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Title: Novel Phenomena in the Spin-1/2 Kagome-like Compounds

We report on the magnetic properties of two spin-1/2 kagome-like compounds, volborthite and vesignieite, that possess a distorted and nearly perfect kagome lattices made up of Cu^{2+} ions, respectively. For volborthite, we found in low magnetic fields below 4 T spin-liquid-like behavior with no spin gap but with a peculiar transition at 1 K, where V NMR spin-lattice relaxation rate $1/T_1$ exhibits a sharp peak, and specific heat exhibits not a peak but a kink. There must be a certain phase transition of spins that is different from a simple long range antiferromagnetic order. On the other hand, at higher magnetic fields, three magnetization steps are observed at 4.3, 25.5 and 46 T, followed by a plateau or a vicinal slope at a magnetization $\sim 0.42 M_{s}$ (M_{s} is a saturation magnetization) in higher magnetic fields above 60 T. The large deviation of the plateau magnetization from theoretically predicted $1/3M_s$ may not be due to the distortion of the kagome lattice in volborthite, because a very similar value has been found also for vesignieite having an almost perfect kagome lattice. It seems that the excess magnetization of $\sim 0.1 M_{\rm s}$ from $1/3 M_{\rm s}$ is successively gained at the three steps with increasing magnetic field. Such magnetization steps have not been observed in vesignieite, but it is possibly due to a larger amount of impurity spins contained in vesignieite samples thus far obtained, compared with the case of volborthite.