

Intensity of the EPR spectrum in quenched samples of YBa₂Cu₃O_x compounds

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Abstract

The temperature dependence of the intensity of the EPR signal is measured in the high-temperature superconductor YBa₂Cu₃O_{6.85} and in the nonsuperconducting compound YBa₂Cu₃O_{6.25}. The copper-oxygen cluster model with spin $S=2$ best describes the results obtained in a sample with an oxygen index of 6.25. The interpretation of the experimental results for a sample with an oxygen index of 6.85, on the other hand, requires the additional assumption that the cluster $S=2$ also has a 200-fold degenerate level at a distance ~ 110 K. © 1997 American Institute of Physics.
