MACHIDA LAB.

[Science of Atomic Layer Materials]

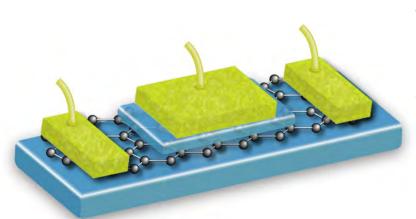
Department of Fundamental Engineering

Quantum Transport in Low-dimensional Systems

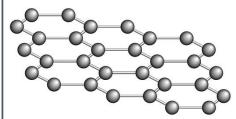
Department of Materials Engineering

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

 V_{dc} (mV)

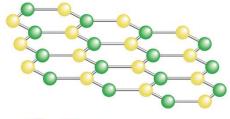


The graphene and other one atomic layer thick crystals reveal unusual quantum physics. By combining material science, nano-fabrication, and low temperature (10 mK) measurement, we explore the science and the engineering of graphene and two-dimensional crystals.



Graphene

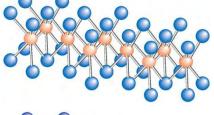
One atomic layer thick Dirac material



h-BN 2D insulator

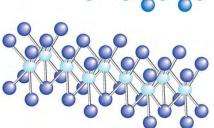
8
4
2
0
-40 -20 0 20 40

V_{BG} (V)



MoS₂

Monolayer semiconductor



NbSe₂ Superconductivity in one § monolayer

