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Synthesis, Structure, and Physical Properties of $Ba_2Mn_2Sb_2O$ Single Crystals JIANNENG LI, S. STADLER, A. KARKI, Y. XIONG, R. JIN, Louisiana State University — We have grown high-quality single crystals of $Ba_2Mn_2Sb_2O$, which possesses the hexagonal structure as determined by X-ray powder diffraction technique. The magnetic susceptibility (χ) is isotropic above $T_N \sim$ 60 K, initially increasing with increasing temperature (T). After reaching the maximum at $T_{MAX} \sim$ 150 K, χ decreases with increasing T and can be described by Curie-Weiss law with negative Curie-Weiss temperature. Below T_N, magnetic anisotropy is observed: χ_{ab} decreases sharply but χ_c increases with decreasing T, suggesting an antiferromagnetic type ordering at T_N. Interestingly, the temperature dependence of electrical resistivity along both *ab* plane and *c* direction changes from exponential dependence above T_{MAX} to logarithmic dependence below T_{MAX}, reflecting strong Kondo effect.

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