

Magnetism in R_2RhIn_8 compounds

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The R_2RhIn_8 compounds belong to a large system of structurally related ternary intermetallics in which the crystal structure can be described as a sequence of RX_3 and TX_2 layers, where R represent rare earth or actinide atom, T is a transition metal and X is In or Ga. The possibility of changing dimensionality in these materials by changing m and n ratio together with changing of T element gives scientists a big playground for tuning ground state properties of these compounds. In this work we present magnetic properties of R_2RhIn_8 (R = Nd, Tb, Dy, Tb, Er and Tm) compounds studied by bulk and microscopic experiments. All studied compounds order magnetically, showing complex magnetic properties with several magnetic phases.