

Abstract Submitted
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Kondo effect in a novel 5d quasi-skutterudite $\text{Yb}_3\text{Os}_4\text{Ge}_{13}$
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ter Physics & Institute of Physics, Chinese Academy of Science — We report the
crystal growth of a new compound, $\text{Yb}_3\text{Os}_4\text{Ge}_{13}$, by using a Bi-flux method. It
crystalizes in the quasi-skutterudite-type caged structure with a cubic space group
of Pm-3n (No. 223). Magnetic measurements reveal almost fully localized Yb *f*-
moments above 120 K. The resistivity exhibits a crossover from metallic to insu-
lating behavior with a logarithmic increase below ~ 40 K. The specific heat coeffi-
cient shows a rapid upturn below ~ 5 K and exceeds $2 \text{ J mol}^{-1} \text{ K}^{-2}$ at 2 K. Our
experimental analysis and electronic band structure calculations demonstrate that
 $\text{Yb}_3\text{Os}_4\text{Ge}_{13}$ exhibits the Kondo effect due to strong hybridization of the localized
Yb *f*-moments with the *p*-electrons of the surrounding Ge-cages.

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