

Ultra-low temperature high pressure physical property measurements - diamond anvil cell station

Ultra-low temperature high pressure physical property measurements-diamond anvil cell station has a system equipped by a 14 T helium free superconducting magnet and helium free cryogenics with large inner diameter. The lowest temperature can reach 500 millikelvin. The inner diameter of cryogenics cavity is about 60 millimeters and is suitable for most of various sized high-pressure cells. This system can be used to perform the measurement of high-pressure resistance, magnetoresistance, and Hall coefficient. Meanwhile, the station provides users the microscope, Raman spectrometer and beryllium-copper high-pressure cell for the studies on the physical properties of solid materials at extreme conditions.

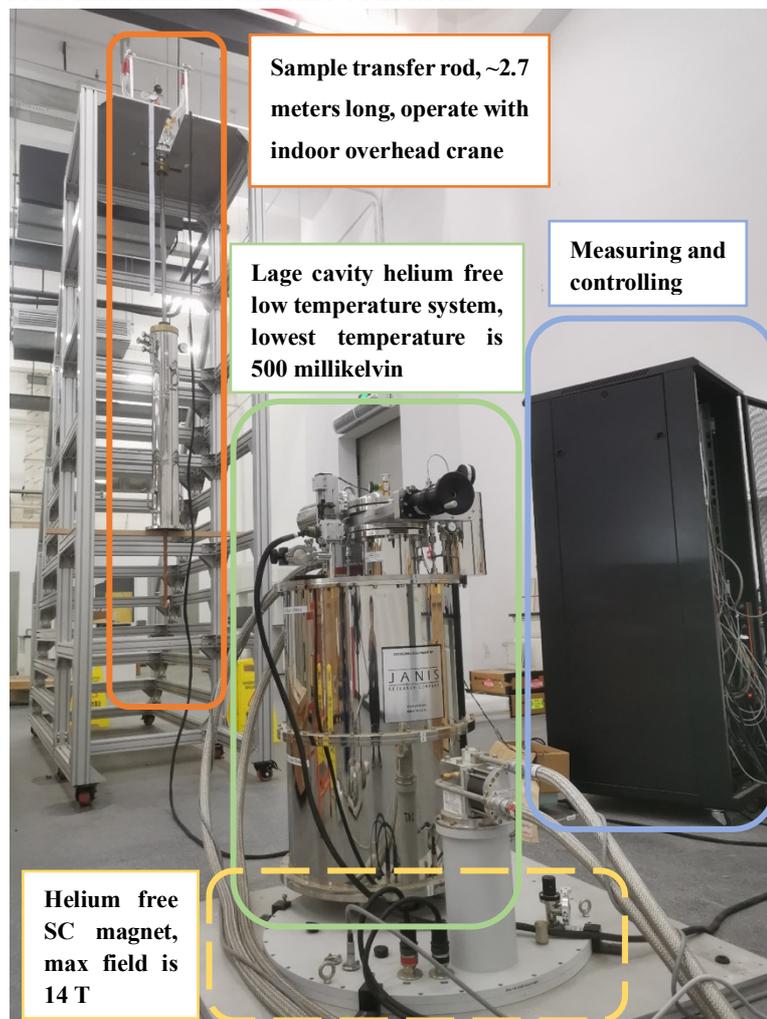


Photo of the station

The capacities of the experimental system in the station

Parameters	Values
Maximum pressure	≥ 100 GPa
Lowest temperature	≤ 500 mK
Maximum field	≥ 14 T
Inner diameter of cryogenics cavity	60 mm
Minimum cooling time	~ 18 h
Maximum holding time	~ 5 h

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