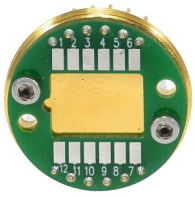
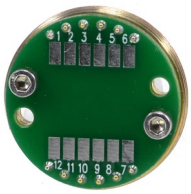
CRYOMAGNETICS, INC.
INNOVATIVE TOOLS FOR SCIENTIFIC RESEARCH


Resistivity and Hall Effect (RHEM) Module for C-Mag

The RHEM Module consists of a central sample mount assembly fitted with 12 robust experimental interconnections between the sample mount (Puck) holder and the sample mount. The mount is securely fixed to the holder to assure a proper thermal path. Experimental setup is a simple matter of securing sample material to the user's choice of solid FR4 or windowed mount. Sample electrical connections are made via bond wire to the output pads of the mount. Sample mounting and verification is aided through the use of the setup fixture which aids with sample position and back-probing for room temperature measurements and verification of setup prior to analysis. Once the puck has been mounted to the probe assembly, the isothermal shield is threaded onto the outer edge of the puck followed by the vacuum shroud mounted using a conical seal. Sample analysis may be in exchange gas or vacuum.

Sample Probe:

- 25mm OD sample mount (Puck) with 12 wire sample interconnections.
- Sample puck design: Users choice, Flat FR4 sample mounting surface or Window style with 11mm x 14mm cutout allowing for direct mount to cold stage. Additional sample mounts are available and all are interchangeable with the puck base.
- Puck Base with pin connections for sample wiring, fitted with calibrated Cernox temperature sensor and cartridge heater.
- Gold plating on all subassemblies.
- Operating temperature: <1.8K to 325K depending on sample environment.

The RHEM Module may be used for all routine AC and DC Resistivity measurements as well as Hall effect. Electronics package may be tailored to suit the characteristics of the expected sample stream.

Software:

Cryomagnetics' Navigator Software Control System is a LabVIEW based, open architecture software program allowing for automated and manual sample analysis and data output.

DC Resistivity Performance:

- Voltage Range: 1nV to 210V*
- Current Range: 50pA to 1.05A

AC Performance Specifications:

- Voltage Range: 2nV to 1V
- Current Range: 1pA to 150mA
- Frequency: 1mHz to 100KHz
- Noise: 1nV/√Hz @ 1kHz (Typ)
- Sensitivity: ±10nΩ RMS (Typ)
- Phase Resolution: 0.01°

Hall Effect Measurement:

- 4 or 5 Wire configuration
- Multiple sample compatible

* Optional configurations available

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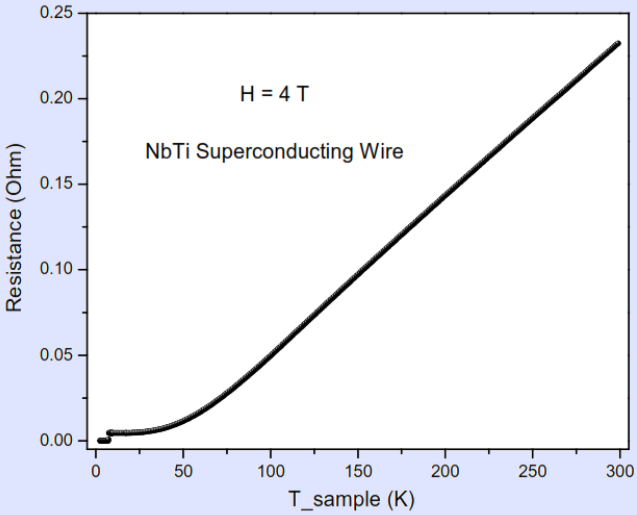
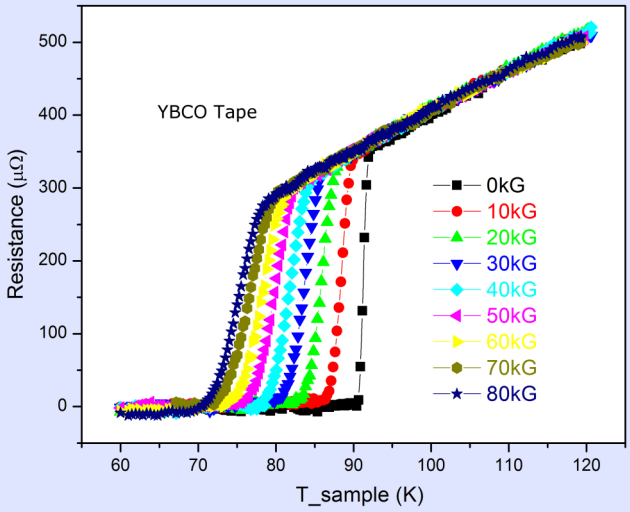
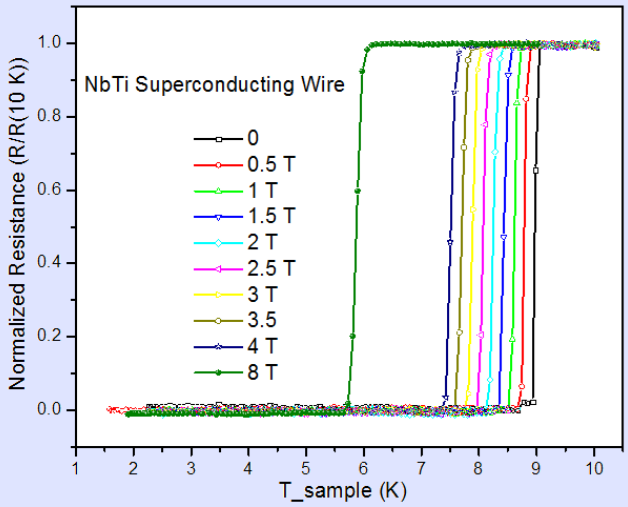
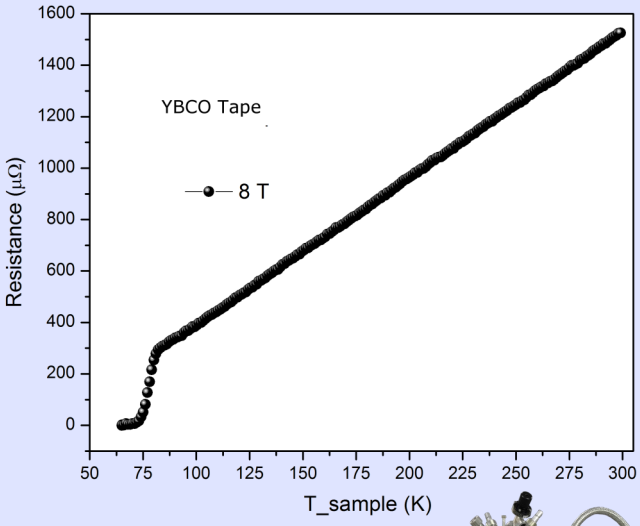
Example Data from









Contact us today for further information!

Cryomagnetics' *C-Mag* systems are versatile bench-top property measurement systems that provide the researcher with exceptional range, versatility, accuracy, and automation in materials characterization. Based on the latest cryocooler refrigeration technology, the systems are very easy to set up, operate and maintain.. Available in single , split pair and multi-axis configurations.

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