

Intrinsic EPR in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$: Manifestation of three-spin polarons

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Abstract

Electron-paramagnetic resonance (EPR) measurements on $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ provide experimental evidence of a three-spin polaron, consisting of two Cu^{2+} ions and one p hole. The symmetry properties and the peculiar temperature dependence of the g values of the EPR line indicate the presence of dynamical Jahn-Teller distortions and formation of a collective mode of polarons and surrounding strongly correlated Cu ions (bottlenecked regime).
