## MACHIDA LAB.

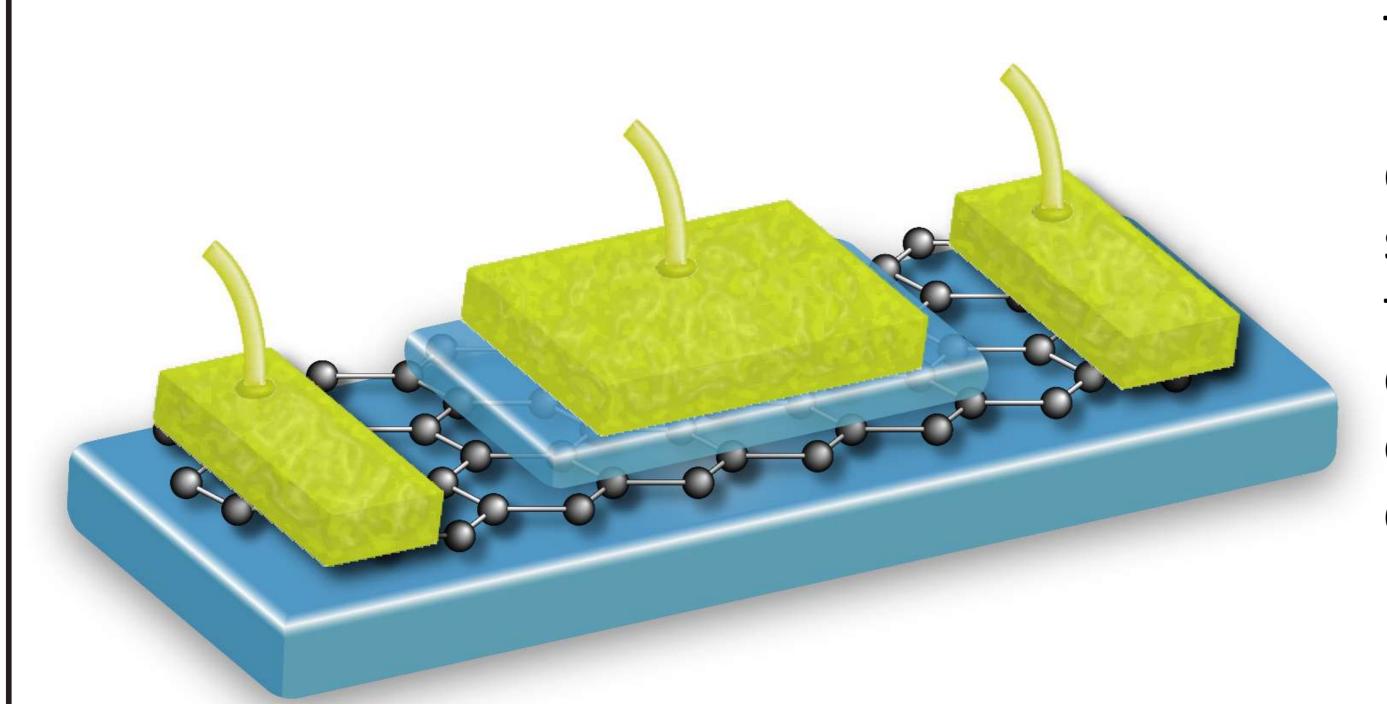
## Science of Atomic Layer Materials



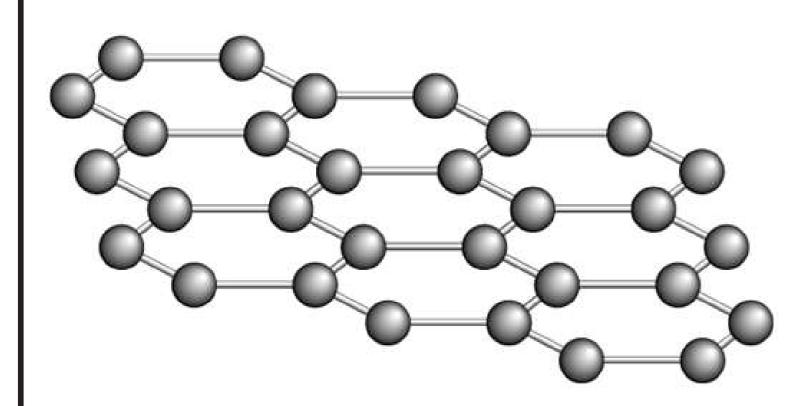
Department of Fundamental Engineering

Quantum Transport in Low-dimensional Systems Department of Materials Engineering, Graduate School of Engineering

