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Relaxation of the magnetisation in superconducting oxides

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Abstract

Relaxation of the thermoremanent magnetisation M in oxide superconductors $BaPb_{0.75}Bi_{0.25}O_3$, $YBa_2Cu_3O_{7-\delta}$, $Bi_2Sr_2CaCu_2Ox$ and $Bi_4Sr_3Ca_4Cu_4Ox$ is measured at T=4.2 K by the SQUID magnetometer. It is well described by the law $M(t)=M_0-Slnt$, where t is the time, M_0 and S are constants. The dependence of the decay rate S on the external magnetic field H is investigated in detail for the ceramics $BaPb_{0.75}Bi_{0.25}O_3$ with a low first critical magnetic field H_{cl}~12 Oe.