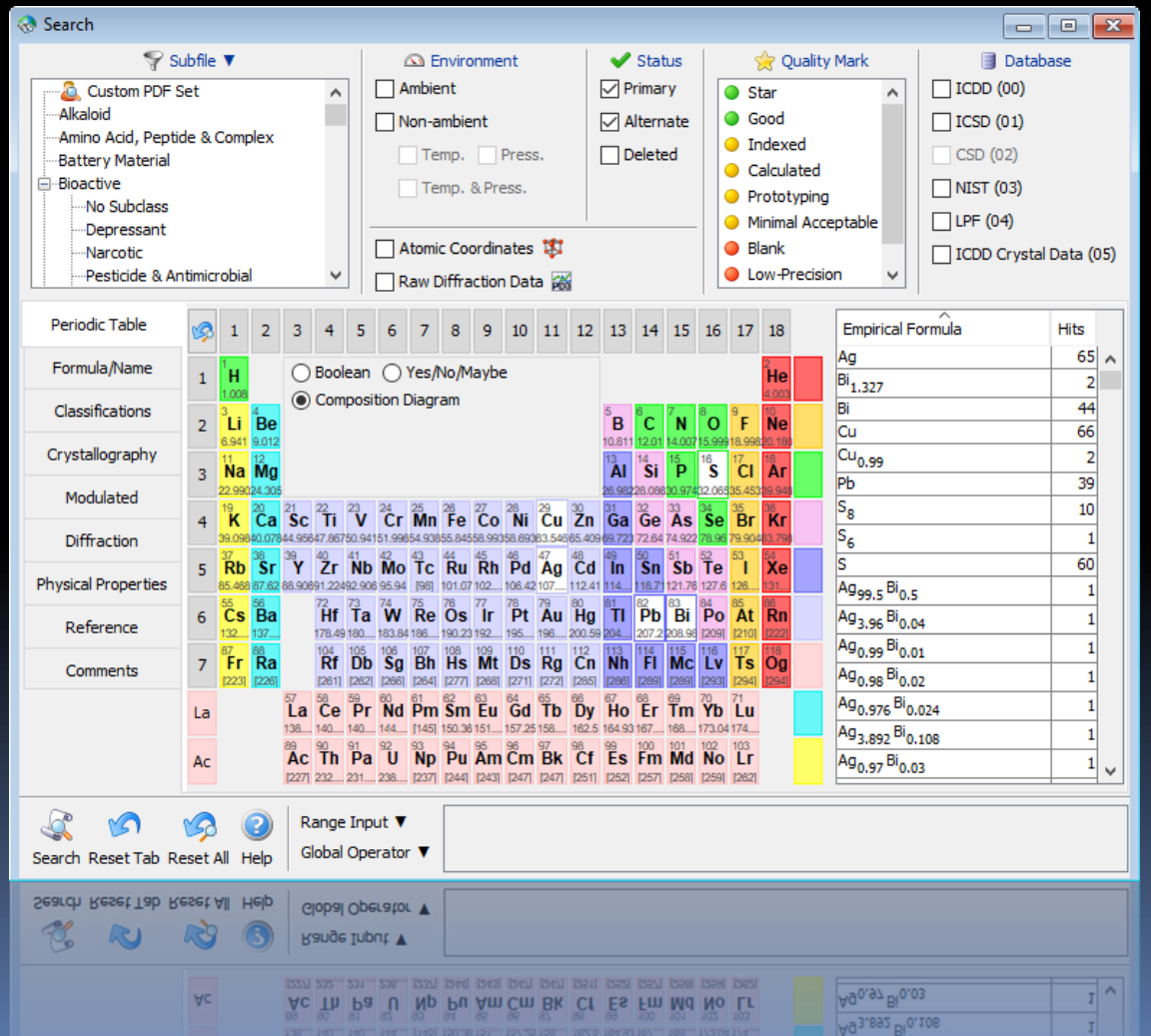
New Features for Data Mining

New Features for Data Mining

- New searches and display fields
  - Zeolite name
  - Molecular weight (g/mol)
  - Can be combined with X-ray/neutron/electron diffraction phase ID (SIeve+) and XRF phase ID (Microanalysis)
- Searches can be cancelled at any time



