

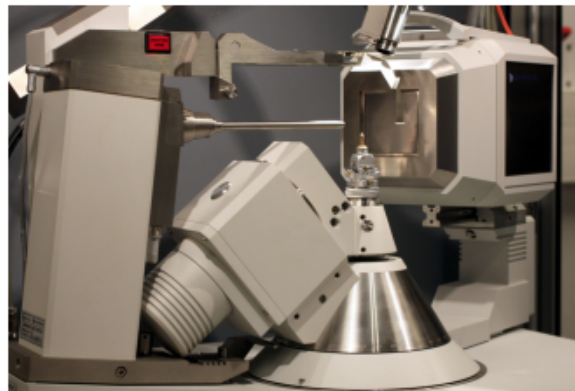
## RIGAKU (Agilent) Xcalibur S diffractometer

Mo anode (17,5 keV)

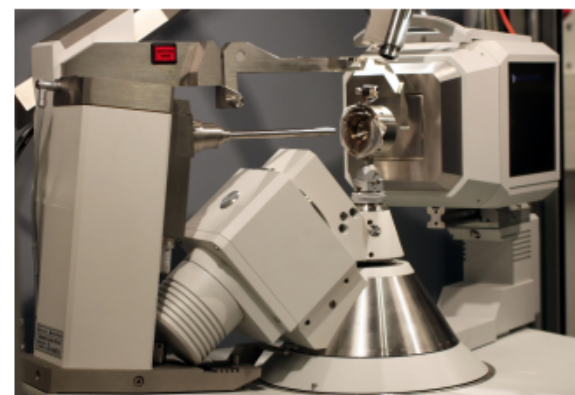
This diffractometer is dedicated to single crystal measurements, under standard conditions or under high pressure in a diamond anvil cell. From a crystal of good quality, it allows to determine the unit cell and the space group, then to solve and refine the three-dimensional structure of the crystallized object. It is also used to find the orientation of the crystals before making spectroscopic measurements along particular axes.

### Specificities :

- Sealed tube with Mo anode.
- 4-circle goniometer with kappa geometry.
- Sapphire CCD detector 3: 92mm diagonal, pixel size = 31 $\mu$ m on the scintillator, fast reading in 2x2 binning mode, maximum resolution  $d = 0.37\text{\AA}$  ( $Q=17\text{\AA}^{-1}$ ).
- Point detector.
- Range of collimators for a beam size ranging from 0.3 to 1mm.
- Configuration allowing the installation of a diamond anvil cell for the studies under high pressures.
- Possibility of studying polycrystalline samples in small quantities, in capillary, at low angular resolution.



Single crystal on the 4-circles goniometer, at ambient condition



Single crystal under pressure in a diamond anvil cell