

Current-Induced Changes of the Magnetic Domain Structure of Iron Whiskers

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Using the electronmicroscopic type II magnetic contrast the behavior of the Landau domain structure under the influence of an electric current is investigated. The specimens are carbon saturated single crystal $\langle 100 \rangle$ iron whiskers with 20 to 200 μm rectangular cross-section and residual resistance ratios (RRR) of about 300. Characteristic changes of the domain structure due to the selfmagnetic field of a current flowing in the direction of the long crystal axis are observed. Additionally, inductive magnetization measurements are performed in order to detect the behavior for a changing, current.