Low-temperature in-situ STM-ARPES experimental station

Low-temperature in-situ STM-ARPES experimental station consists of STM, ARPES, OMBE, and LMBE, which are interconnected by an ultra-high-vacuum pipe. The function of this experimental station is epitaxial growth of single-crystal films and in-situ measurements of electronic structures in real/momentum space.

Specifications of the experimental station

STM	
Type	Unisoku 1300
Controller	Nanois^{TM} SPM control system
Temperature range	0.3 K-300 K
Maximum field	16 T
Energy resolution	0.3 meV
Space resolution (z)	0.1 Å
ARPES	
Light source	He and Kr
Sample manipulator	Six-axis
Analyzer	DA30-L
Temperature range	4.2 K-300 K
Energy resolution	3 meV
OMBE	
Substrate temperature	≥ 1000 ℃
Gas	Ozone
RHEED	One stage differential pumping
LMBE	
Substrate temperature	≥ 1000 ℃
Gas	Oxygen and Ozone
RHEED	Two stage differential pumping
Laser	KrF Excimer Laser and Solid-state Laser
UHV Interacting Pipe	
UHV	< $3*10^{-10}$ Torr

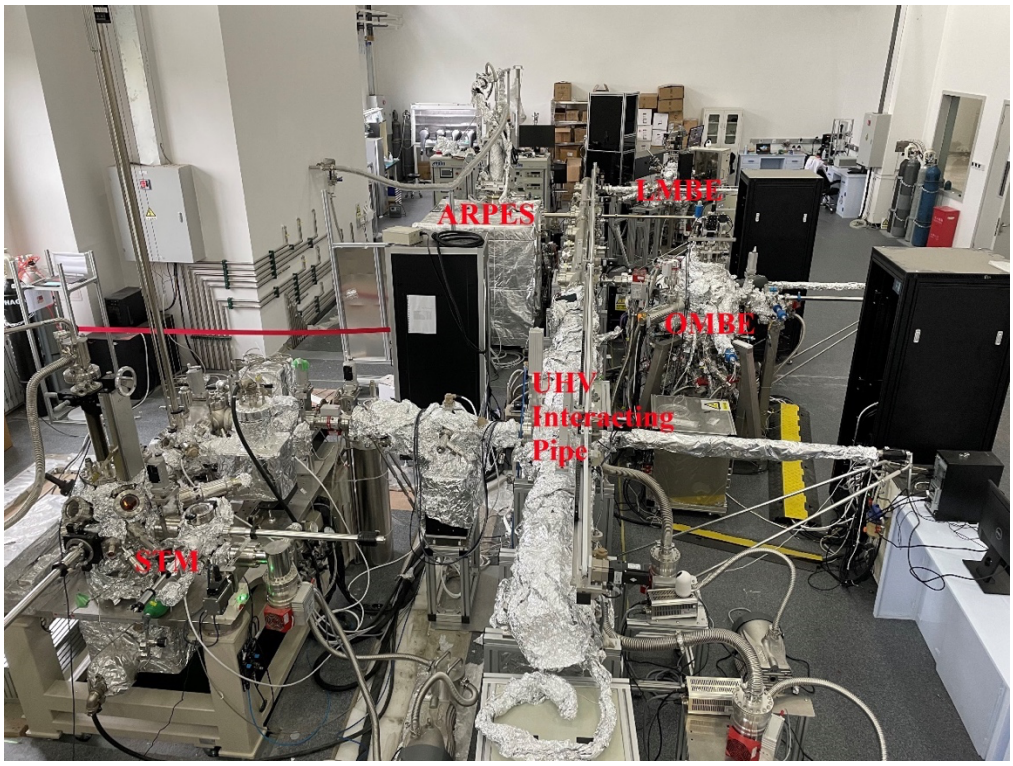

Photo of the experimental station

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