Department of Physics, National Central University



## Novel Phenomena in a Two-Dimensional World through Ordered Structures



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This talk delves into the intriguing world of two-dimensional (2D) materials, specifically epitaxial bismuthene and moiré graphene. Using Scanning Tunneling Microscopy (STM), we uncovered the atomic and electronic structures of epitaxial bismuthene, which exhibited distinct topological properties. Additionally, we investigated the emergence of extreme pseudo-magnetic fields in moiré graphene and how they were used to adjust electronic behaviors. These findings demonstrated the vast potential of 2D materials in advancing materials science and technology.