

Abstract Submitted
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Surface bulk differences in a Kondo lattice system KALOBARAN MAITI, Tata Inst of Fundamental Res, THOMAS PRUSCHKE, University of Goettingen, KHADIZA ALI, DEEPNARAYAN BISWAS, SANGEETA THAKUR, SWAPNIL PATIL, NISHAINA SAHADEV, GANESH ADHIKARY, Tata Inst of Fundamental Res, G. BALAKRISHNAN, University of Warwick — Antiparallel coupling between the magnetic moment and conduction electrons leads to a non-magnetic Fermi liquid phase in a magnetic material - this is known as Kondo effect. Such coupled electronic states appear as a sharp feature at the chemical potential at low temperatures, called Kondo resonance feature. Photoemission spectra of Kondo systems often exhibit growth of multiple Kondo resonance features with large intensity at temperatures much higher than the Kondo temperature. We studied the evolution of the Kondo resonance feature in CeB6 employing high resolution photoemission spectroscopy and state of the art calculations based on dynamical mean field theory. We observe multiple Kondo resonance features with anomalies in their temperature evolution. It appears that the surface of these systems possess high Kondo temperature compared the bulk that causes unusual temperature evolution in these materials.

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