

Transport properties of REFeAsO (RE = La, Ce, Pr, Sm, Gd)

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Polycrystalline samples from the REFeAsO (Re=La, Ce, Pr, Sm, Gd) system were studied by means of electrical resistivity, thermal conductivity and thermoelectric power in temperature range 5-300K. Structural and magnetic transition to SDW AFM order around 150K lead to significant anomalies in electrical, thermal and thermoelectric properties. We present the influence of substituting rare earth elements for La ion on the low temperature thermopower. We discuss also the strong impact of magnetic field ($B = 14\text{T}$) on thermoelectric properties. The results reflect profound changes in the Fermi surface topology as well as strong impact on charge carrier scattering processes with substituting Rare Earth elements and with changing temperature.