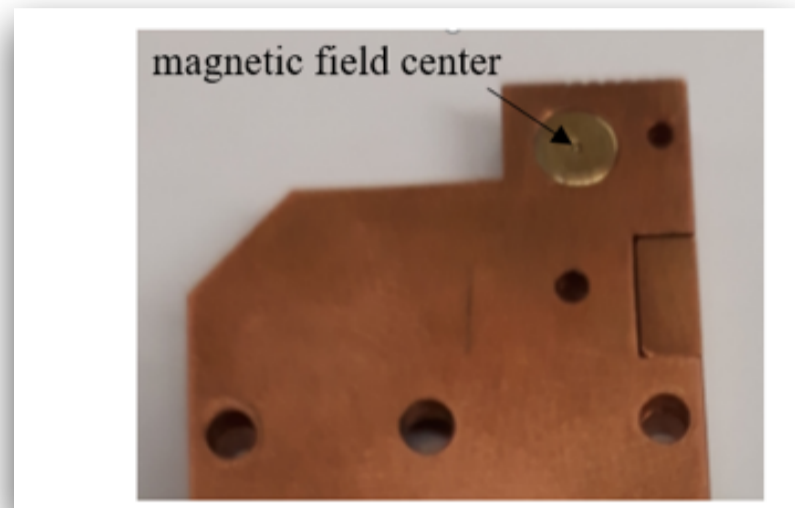
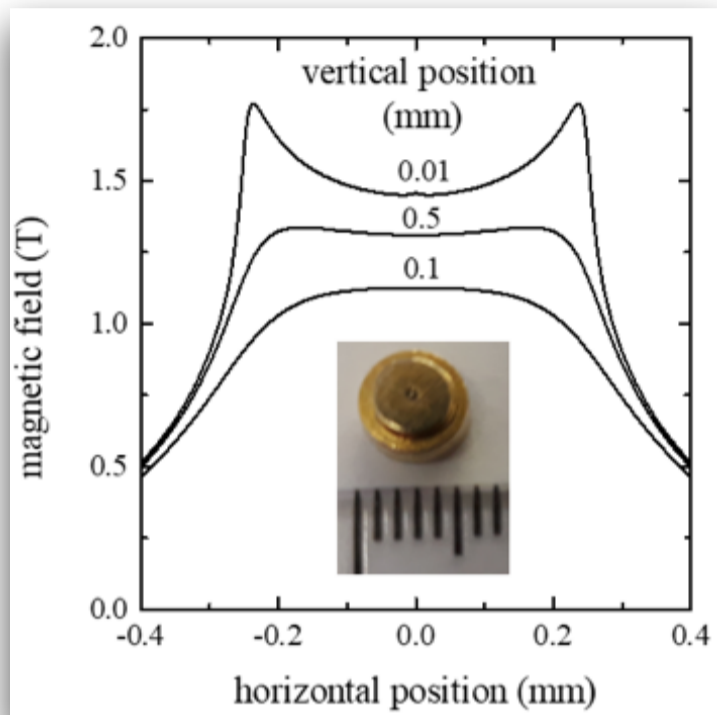


Licensing opportunity

Ultracompact 1.5 Tesla magnet for magneto-microscopy



Left: general view of the magnet and generated magnetic field close to the center.

Top: the magnet mounted on a sample holder for scanning-probe microscopy

Background

One challenge for applying a magnetic field in optical or scanning-probe microscopy is the need to achieve a high intensity of the magnetic field while using a magnetic device of small size to fit the geometry of these experiments, typically less than 10 mm.

Invention

We developed an ultra-small permanent magnet with a footprint of only 5 mm and weight of about 600 mg using an innovative bi-component design. The magnet generates magnetic field of 1.5 T, with a region of the field homogeneity of 0.5 mm, which is sufficient for the microscopy applications.

Patent status

- ▶ Patent pending

Potential markets

- ▶ Scanning probe microscopies (AFM, STM, SNOM etc.)
- ▶ Raman, photoluminescence, MOKE

Advantages

- ▶ High magnetic field (1.5 T)
- ▶ Small mass (< 1 g)
- ▶ Small volume and size (5 mm)
- ▶ Negligible leakage field
- ▶ Cost-effective
- ▶ No need for electrical supply
- ▶ Compatible with most existing setups