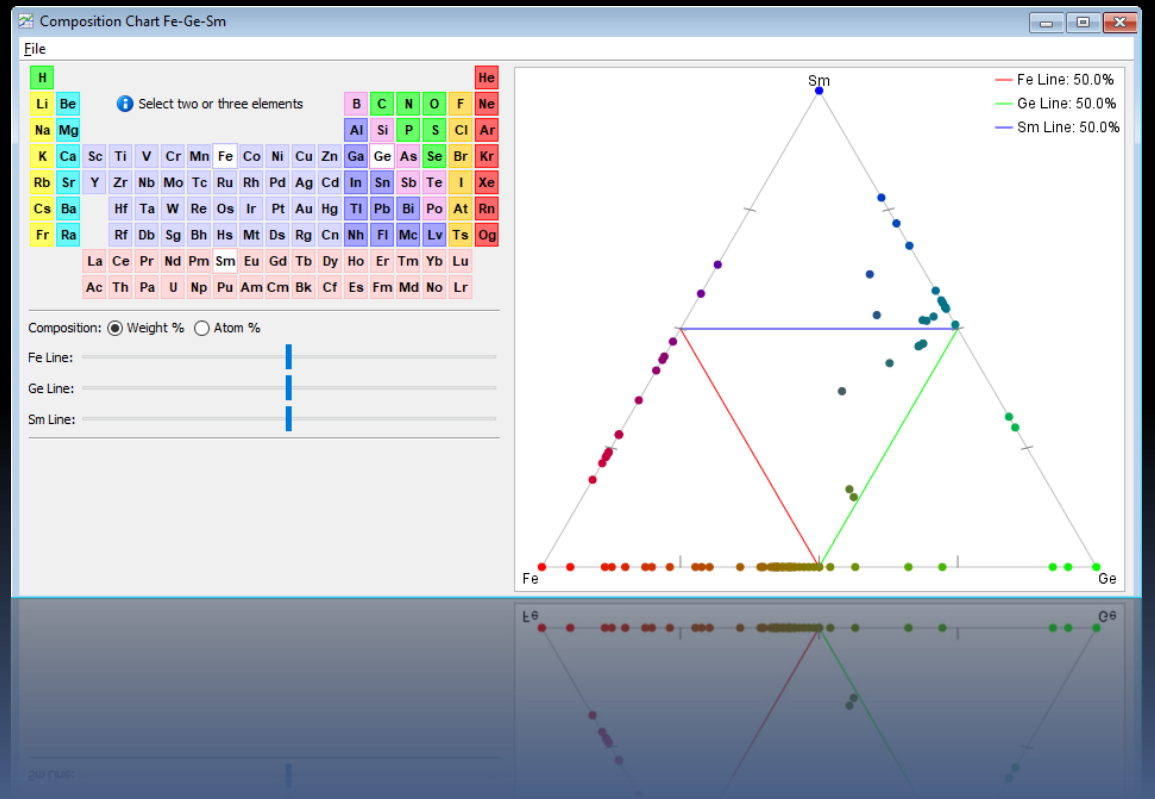
New Features for Data Mining



- Quinary sorting of composition diagram lists
  - A, B, C, D, and E compounds (pure elements)
  - A-B compounds (sorted by A content)
  - A-C compounds (sorted by A content)
  - A-D compounds (sorted by A content)
  - A-E compounds (sorted by A content)
  - B-C compounds (sorted by B content)
  - B-D compounds (sorted by B content)
  - B-E compounds (sorted by B content)
  - C-D compounds (sorted by C content)
  - C-E compounds (sorted by C content)
  - D-E compounds (sorted by D content)
  - A-B-C compounds (sorted by A content)
  - A-B-D compounds (sorted by A content)
  - A-B-E compounds (sorted by A content)
  - A-C-D compounds (sorted by A content)
  - A-C-E compounds (sorted by A content)
  - B-C-D compounds (sorted by B content)
  - B-C-E compounds (sorted by B content)
  - C-D-E compounds (sorted by C content)
  - A-B-C-D compounds (sorted by A content)
  - A-B-C-E compounds (sorted by A content)
  - A-B-D-E compounds (sorted by A content)
  - A-C-D-E compounds (sorted by A content)
  - B-C-D-E compounds (sorted by B content)
  - A-B-C-D-E compounds (sorted by A content)

New Features for Data Mining

- Composition graphs
  - Supports binary and ternary systems
  - Color-coded data points
  - Weight % or atomic %
  - User-defined divider lines
  - Tooltips show composition
  - Click to view PDF entries



