9.7 cm

MAGNETIC PROPERTIES OF Cr_3Si DOPED Fe AND Co

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Policrystalline samples of $Cr_{3-x}TM_xSi$ (where x=0.02, 0.1, 0.2, 0.3; TM=Fe, Co) were prepared from pure elements in the arc furnace. The magnetization of these samples was measured by VSM method as a function of magnetic field (-12 kOe to 12 kOe) and temperature (10 K to 300 K). With increasing iron concentration the $Cr_{3-x}Fe_xSi$ alloys change from the paramagnetic (x≤0.2) to the ferromagnetic (x=0.3) ones. In the case of Co impurities the ferromagnetic properties were observed in the most diluted samples (x=0.02).

13.4 cm

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