

## Mössbauer Spectroscopy

Mössbauer spectroscopy is a spectroscopic method to detect a slight change in energy levels of an atomic through recoil-free resonant absorption and emission of gamma rays in solids. Typically, chemical shift, quadrupole splitting, and hyperfine splitting can be observed. Due to the narrow linewidth of gamma rays, Mössbauer is extremely sensitive in terms of energy resolution. In the resulting spectra, the gamma-ray intensity is plotted as a function of the source velocity. At velocities corresponding to the resonant energy levels of the sample, a fraction of the gamma rays are absorbed, resulting in a drop in the measured intensity and a corresponding dip in the spectrum. The absorbing nuclei and sample can be characterized by the number, positions, and intensities of the dips in the spectrum. Recently, some charge state and electronic configurations have been confirmed through Mössbauer spectroscopy at cryogenic temperatures.

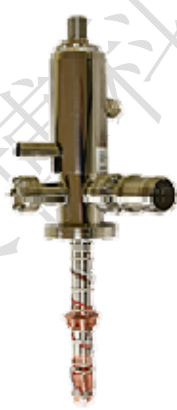
### Related Products:



X-20 ULTRA-LOW VIBRATION

- Vibrations < 3-5 nm
- Quick and easy sample access via pop-off shroud
- High temperature stability

Cryostat Model	Type
CS202-DMX-20	CCR
CS204-DMX-20	CCR
CS210-GMX-20	CCR



LT3

- The backbone of low vibration cryogenic research
- Atomic resolution is achieved through a series of heat exchangers
- Coaxial shield flow transfer line ensures liquid at the tip

Cryostat Model	Type
LT3	Flow
LT3B	Flow
LT3M	Flow



LT4

- All-purpose, low cost flow cryostat
- Maintains the high cooling power of the LT3
- UHV option available

Cryostat Model	Type
LT4	Flow

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