

Abstract Submitted
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Latent heat and magnetocaloric properties of MnAs, CaMn_2Sb_2 and Mn-based compounds ANA LIMA SHARMA, RIKEN - Japan, ANGELO GOMES, Inst. de Fisica, UFRJ, Brazil, SERGIO GAMA, Inst. de Fisica, UNICAMP, Brazil — The intense search for new magnetic materials for magnetic refrigeration has brought out several aspects of the magnetocaloric effect (MCE) behavior and interest in the underlined physics. We investigated the behavior of the magnetocaloric effect of materials such as MnAs and alloys, CaMn_2Sb_2 and Mn-based compound which have been a fruitful playground for competing interactions that lead to a variety of magnetic ordering such as spin liquid behavior, glass phase, etc. The MCE of those systems We extracted The MCE of those systems from heat capacity data and magnetization data using Maxwell's relations and we also investigated the latent heat involved in magnetic and structural phase transitions using a differential scanner calorimeter. Our results can discussed using a mean field approach in a quenched (or frozen) disorder parameters frame. In the present work, the MCE will be present as characterization tool for materials which exhibit unusual magnetic ordering phases.

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