INFLUENCE OF LOCAL ENVIRONMENT ON THE ELECTRONIC STRUCTURE AND MAGNETIC PROPERTIES OF $Ni_{1-x}Cu_xMnSb$ ALLOYS

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9.7 cm

The magnetic ordering in $Ni_{1-x}Cu_xMnSb$ alloys changes from ferromagnetic (x=0) to antiferromagnetic (x=1). The X–ray and neutron diffraction have shown that the systems crystallise in $C1_b$ type structure. We present an influence of the local chemical ordering on the electronic and magnetic properties of $Ni_{1-x}Cu_xMnSb$ alloys. The band structure and the magnetic moments were calculated by the spin–polarised LMTO–ASA method for the experimental values of the lattice parameters. The magnetic moment of Mn increases from 3.8 μ_B for x=0 to 4.1 μ_B for x=1. The magnetic moment of Ni changes from 0.26 to 0.33 μ_B.

13.4 cm

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