Magnetic Phase Transition in the Verdazyl Biradical Crystal p-BIP-V_2

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Organic radical compounds have attracted much attention since the discovery of the first organic ferromagnet.[1] A lot of organic radical compounds are synthesized during the two decades. Verdazyl radicals are one of the stable radicals and have a delocalized π-electron system expanded over a molecule,[2] which is expected to result in relatively strong intermolecular interactions. Actually, several verdazyl radical crystals show interesting magnetic properties originating from the intermolecular exchange interactions. We have succeeded in synthesizing verdazyl biradical crystal p-BIP-V_2. The crystal structure belongs to the monoclinic system, space group $P2_1/n$. The magnetic susceptibility and specific heat showed anomalous behavior at 7.5 K, indicating some kind of magnetic phase transition. We performed high-field magnetization measurements below 7.5 K and discussed magnetic structure to investigate low-temperature phase in detail.

[1]M. Tamura *et al.*, Chem. Phys. Lett.**186**, 401 (1991).
[2]P.H.H. Fischer, Tetrahedron **23**, 1939 (1967).