THE CHINESE UNIVERSITY OF HONG KONG

Department of Physics

COLLOQUIUM

Engineering Flat Bands in Twisted/Stacked Few-Layer Graphene

by



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Date: April 11, 2025 (Friday)
Time: 4:00 - 5:00 p.m.
Place: L2, Science Centre, CUHK

(Light refreshments will be served at SCNB 1/F lobby from 3:30 to 3:50 p.m.)

ALL INTERESTED ARE WELCOME
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Abstract

Stacking graphene layers at different twist angles or stacking orders can lead to different symmetries with emergent properties distinct from the constitute materials, for example, quasi-crystalline graphene in 30-degree twisted bilayer graphene, flat bands and correlated phenomena in magic-angle twisted bilayer graphene, and topological flat bands and quantum anomalous Hall effect in rhombohedral graphene. The electronic structure engineering in such heterostructure/superstructure is critical underlying these interesting phenomena. In this talk, I will present our recent experimental progress on engineering flat bands in graphene-based materials, made possible by combining high-resolution Nanospot angle-resolved photoemission spectroscopy (NanoARPES) with real-space characterization of the moire superlattice.

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