http://qhe.iis.u-tokyo.ac.jp/

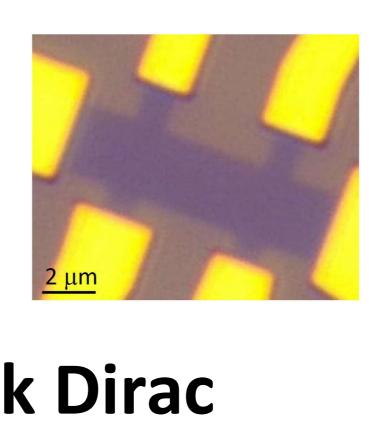


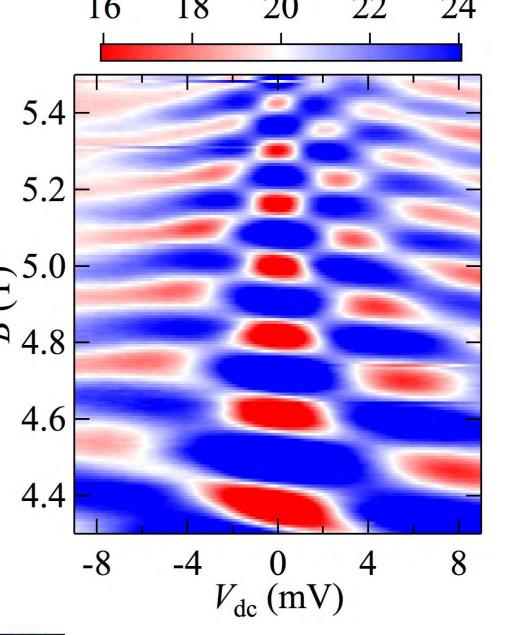
The graphene and other one atomic layer thick crystals reveal unusual quantum physics. By combining material science, nano-fabrication, and low temperature (10 mK) measurement, we explore the science and the engineering of graphene and two-dimensional crystals.



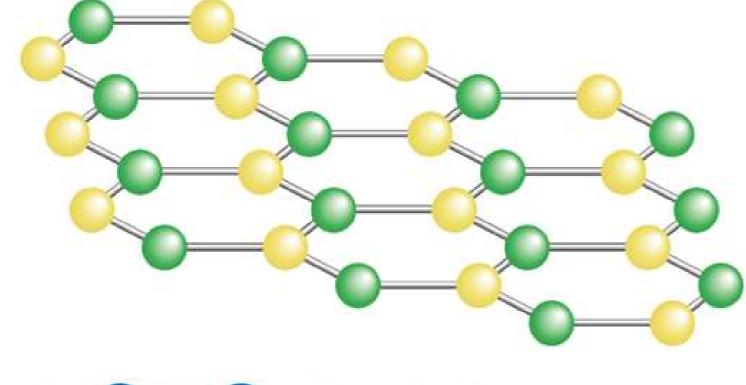
Graphene

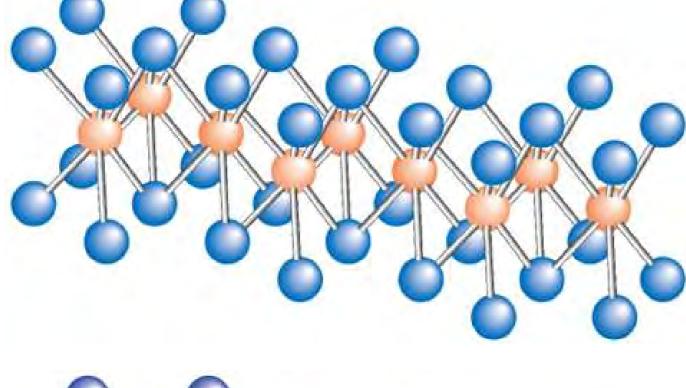
One atomic layer thick Dirac material





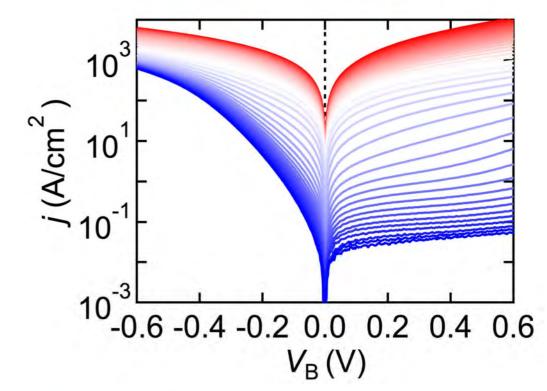
 $G(\mu S)$ 

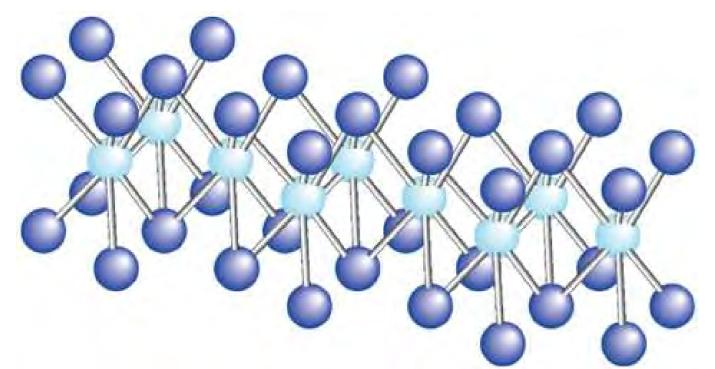


h-BN 2D insulator 

MoS<sub>2</sub>

Monolayer semiconductor





NbSe<sub>2</sub>
Superconductivity in one monolayer

