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Electron spin resonance of the Kondo ion in YbRh₂Si₂

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Abstract

By means of electron spin resonance (ESR) we investigated the dynamic magnetic properties of the heavy fermion metal YbRh₂Si₂. This is the first observation of Yb³⁺-ESR in YbRh₂Si₂ being also the first ESR signal of a Kondo ion in a dense Kondo lattice system. Below $T = 25$ K strongly anisotropic ESR spectra observed in high-quality single crystals demonstrate the existence of local Yb³⁺ magnetic moments even below a characteristic spin fluctuation temperature derived from thermodynamic properties. © 2003 Elsevier B.V. All rights reserved.

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Keywords

Electron spin resonance, YbRh₂Si₂