New Features for Simulations

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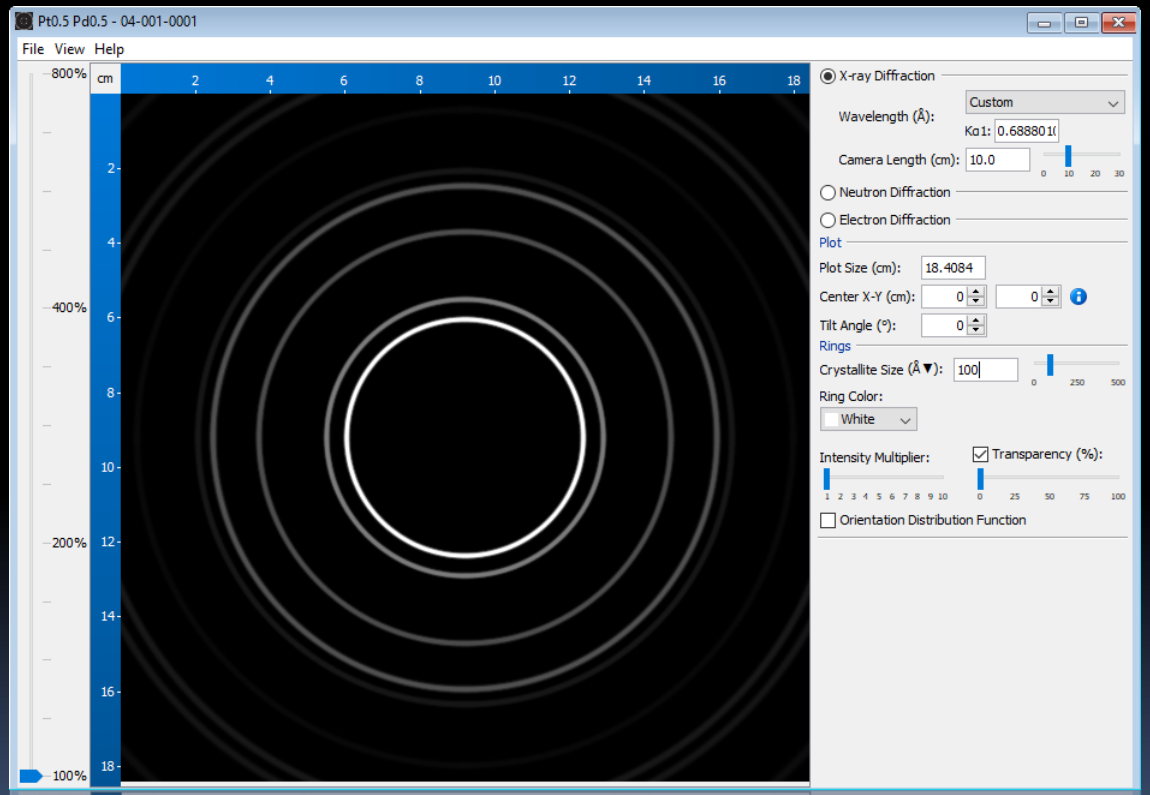
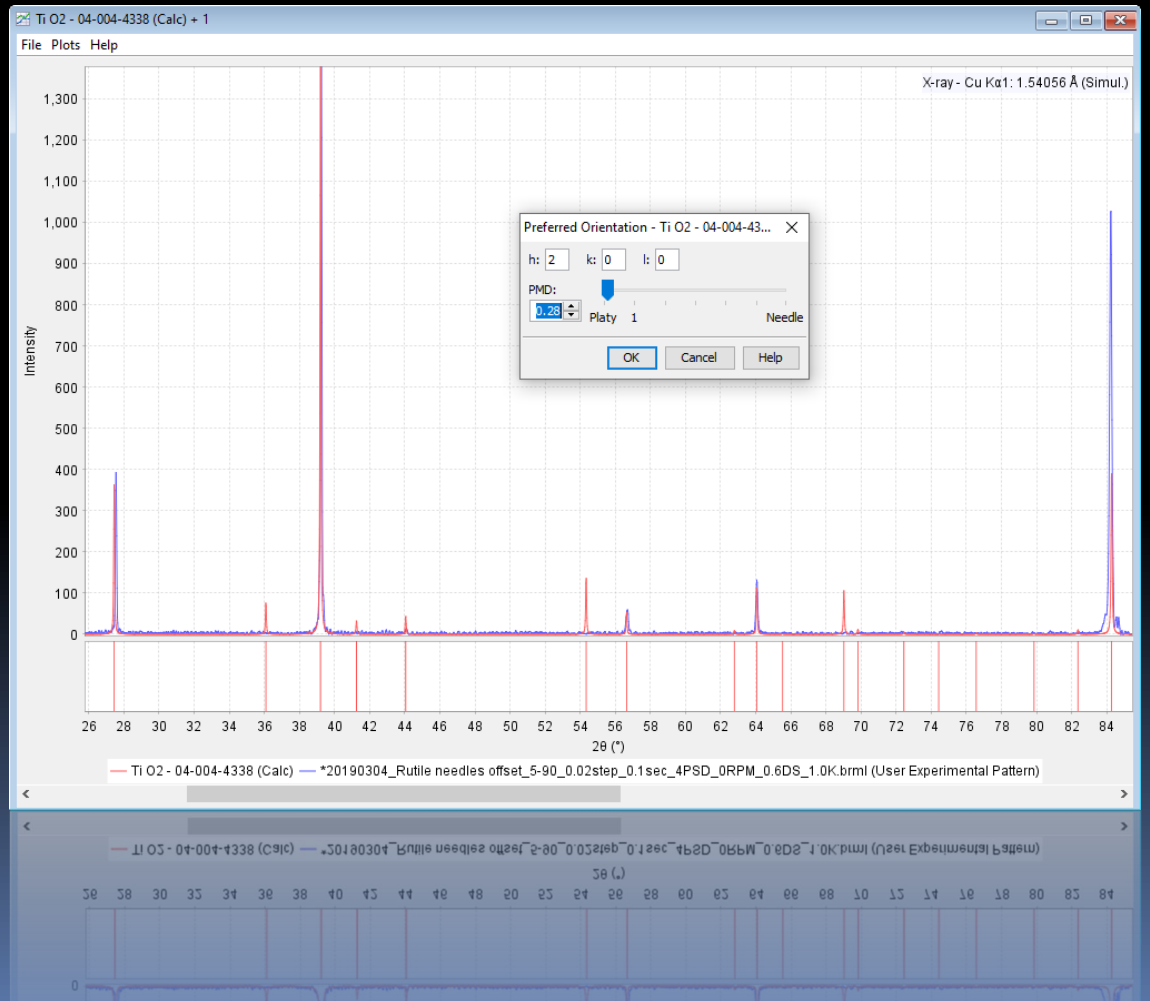


- Export SAED, EBSD, and ring pattern simulations as image files (electron diffraction subcommittee user group suggestion)
  - *.jpg
  - *.gif
  - *.png
  - *.tif

