Influence of 1% addition of Nb, W and Mo on the ralaxation process in classical Fe-based amorphous alloys

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In order to compare influence of small additions of alloying elements on structure, time and thermal stability of magnetic properties, disaccommodation effect for amorphous $Fe_{61}Co_{10}Y_8Me_1B_{20}$ (where Me = Nb, W, Mo) alloys has been studied. Structure of samples has been confirmed by Mössbauer spectroscopy and X-ray diffraction. The obtained results point on strong corelation between structure and disaccommodation of studied alloys. Different configurations of atoms resulting from Mössbauer studies in amorphous alloys are leading to various potential barrier between orientation of atom pairs. For this reason, to describe the disaccommodation effect, the distribution of activation energy should be taken into account. The distribution of activation energy has been related to the distribution of relaxation times.