

Abstract Submitted
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Magnetic Moment Enhancement in Mn₁₁Si₁₉ micro-particles

KIYOTAKA HAMMURA, Hitachi Cambridge Laboratory, HARUHIKO UDONO, Ubaraki University, TOMOSUKE AONO, Ibaraki University — Our paper aims to investigate a size dependence of Mn₁₁Si₁₉ magnetism experimentally since there has not been a consensus on it. Mn₁₁Si₁₉, one of the family of compounds referred to as highly manganese silicides (HMS). HMS, in general, have attracted attention because of their potential to be used as thermoelectric materials. Investigation of HMS's basic properties is required. We measured magnetization curves in Mn₁₁Si₁₉ both in bulk and in powder (about 5 μ m in diameter) states using a SQUID magnetometer at 5K to 300K. We confirmed paramagnetic properties in bulk and soft ferromagnetic ones in powder states. The Arrott plotting was used for an analysis of the powder's data.

Kiyotaka Hammura
Hitachi Cambridge Laboratory

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