The Use of Standard Single Crystal X-Ray Instruments to Investigate Powder Diffraction.

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Traditionally single crystal and powder X-Ray diffraction studies have been separated into two distinct experiments. This involved two sets of instruments, two sets of software and two sets of experts to perform the experiments. Recently, due to advances in X-Ray sources, detectors, and software, this model has changed for some cases. Using microfocus X-Ray sources, large sensitive area detectors with good spatial resolution and integrated software packages routine powder experiments can be done with no modification to the instrument or software. This presentation will focus on the practical application and optimization of data collection as well as illustrating some interesting results using this method with standard Bruker single crystal instruments.