

Coherent X-ray Diffraction Microscopy Applied to Nanoscience and Biology

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X-ray crystallography has made a tremendous impact in physics, chemistry, materials sciences, biology and medicine. It has now reached a point at which it can determine almost any structure, as long as good-quality crystals are obtained. Many samples, however, cannot be accessed by this approach, such as amorphous and disordered materials, whole cells, organelles, viruses, and many important protein molecules. Overcoming these limitations requires the employment of different methods. One very promising approach currently under rapid development is coherent X-ray diffraction microscopy (or lensless imaging). In this talk, I will present some recent applications of coherent X-ray diffraction microscopy in nanoscience and biology.