

LIF name	Capabilities/research filed	Current status
Gas Loading	Loading many types of DACs Helium, Neon, Argon, Nitrogen	Operational @ Shanghai
Glovebox	Sensitive sample loading	Operational @ Shanghai
Small processing center	Mechanical processing	Operational @ Shanghai
CNC lathe	Mechanical processing	Operational @ Shanghai
FIB	<ul style="list-style-type: none"> ➤ Micro Machining ➤ SEM/EBSD ➤ CVD deposition 	Operational @ Shanghai
Micromanipulator	<ul style="list-style-type: none"> ➤ Micrometer size sample preparation ➤ Small sample loading in DAC 	Operational @ Changchun Unfinished @ Shanghai
Magneto Sputtering System	Coating for high pressure electrical transport measurement and structure measurements Fabricating thin film and novel 2D materials	Operational @ Shanghai: NCP lab
Laser-Heating	Double sided laser heating	Operational at one side @ Shanghai: MREC lab
Raman	<ul style="list-style-type: none"> ➤ Raman/UV/PL 	Operational @ Shanghai, Changchun & Beijing
Raman System for Studies at Ultra HP	<ul style="list-style-type: none"> ➤ Ultra-high pressure experiments (above 200 GPa) probing small sample sizes (<10 micron diameter) 	Unfinished @ Shanghai: RTH lab
Raman complex	<ul style="list-style-type: none"> ➤ 10 wavenumber HP measurement 	Operational @ Shanghai :CEP lab
	<ul style="list-style-type: none"> ➤ HP Ac magnetic Susceptibility 	
	<ul style="list-style-type: none"> ➤ HP Electrical resistance 	
Brillouin	Elastic properties of materials and minerals	Commissioning @ Changchun
IR	Chemical reaction and phase transition	Operational @ Beijing: HPChem lab Unifished @ SSRF
XRD	Structure/Phase characterization	Installed @ Shanghai: AMAT lab Installed @ Beijing: HPChem lab
Impedance	Electrical conductivity of materials under high pressure/shear	Operational @ Changchun Operational @ Beijing: HPChem lab Operational @ Shanghai: HPSynR lab.
PPMS	<ul style="list-style-type: none"> ➤ Electrical Transport ➤ Thermal Transport ➤ Thermal expansion ➤ Heat Capacity. etc 	Operational @ CEP lab Commissioning @ HPSynR lab; Unfinished @ Beijing SCS lab
MPMS	<ul style="list-style-type: none"> ➤ Magnetization ➤ Electrical resistance 	Operational @ CEP lab
Ultrafast Femtosecond Laser System	Dynamics of charge (electron or hole) transport across and/or chemical transformation at the interface of functional materials at or far from equilibrium conditions	Commissioning @ CEP lab Unfinished @ Dr. Weng's lab

Differential Scanning Calorimetry (DSC)	<ul style="list-style-type: none"> ➤ Thermal transitions in polymers ➤ Characteristic-temperature measurement ➤ Oxidative stability test, etc 	Operational @ Shanghai: AMAT lab
High-performance Computing Cluster (HPC)	Computation	Operational @ Shanghai