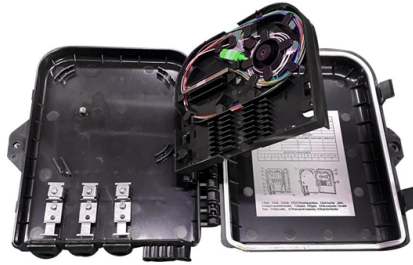


Extreme Low Temperature Spectrometer



Overview

It features high-quality near-field measurements in an unmatched spectral range from visible to IR and even THz frequencies. 2K - liquid helium temperatures (4.2 K) via our range of cryostats. These operate from. One application for FTIR-spectroscopy at low temperatures is the determination of concentration levels of doping materials on the basis of the absorption spectrum. The spectral range 30 to 250nm conveniently covers many applications in HHG and plasma diagnostics., S 1) to its electronic ground state (S 0) after photoexcitation (Figure 1). A competing process is the radiationless transition from S 1 to a triplet excited state (T. Our group is developing cutting-edge mid-infrared quantum cascade laser absorption spectroscopy (QCLAS) techniques, equipped with a low-temperature multipass cell, to advance high-precision isotope analysis of both inorganic and organic compounds.



Article Content

Tailored Li-ion battery electrodes and electrolytes for extreme ...

Lithium-ion batteries can be engineered to operate reliably under extreme cold conditions through innovations in electrode architecture, electrolyte design, and interfacial chemistry. In this ...

An extreme ultraviolet spectrometer working at 10–130 Å for tungsten ...

A newly developed flat-field extreme ultraviolet (EUV) spectrometer working at 10–130 Å wavelength range with high spectral resolution and fast-time r

Low Temperature Spectroscopy

We can control the temperature of samples in a vacuum or exchange gas down to 4.2K - liquid helium temperatures (4.2 K) via our range of cryostats. Andor also supplies high resolution,

An ultra-high vacuum scanning tunneling microscope with pulse tube

Low-temperature scanning tunneling spectroscopy is a key method to probe electronic and magnetic properties down to the atomic scale, but suffers from extreme vibrational sensitivity.

Using Raman spectrometers developed for space exploration in other ...

Optimizing Raman spectrometer designs for use in extreme environments can enable acquisition of critical information that may not be accessible in situ by humans. Technology

Team Advances Low-Temperature Spectroscopy for the Quantum Realm

The result is a spectrometer capable of stable, ultra-precise operation under extreme cold conditions,” he said. For their experiments at cryogenic temperatures, the researchers selected molecular hydrogen.

A cryogen-free low temperature scanning tunneling microscope

The design and performance of a cryogen-free low temperature scanning tunneling microscope (STM) housed in ultrahigh vacuum (UHV) are reported. The cryogen-free design was

Low-temperature on-site in situ high-pressure ultrafast

We design and construct an ultrafast optical spectroscopy instrument that integrates both on-site in situ high-pressure technique and low-temperature

Low Temperature Techniques-Xi Lin Group

However, due to the decreasing electron-phonon interaction at ultra-low temperature, the electron temperature is usually higher than the refrigerator

Implementation of Low Temperature spectrometers for the JET High ...

The low temperature Thomson scattering (LTTS) system was installed, tested and cross calibrated against the standard HRTS diagnostic in a calibration pulse. The system worked reliably during the

cryo-neaSCOPE+xs | cryogenic imaging

cryo -neaSCOPE +xs enables near-field optical nanoimaging and nanospectroscopy at extreme cryogenic temperatures. It features high-quality near-field

Spectral investigations of low-temperature plasma induced in CO

In this work, low-temperature plasmas, induced in a gaseous CO₂ by intense extreme ultraviolet (EUV) pulses were investigated with a purpose to determine their ionic/molecular

Measuring Fluorescence and Phosphorescence Spectra

This technical note detailed the procedure for obtaining the fluorescence and phosphorescence spectra of a fluorescent emitter at low

Current status and future perspectives of low-temperature electrolytes ...

Supercapacitors are critical for high-power applications due to their fast charge-discharge capabilities and long lifespans. However, achieving high performance at ultra-low temperatures

FTIR-spectroscopy at low temperatures: cool samples – most

Choosing the right hardware can well ease the task, particularly when a proprietary spectrograph is to be used. One application for FTIR-spectroscopy at low temperatures is the determination of

Research on health monitoring of extreme low-temperature equipment

Abstract Full-lifecycle health monitoring of extreme low-temperature equipment heavily depends on the stability of the cryogenic mechanical behavior of core structural materials. Notably,

Liquid-Filled Pressure Gauge for Temps to -94°F (-70°C)

The PG23LT liquid-filled Bourdon tube pressure gauge performs accurately and reliably in ambient temperatures as low as -94°F (-70°C).

Low-temperature Mössbauer Spectrometer

All necessary parts included (vacuum pump, power supply, temperature control,) Do you have any questions? Please feel free to contact us.

A low-temperature scanning tunneling microscope

A Scanning Tunneling Microscope (STM) allows sample surfaces to be imaged with sub-nanometer topographic resolution and enables local density

cryo-neaSCOPE+xs

cryo-neaSCOPE+xs enables near-field optical nano-imaging and nano-spectroscopy at extreme cryogenic temperatures. With it, you can perform high-quality near

Powering the extreme: rising world of batteries that could operate at ...

However, such battery systems face significant performance degradation in low-temperature environments, which limits their applications in extreme climate conditions, such as

easyLIGHT XUV

easyLIGHT XUV provides wide-band spectral measurements with unprecedented efficiency. The no-slit design directly images the radiation source and thus eliminates the cumbersome entrance slit. The

An integrated single-shot spectrometer with large bandwidth-resolution ...

There has been a rapidly growing demand for low-cost, integrated single-shot spectrometers to be embedded in portable intelligent devices. Even though significant progress has

Contact Us

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