

**INFLUENCE OF Ti ON THE MAGNETIC STATE OF
CaRu_{1-x}Ti_xO₃**

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The magnetic ground state of the ternary ruthenate CaRuO₃ is rather controversial. There are indications that it is a non-Fermi liquid metal. It has been considered a paramagnet, however, in the light of the most recent experimental studies it appears to be a material at the verge of magnetic ordering that readily evolves into a magnetically ordered one. Substitution of Ru by nonmagnetic Ti atoms was found to induce ferromagnetism in this material with maximum effect for 40% of Ti.

Polycrystalline samples of CaRu_{1-x}Ti_xO₃ with x=0, 0.005, 0.03 and 0.07 have been prepared and pressed into pellets that were sintered at 1100-1200°C for 72 h in air. We have measured the specific heat in the temperature region of 3-300 K in magnetic field of 0, 0.5 and 1 T, as well as the ac-susceptibility up to 120 K at frequencies of 100 Hz, 1 and 3 kHz.

No specific heat anomaly has been observed neither for CaRuO₃ nor for the Ti containing samples but clear cusp was visible in the real part as well as in the imaginary part of ac-susceptibility at 30 K for the samples with Ti. These results are indicative of spin glass behaviour, together with the observed increase of magnetization below 30 K.

9.7 cm

13.4 cm

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