Magnetostriction in superconducting MgB_2

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The magnetostriction measurements have been performed at various temperatures for superconducting MgB_2 using three terminal capacitance technique in magnetic field up to 12 T. The obtained results were analyzed in frames of the pinning induced model of magnetostriction. The performed scaling analysis of obtained experimental data suggests that the pinning mechanism responsible for magnetostriction in MgB_2 is unique over broad temperature region below the critical temperature.

9.7 cm

13.4 cm

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