

Electronic Supplementary Information

Magnetomigration of rare-earth ions in inhomogeneous magnetic fields

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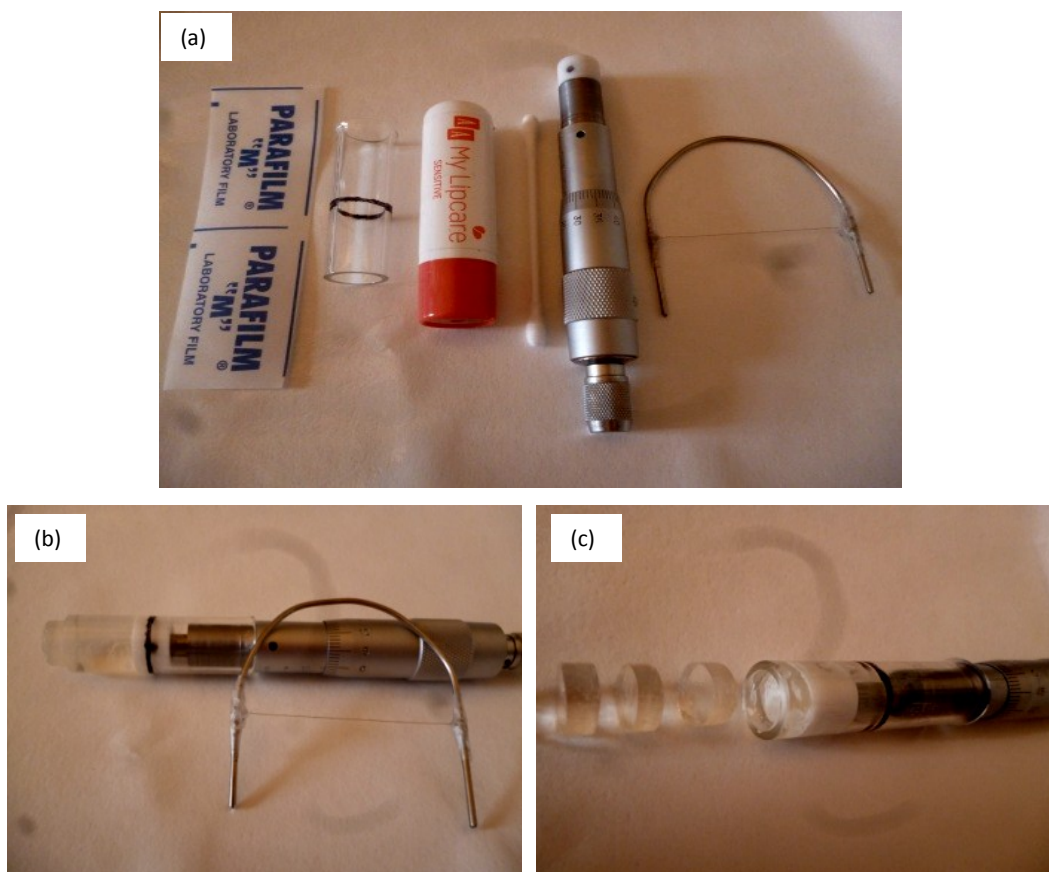


Fig.1. (a) Tools used to prepare the gel-based samples; (b) and (c) Method of the extraction of the gel pieces.

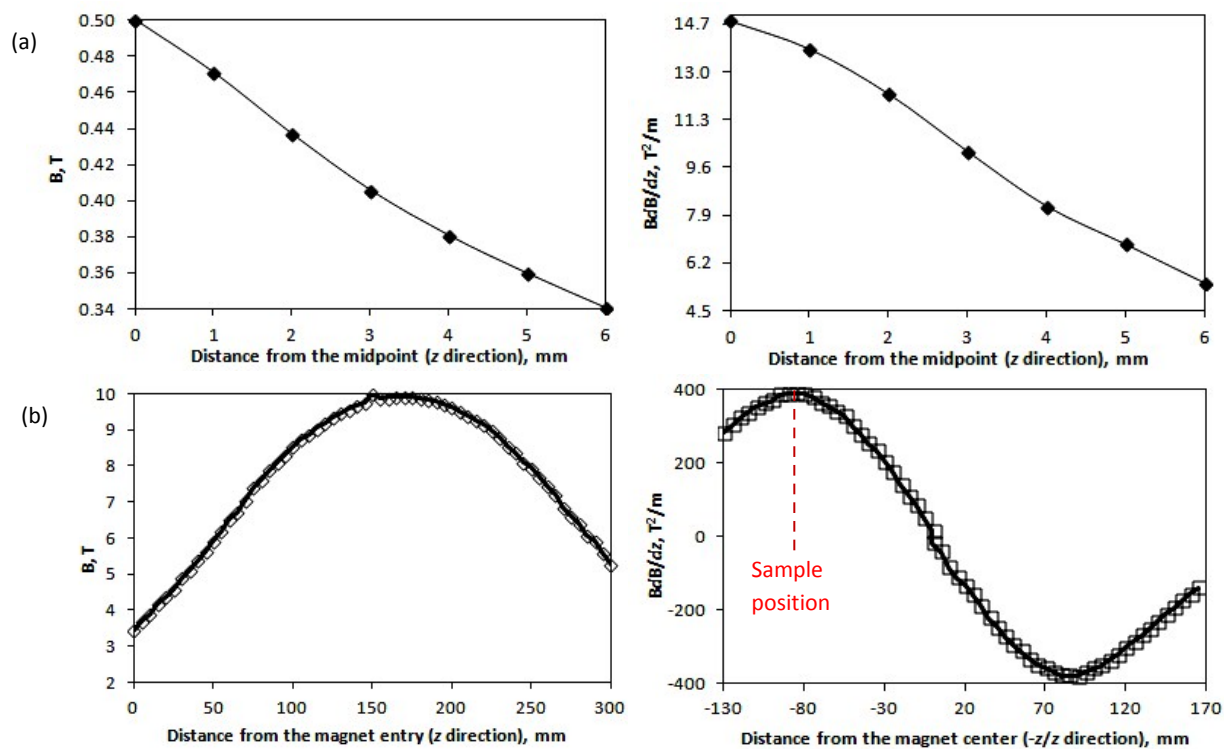


Fig.2. Magnetic field strength of (a) the N52 NdFeB permanent magnet and (b) the superconducting magnet with associated product of the magnetic field times the magnetic field gradient as a function of the normal distance from the surface/center of the magnet in z direction. The surface magnetic field of the NdFeB permanent magnet was measured at the midpoint of the magnet with a Gauss meter (LakeShore Inc.). Changes in the magnetic surface field strength as a function of the distance from the magnet surface were determined using 1 mm thick glass sheets that were placed one on another, measuring the surface field each time at the same point. The magnetic field in the superconducting magnet was measured using a home-made magnetometer based on a Hall sensor that was placed in the bore of the magnet and moved up and down from the magnet center.