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**Bulk Fermi surface of charge-neutral excitations in SmB<sub>6</sub> or not: A heat-transport study**

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Recently, there have been increasingly hot debates on whether a bulk Fermi surface of charge-neutral excitations exists in the topological Kondo insulator SmB<sub>6</sub>. To unambiguously resolve this issue, we perform the low-temperature thermal conductivity measurements of a high-quality SmB<sub>6</sub> single crystal down to 0.1 K and up to 14.5 T. Our experiments show that the residual linear term of thermal conductivity at the zero field is *zero*, within the experimental accuracy. Furthermore, the thermal conductivity is insensitive to the magnetic field up to 14.5 T. These results demonstrate the absence of fermionic charge-neutral excitations in bulk SmB<sub>6</sub>, such as scalar Majorana fermions or spinons and, thus, exclude the existence of a bulk Fermi surface suggested by a recent quantum oscillation study of SmB<sub>6</sub>. This puts a strong constraint on the explanation of the quantum oscillations observed in SmB<sub>6</sub>. [1] Y. Xu, S. Cui, J. K. Dong, D. Zhao, T. Wu, X. H. Chen, Kai Sun, Hong Yao, and S. Y. Li, Phys. Rev. Lett. 116, 246403 (2016).