

Vacuum and Cryogenic Applications Lab

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Laboratory introduction

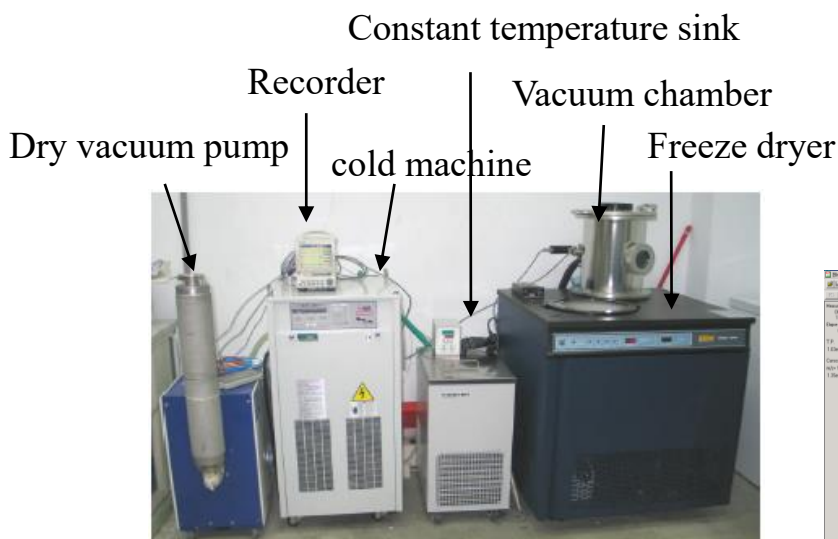
The laboratory is led by Zheng Hongbin with multiple doctoral students and three graduate students. The current research field is dedicated to the development of vacuum technology and ultra-low temperature technology in various fields. To cope with the development of national high-tech industries, such as semiconductors/flat panel displays/biotechnology/micro-electromechanical systems, etc., develop practical applications such as applied technology research and cultivate relevant talent.

Main research project

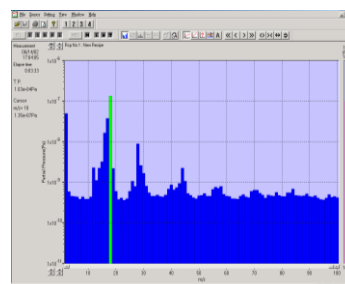
- Turbomolecular vacuum pump design analysis
- Development and research of refrigerated vacuum pump system
- Development of freeze vacuum drying system technology
- Outgassing detection system of material components for high vacuum
- Prospective agricultural fresh-keeping vacuum pre-cooling technology
- Array inkjet micro pump fluid analysis technology

Main research equipment

All kinds of vacuum equipment and testing instruments, oil rotary vacuum pump, water-sealed pump, Lu pump, dry vacuum pump, refrigerated vacuum pump, turbomolecular pump, Pirani vacuum gauge, convexron vacuum gauge, Ion vacuum gauge, gas mass flow control system, helium leak detector, residual gas analyzer, ultra-low temperature measurement equipment, vacuum cooling equipment, freezing vacuum drying equipment, microwave vacuum system, ultra-low temperature freezing storage cabinet, data collection and extraction device, Microscopic observation system, various computer facilities.



Helium Leak Detector



Inside the test cavity
Residual gas analysis