Oxygen-isotope effect on magnetic properties of $Pr_{0.7}Ca_{0.3}MnO_3$ under strong pulsed magnetic fields

N. A. Babushkina, G. E. Fedorov, A. V. Inyushkin, A. N. Taldenkov
Institute of Molecular Physics, Russian Research Centre "Kurchatov Institute",
123182 Moscow, Russia

Magnetization and susceptibility measurements have been performed on the oxygen-isotope substituted (^{16}O and ^{18}O) samples of $Pr_{0.7}Ca_{0.3}MnO_3$ under pulsed magnetic fields up to 35 Tesla. Experiments were carried out within temperature range 78 to 300 K. Magnetic-field-induced phase transition into ferromagnetic state has been obtained in both samples at temperatures up to 200 K. Isotope substitution has been proved to have a significant impact on the temperature and field of this transition. Phase diagrams of the samples obtained from magnetization measurements are presented.

9.7 cm

13.4 cm

Subject category :

5. Phase Transitions and Critical Phenomena

Presentation mode :
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Corresponding author :
G. E. Fedorov

Address for correspondence :
Institute of Molecular Physics
RRC "Kurchatov Institute"
Kurchatov sq. 1
123182 Moscow, Russia

Email address :
fedorov@imp.kiae.ru