SUPERCONDUCTING AND MAGNETIC PHASES IN THE PEROVSKITE-LIKE CUPRATES: THE PROBLEM OF PHASE SEPARATION

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9.7 cm

Studies of magnetic and transport properties of the 1212 compounds $MA_2LnCu_2O_{7-x}$ (M = Al or Tl; A = Sr or Ba; Ln = lanthanides or Y) revealed a number of interesting magnetic phenomena. Apart from high-temperature superconductivity, these compounds exibit spontaneous antiferromagnetism, field-induced antiferromagnetism or ferromagnetism. The different magnetic orders and superconductivity may be realized in the same compound as a result of the phase separation.

13.4 cm

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