New Features for Simulations



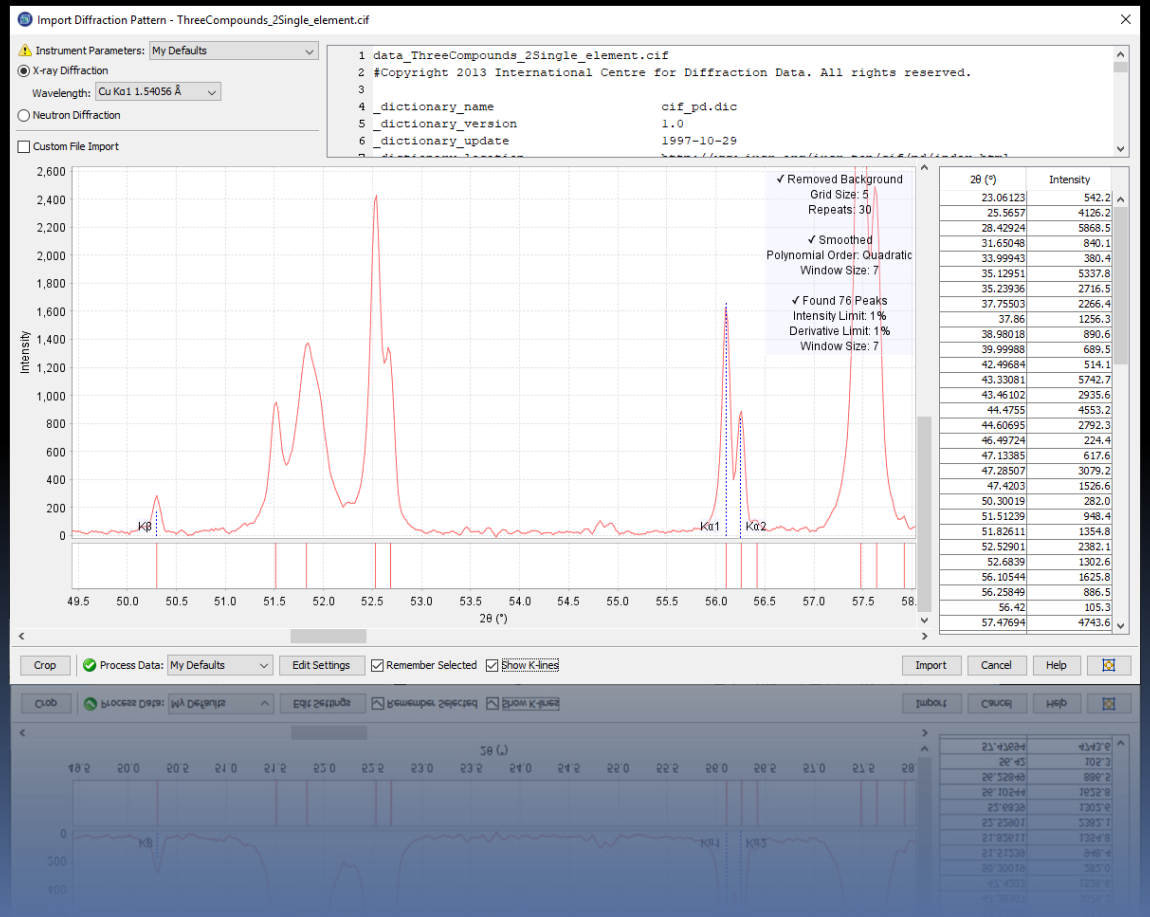
- Dynamic preferred orientation
- Visually compare experimental data with simulated diffraction patterns to determine the amount of preferred orientation.

