MACHIDA LAB.

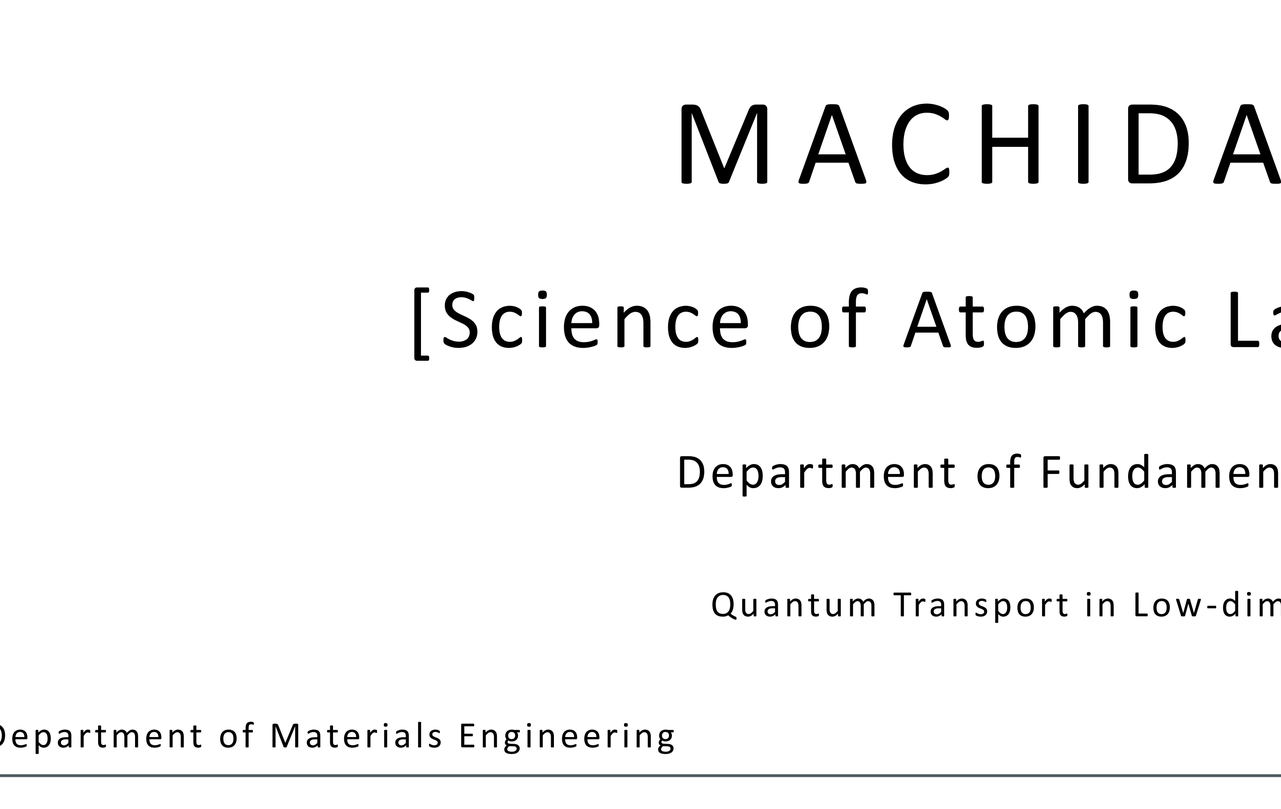
[Science of Atomic Layer Materials]

Department of Fundamental Engineering

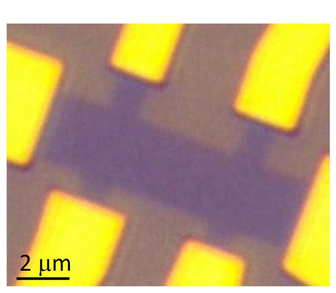
Quantum Transport in Low-dimensional Systems

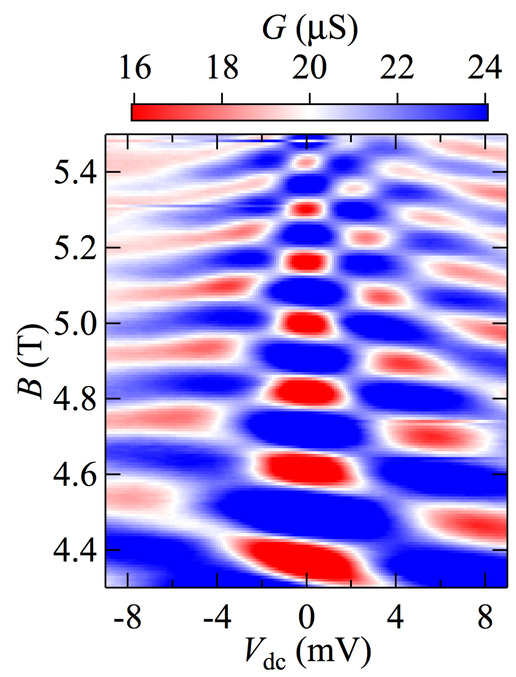
Department of Materials Engineering

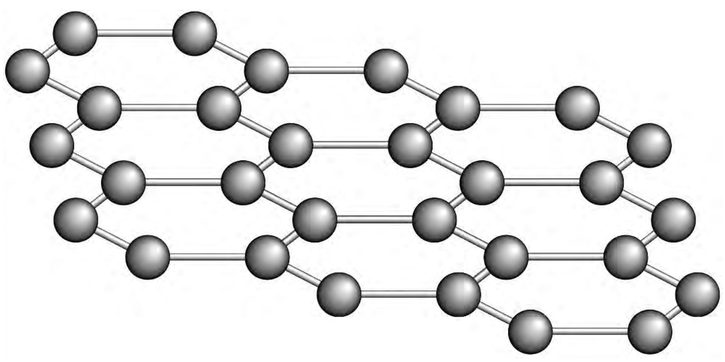
http://qhe.iis.u-tokyo.ac.jp



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.

