$T^{3/2}$ Temperature Dependence of Magnetization of Amorphous $Fe_{80-x}Co_xB_{20}$ Alloys

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The temperature-dependent saturation magnetization curves of amorphous $Fe_{80-x}Co_xB_{20}$ ($8 \leq x \leq 40$, the step of x is 8) alloys were measured using a vibrating sample magnetometer from 77 K up to 1000 K. Curie temperature and the Bloch coefficient were estimated from the saturation magnetization curves. The low temperature dependence of magnetization is in good agreement with Bloch relation, $M_s(T)=M_s(0)$ $(1-BT^{3/2} - \cdots)$. The spin wave stiffness constant, the range of the exchange interaction, and the probable atomic spin were calculated from the saturation magnetization values.