New Features for Phase ID

New Features for Phase ID

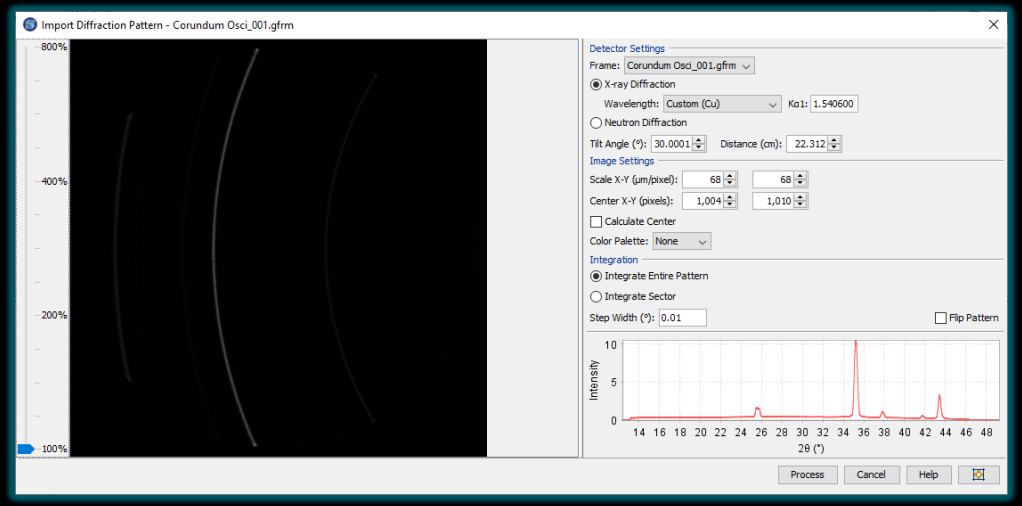
- New supported 1D diffraction pattern file types:
  - Proto *.xml files
  - Shimadzu *.raw files
  - MDI *.dif files (processed *.mdi)

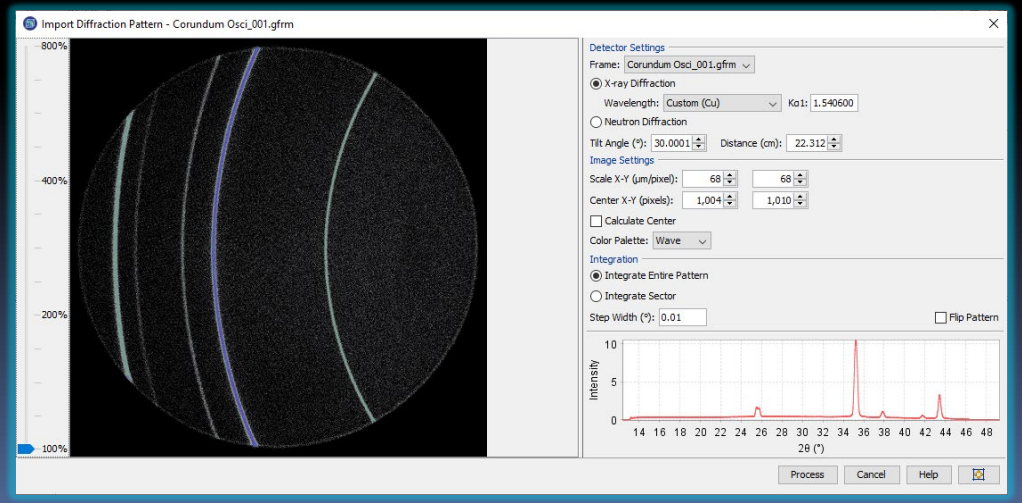
New Features for Phase ID



- K-line cursor when processing experimental data
- Shows where a potential Kα2 line and Kβ line may exist in relation to the user-defined Kα1 line using the mouse cursor position

