Talk 3: 12:30–

EPR study on organic low-dimensional spin systems

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Our EPR study on organic radical crystals will be presented. First, X-band EPR measurements of $S = 1/2$ one-dimensional compound, p-CF3PNN is described. An alternating chain is formed along the a-axis and exchange couplings were determined $2J/k = -20.8$ K and $\alpha = 0.1$. W-shaped angular dependence of the linewidth was observed, but the magnetic axis is the b-axis. In this compound, the two-dimensional character in the dipolar interactions is suggested in spite of the one-dimensional exchange interactions.

Next, X-band and submillimeter EPR measurements of the two-dimensional systems with $S = 1$ and $S = 1/2$, BIPNNBNO, is presented. The field dependence of the resonance fields suggests that the magnetic interactions along the a-axis play substantial role in this system, which possibly induce frustrated spin structure.