

Microcrystal Electron Diffraction (MicroED) Methods and Applications

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A common barrier to high-resolution structure determination is the growth of large well-ordered crystals. Electron diffraction is capable of producing diffraction data from crystals that are orders of magnitude smaller than those needed for conventional X-ray crystallographic experiments. In this presentation, the technique of microcrystal electron diffraction, or MicroED, will be described, which allows the collection of high-resolution diffraction data from extremely small nano and microcrystals. MicroED methods will be described along with representative applications where MicroED was used for structure determination. Additionally, current work focused on improving MicroED methodology and extending this technique to new samples will be presented.