New Features for Phase ID



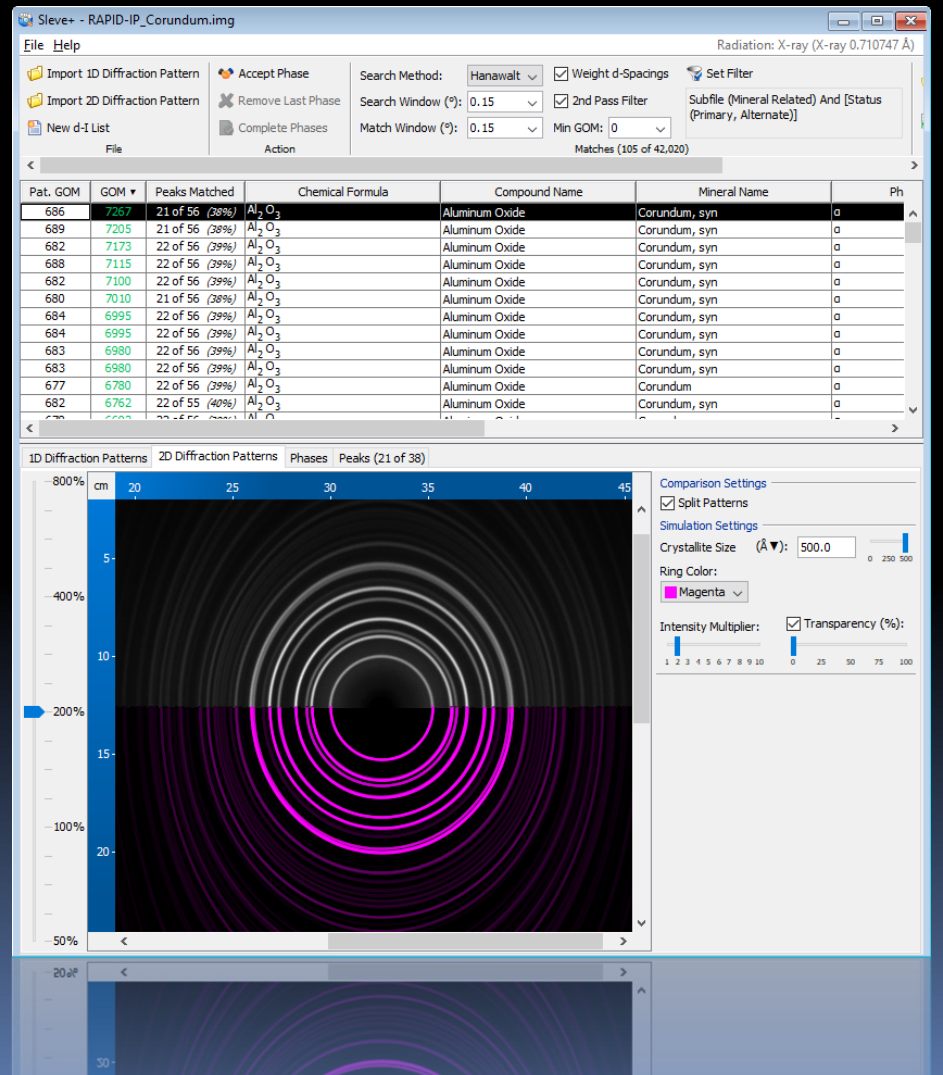


- Importing 2D diffraction patterns
  - User-defined color palette for better contrast
  - 2D-to-1D integration now supports multi-core processors

	Image Size	2019	2020
Bruker	2048 x 2048	10s	4s
DECTRIS Eiger	3110 x 3269	26s	10s
Rigaku	4600 x 2560	24s	12s

