

Rigaku Gemini A, Single Crystal Diffractometer Manufactured By: Oxford Diffraction, now a part of Agilent

The Gemini A System

Single crystal diffraction is a powerful X-ray technique for structural solution of crystals typically of 20 - 200 microns in diameter. It provides key information on the symmetry and atom positions in these crystals. Usage spans from routine structural work on organic and metal-organic small molecules to highly detailed investigations of heavy metal oxides that can include twins, modulated structures or diffuse scattering.

The single crystal diffractometer available at the Joint School of Nanoscience and Nanoengineering is a Gemini R from Rigaku Oxford Diffraction. The Gemini A is a Kappa geometry goniometer equipped with dual wavelength (Cu/Mo) fine focus X-ray sources, graphite monochromators and Enhance optics. The detector is a Ruby CCD area detector, which allows for extremely fast data collection of the entire Ewald sphere. Experiments typically take from between an hour to several days. The CrysAlisPro software enables data collection, data integration and absorption corrections to be made.