

Magnetic properties of the $\text{CeNi}_4\text{Mn}_y\text{Al}_{1-y}$ compounds

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The magnetic properties of the polycrystalline $\text{CeNi}_4\text{Mn}_y\text{Al}_{1-y}$ compounds have been investigated combining AC magnetic susceptibility, field-cooled and zero-field-cooled DC magnetization and magnetic relaxation measurements. The X-ray diffraction measurements show that the group $\text{CeNi}_4\text{Mn}_y\text{Al}_{1-y}$ is isostructural and crystallizes in the CaCu_5 -type structure (P6/mmm). For $0 < y < 1$ irreversible magnetism, long-time magnetic relaxation effect and evident upshift of the AC susceptibility peak with increasing frequency are observed at low temperatures. The spin-glass-like behavior originates from a disorder due to the statistical occupation of the 3g site.