New Features for Phase ID

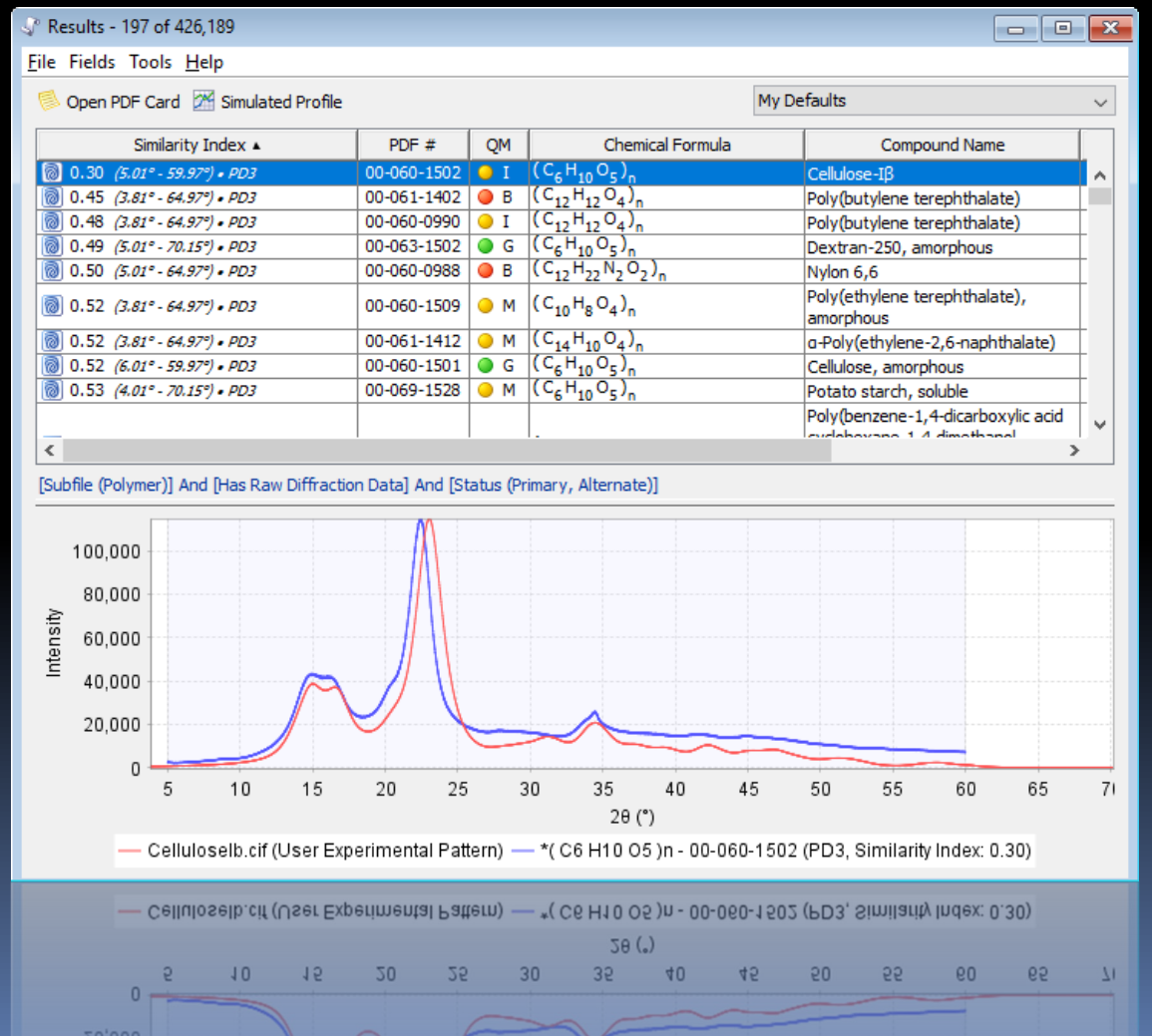
- Compare 2D diffraction pattern images directly in SIeve+
  - Split view for easier comparison
  - Dynamically change crystallite size of 2D simulations
  - Increase intensity brightness for 2D simulations
  - Support comparison of multiple 2D frames



New Features for Phase ID

- Similarity indexes now support multi-core processors

	# Entries	2019	2020
Depressants	213	10s	3s
Clays	335	33s	20s
Polymers	1,336	25s	13s



New System-Wide Features

- More accurate d-spacing precision
- Custom program font size
  - 100%
  - 125%
  - 150%
  - 175%