Analysis of the impact of d- and p-electron elements on the magnetic properties of ternary intermetallic compounds of RT_xX_2 type (R – rare earth, T – transition metal, X – p-electron element)

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Studies of rare earth compounds with transition metals are one of the dominant trends in modern magnetism and cover a wide range of research both basic and applicative nature. The main aim of the study of lanthanide compounds is to find answers to questions concerning mechanisms of interaction between the magnetic moments. A systematic study of the magnetic properties of rare-earth compounds gives hope for full understanding of magnetism in these families of compounds.

For many years the RT_xX_2 compounds with the crystal structure of $CeNiSi_2$ – type are in the circle of my interests. Based on my own research and the results published in the literature by other authors, the impact of d- and p-electron elements on magnetic properties of the RT_xX_2 compounds, where $x \leq 1$ and T = Ni, Co, Cu, Fe, Mn, Cr will be analyzed.