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Buckling induced flat bands: Giant nanoscale periodic strain

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Abstract

Two-dimensional atomic crystals can radically change their properties in response to external influences, The strain fields induced by periodically buckling graphene result in a periodic pseudo-magnetic field. Using scanning tunneling microscopy and spectroscopy, together with numerical simulations, we demonstrate. From the geometry, amplitude, and period of the periodic pseudo-magnetic field, we determine the necessary

References

[1] J. Mao, S. P. Milovanovic, M. Anđelković, X. Lai, Y. Cao, K. Watanabe, T. Taniguchi, L. Covaci, F. M. Peeters, A. K. Geim, Y. Jiang, and E. Y. Andrei: “Evidence of Flat Bands and Correlated States in Buckled Graphene Superlattices”, Nature 584, 215 (2020).

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