Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Electronic structures of Ce-based Kondo insulators T.-S. NAM, Pohang Univ of Sci Tech, C.-J. KANG, Rutgers University, D.-C. RHYU, K. KIM, B. I. MIN, Pohang Univ of Sci Tech — Topological Kondo insulators draw lots of recent attention, and so research on Kondo insulators is actively revived. SmB6 is a typical example. Among Ce-based systems, CeNiSn and CeRhSb have also been investigated as promising candidates of Kondo insulators, but it is controversial whether they are Kondo insulators or semimetals. Recent magnetothermoelectric measurement on CeNiSn suggested that CeNiSn is a nodal metal arising from anisotropic hybridization. Specific heat and thermal conductivity measurements, however, indicate that CeNiSn has an anisotropic pseudo-gap. To explore the Kondo nature in CeNiSn, we have investigated the electronic structures of CeNiSn, CeRhSb, and CeRhAs that is an isostructural material with CeNiSn, utilizing the density functional theory and the dynamical mean field theory. We have also examined the topological properties of those systems.

Taesik Nam
Pohang Univ of Sci
Tech

Date submitted: 03 Jan 2017 Electronic form version 1.4