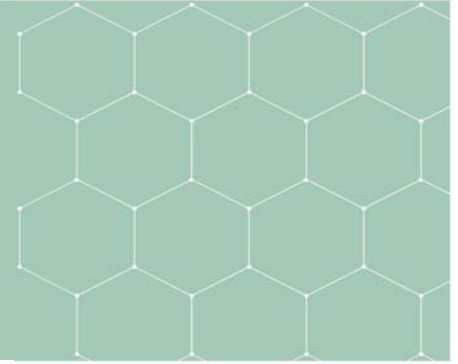




PHYSICS
COLORADO STATE UNIVERSITY



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Moiré Patterns in van der Waals Heterojunctions

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120 Engineering (Hammond Auditorium)

Abstract

According to Wikipedia a **moiré pattern** ([/mwa:r'eɪ/](#); French: [\[mwa'ʁe\]](#)) is a large scale interference pattern that is produced when an opaque regular pattern with transparent gaps is overlaid on another similar pattern. Moiré pattern appears when two dimensional crystals are overlaid with a small difference in lattice constant or a small difference in orientation, are ubiquitous in van der Waals heterojunctions, and can be controlled by varying relative orientation. I will discuss some examples of new physics that can be realized using moiré patterns formed by graphene on hexagonal boron-nitride, graphene on graphene, and by transition metal dichalcogenides bilayers.

