

NMR Study of Layered Transition Metal Ditelluride (Ir,Pt)Te₂

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Layered transition metal dichalcogenide IrTe₂ shows the anomalous behavior with a hysteresis in temperature around 270 K in electrical and magnetic properties, originating from a structure deformation.¹ The NMR measurement suggests that a simple metallic state realizes in both high- and low- temperature region and the density of states at Fermi surface $N(E_F)$ is reduced below the transition temperature.² In contrast, PtTe₂ with the same CdI₂ structure type shows no anomaly. Quite recently, it is reported that the superconductivity exhibits in Ir_{1-x}Pt_xTe₂ with the maximum of $T_C = 3.1$ K for $x = 0.04$.³ Thus, further studies are necessary to clarify the microscopic electronic states related with the superconductivity. It is quite helpful to make use of the NMR method for a study of local electronic properties. In this presentation, we present the ¹²⁵Te and ¹⁹⁵Pt NMR results of (Ir,Pt)Te₂ and discuss about them at the conference.

¹N. Matsumoto *et al.*, J. Low Temp. Phys. **117**, 1129 (1999).

²K. Mizuno *et al.*, Physica B **312-313**, 818 (2002).

³S. Pyon *et al.*, presented at International Workshop on Novel Superconductors and Super Materials 2011 (NS²2011).