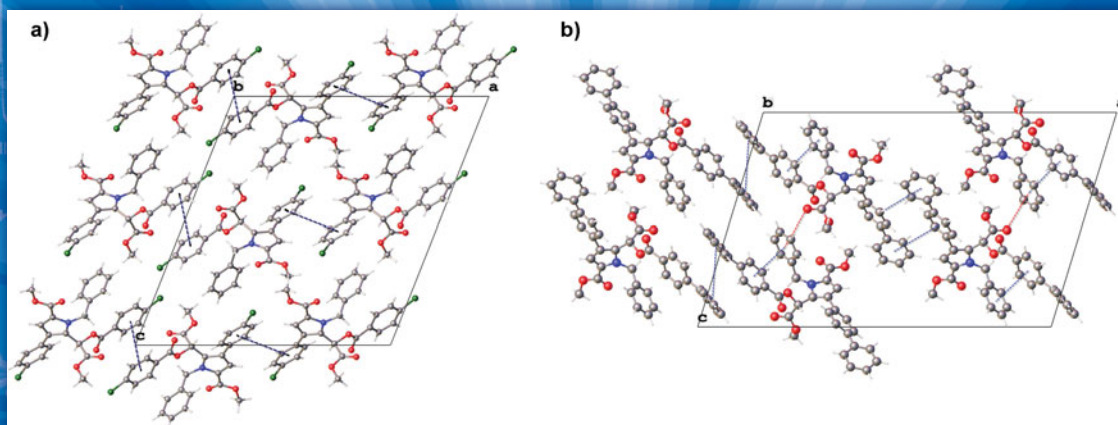


Powder Diffraction

An International Journal of Materials Characterization



Guidance software... makes powder diffraction easy

Automatic alignment, CBO, and SmartLab's Guidance software engine combine to create an extremely flexible, intelligence-based data collection platform. SmartLab gathers information about your sample, suggests measurement configurations, helps you set the diffractometer, and executes measurements, all with the help of user-friendly dialog screens. CBO technology allows simple selection of focusing and parallel beam geometries on demand for the widest possible range of applications.

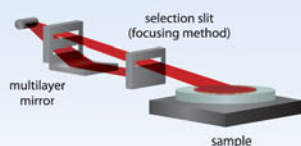
Supported powder diffraction applications include:

- Phase identification
- Quantitative analysis
- Percent crystallinity
- Crystallite size/lattice strain analysis
- Precise lattice parameter determination
- Rietveld refinement

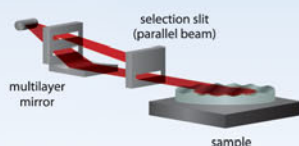
Cross Beam Optical (CBO) technology

Change and adjust optics easily, whether you are using focusing optics in the direct beam path, or a multilayer mirror optic for high-brilliance, monochromated parallel beams.

Bragg-Brentano focusing

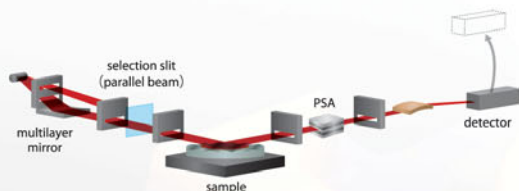


Parallel beam



High resolution parallel beam optics

By combining the parallel beam from a multilayer mirror with a long slit PSA (parallel slit analyzer), you can obtain exceptionally accurate, high-resolution data with high repeatability without the influence of sample shape or measurement environment. The effectiveness of this configuration is particularly notable for in-situ analysis, powder structure determination, and the analysis of clay minerals and organic materials.



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On the cover: Crystal structures of 5EA (a) and 5CA (b) viewed along the b-axis. Intermolecular contacts are shown as dotted lines. (Courtesy Iván da Silva, Sara López-Tosco, David Tejedor, Fernando García-Tellado and Javier González-Platas).

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