Influence of manganese and tin substitution on the structure and magnetic properties of $CdCr_2Se_4$.

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Streszczenie

Single phase materials with general formula CdxMeyCr2Se4 (where Me = Mn, Sn) were obtained using solid state synthesis method. Both compounds are ferromagnets with TC =115K (Sn) and 135K (Mn). The values of Curie-Weiss parameter ΘC-W = 135K (Sn) and 145K (Mn) are higher than respective values of TC indicating a presence of competing antiferromagnetic component. The values of lattice parameters are consistent with Sn and Mn replacing Cd. Slight cadmium deficiency has been also observed.

Słowa kluczowe

Crystal Structure of Spinel, Magnetic Property, Rietveld Refinement, X-Ray Diffraction (XRD)

Adres publiczny

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