
Surface States in the Kondo Insulator SmB6

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Abstract

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In 2010 it was predicted theoretically that Kondo insulators with tetragonal or orthorhombic symmetries could become a host to topologically protected metallic surface states [1]. Very recent transport [2-4] and point contact spectroscopy [2] studies give strong evidence for a metallic surface state in the Kondo insulator SmB6. In this talk I will review these experimental studies and discuss other preliminary experiments designed to determine if the surface states are topologically protected.

1. Dzero, Sun, Galitski, and Coleman, PRL 104, 106408 (2010).
2. Zhang et al., PRX 3, 011011 (2013).
3. Wolgast et al., arXiv:1211.5104.
4. Botimer et al., arXiv: 1211.6769.

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