Supplementary Material

Superconducting YBCO foams as trapped field magnets

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Video sequence of a superconducting YBCO foam, cooled down with liquid nitrogen, operating on a magnetic rail. The sample was field-cooled in a styrofoam container on the magnetic rail. The sample is pushed by hand, and when moving on the rail, one can see nitrogen steaming out from the foam sample, which is deeply cooled due to the open porous structure. Due to the reduced sample weight, the lift height of the foam sample is clearly higher than that of a conventional YBCO bulk sample. On the top of the sample, one can still see the remnants of the former seed crystal used during the infiltration growth process.

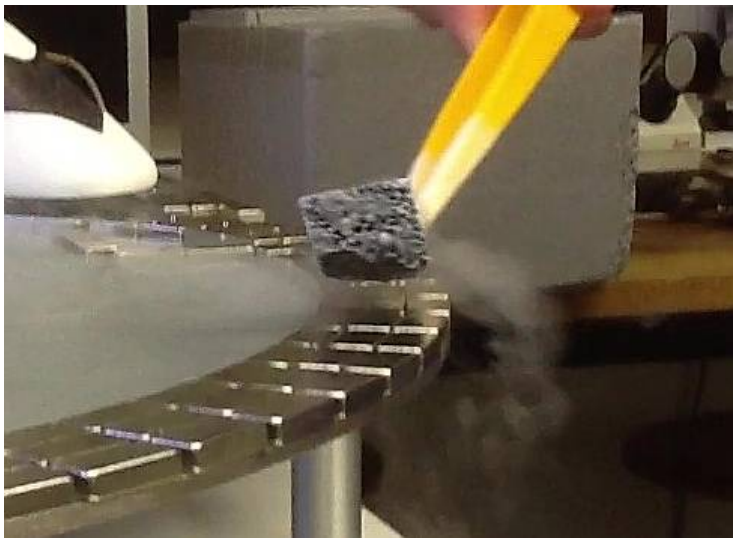

Figure S1: YBCO foam sample being pushed while levitating on the magnetic rail.