MAGNETIC PROPERTIES OF $(Fe_{1-x}M_x)_7Se_8$ (Abstract) [*]

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The temperature dependence of the magnetization of the quenched and slowly cooled samples of Fe_7S_8 and $(Fe_{1-x}M_x)_7Se_8$ samples with M=Co and Ni and x = 0.02,0.05 and 0.08 were given. All the thermomagnetic curves obtained belong to the Weiss ferrimagnetic type. For some samples discontinuities indicating a magnetic transformation to antiferromagnetic order were obtained. The values of the magnetic moment μ_o , μ_{78} were given. The reciprocal susceptibility-temperature dependence in the paramagnetic range were studied and the asymptotic Curie points were given. The values of the effective magnetic moment μ_{eff} and the number of unpaired electrons n were calculated. The thermal variation of the electrical conductivity of the host material Fe_7Se_8 in the paramagnetic region was studied.