Abstract Submitted
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Topological phase transition driven by electron-phonon interaction KUSH SAHA, ION GARATE, University of Sherbrooke — We study the effect of electron-phonon interactions in the band topology of Dirac insulators, both at zero and finite temperature. Elaborating on recent theoretical work [1], we determine how and when phonons can drive a trivial insulator into a topological insulating phase. As an application, we evaluate the temperature-dependence of the critical thickness for the topological transition in CdTe/HgTe quantum wells.

Ref[1]: Ion Garate, PRL 110, 046402 (2013).

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