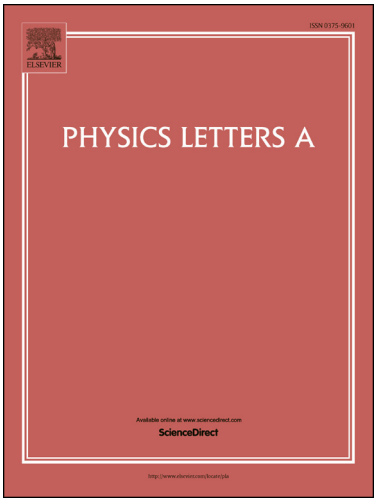
Accepted Manuscript



Localized vibrational modes in diamond

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PII: S0375-9601(16)31740-6
DOI: http://dx.doi.org/10.1016/j.physleta.2017.01.014
Reference: PLA 24284

To appear in: *Physics Letters A*

Received date: 14 November 2016
Accepted date: 10 January 2017

Please cite this article in press as: R.T. Murzaev et al., Localized vibrational modes in diamond, *Phys. Lett. A* (2017), http://dx.doi.org/10.1016/j.physleta.2017.01.014

Highlights

- Molecular dynamics simulation of discrete breathers in diamond was performed.
- Single and double discrete breathers had relative long lifetime.
- Energy exchange between neighboring discrete breathers was found.
- Hard type of nonlinearity was observed for all considered discrete breathers.