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Mössbauer and magnetometric studies of the magnetism of quasi-ordered Fe-Al alloys with Ga, V and Mn admixtures

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Abstract

The introduction of additives of Ga, V and Mn ($M_{x,y} = 0, 5, 10$ at %) to ordered alloys $Fe_{65}Al_{35-x}M_{x,y}$ is aimed at studying the general and specific features of the magnetic characteristics of these alloys as functions of their temperatures (5-300 K) and magnetic fields (up to 5 T). In this work, we discuss the possibility of interpreting the combined results from magnetometry and Mössbauer spectroscopy in terms of magnetic phase separation and models of localized magnetic moments. © 2013 Allerton Press, Inc.

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