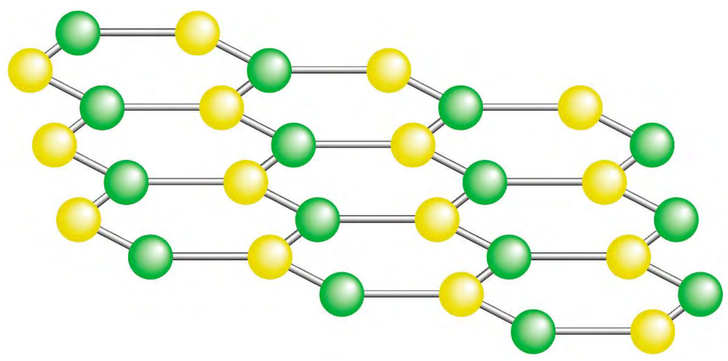






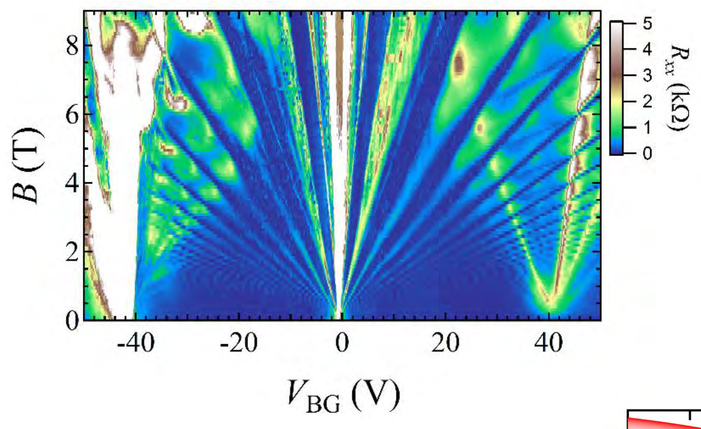
Graphene

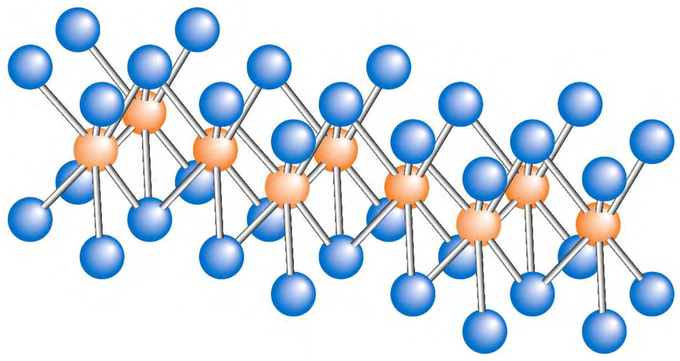
One atomic layer thick Dirac material



h-BN

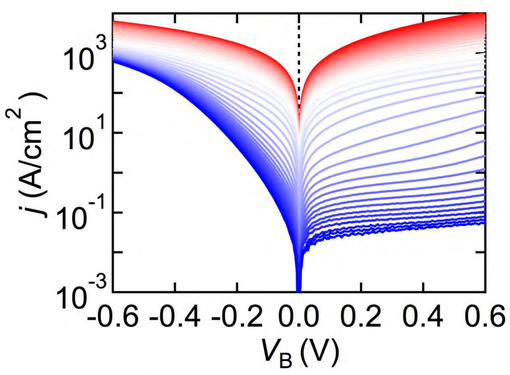
2D insulator

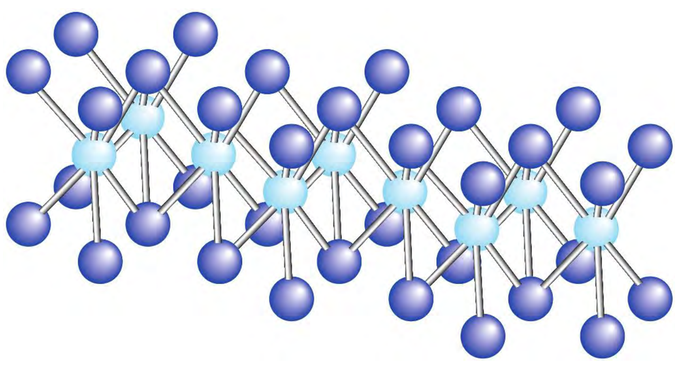




MoS_2

Monolayer semiconductor





$NbSe_2$

Superconductivity in one monolayer