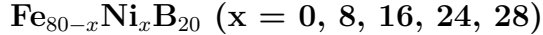


Mössbauer study of the some intermetallic compounds



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Fe-based amorphous and nano-crystalline alloys were prepared by the melt-spinning technique and characterized by X-ray diffraction, magnetostatic and Mössbauer effect methods. The Mössbauer spectroscopy allows to study the local environments of the Fe atoms in the investigated $\text{Fe}_{80-x}\text{Ni}_x\text{B}_{20}$ ($x = 0, 8, 16, 24, 28$) compounds and showing the changes in the structure due to the changing of Ni addition. Combination of X-ray diffraction and Mössbauer spectroscopy results confirm formation of different phase complex including the α -Fe-Ni, γ -Fe-Ni, Fe_2B and Fe_3B in investigated materials. Magnetostatic measurements indicate on structural transformation around 700°C in compounds with $x = 8$ and 16.