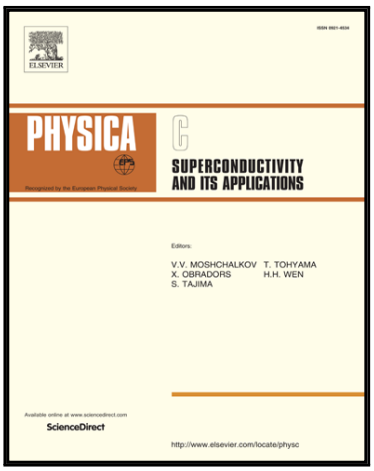

Phonon dispersion models for MgB_2 with application of pressure

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Highlights

- *Ab initio* DFT MgB_2 phonon dispersion for pressures up to 20 GPa are presented
- Extent of E_{2g} phonon anomaly and thermal energy, $T_{\delta,}$ are pressure dependent
- Phonon anomaly thermal energy equivalent to experimental T_c values for MgB_2
- Computational method to measure T_δ is an effective predictor of T_c