

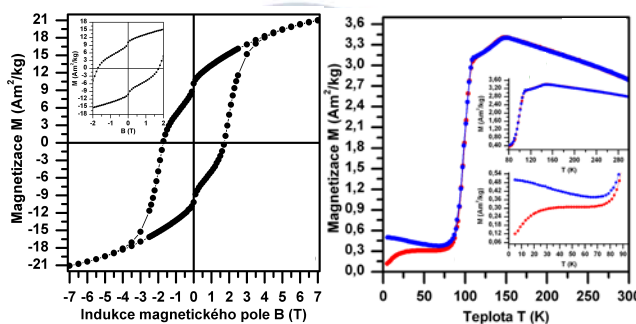


SQUID magnetometry

We offer contract measuring of complex magnetic characterization of the samples using SQUID (Super-conducting Quantum Interference Device) magnetometer of MPMS XL-7 type from American company Quantum Design. SQUID magnetometer is a representative method for measuring magnetization of the materials using the electromagnetic induction law and at present it represents the most accurate device for studying the magnetic properties of matters, and it is possible to distinguish changes in magnetic field in the order up to 10^{-14} T. SQUID magnetometer of MPMS XL-7 type provides fully automatic measurements of the magnetic moment (more precisely its longitudinal component in the direction of the external magnetic fields) of studied materials under conditions in varying temperature and induction of external magnetic field. Moreover it is equipped with module for measurement of so called alternating (AC) susceptibility (i.e., the real and imaginary part of susceptibility at varying frequencies of the alternating magnetic field).

SQUID magnetometer MPMS XL-7 type provides measurement of:

- field dependences of sample magnetization (i.e., hysteresis loops);
- temperature dependences of sample magnetization;
- AC susceptibility



SQUID magnetometer of MPMS XL-7 type is designed for powder materials and/or materials in the form of a cylinder with maximum diameter 4 mm and height 5 mm. The measuring atmosphere are the low-pressure helium vapours.

Measurement conditions

- range of measurable magnetic moments: ± 5 emu (i.e., $\pm 5 \times 10^{-3}$ Am²);
- temperature range: 1,9 – 400 K (400 – 800 K when an accessory oven is placed into the sample chamber);
- range of magnetic field induction: ± 7 T;
- AC susceptibility measurements: frequency range of magnetic field: 0.1 – 1000 Hz, range of induction of alternating magnetic field: 0 – 0.0003 T.

Contact for technical communication: Mgr. Jiří Tuček, Ph.D.
@ jiri.tucek@upol.cz
✉ Šlechtitelů 11, 78371 Olomouc
☎ +420 585 634 950

Contact for business communication: Prof. RNDr. Zdeněk Trávníček, Ph.D.
@ zdenek.travniczek@upol.cz
✉ 17. listopadu 12, 77146 Olomouc
☎ +420 585 634 352

