

MACHIDA LAB.

Science of Atomic Layer Materials



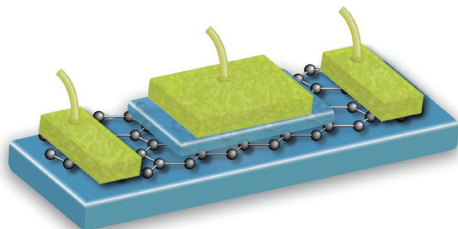
Department of Fundamental Engineering

Quantum Transport in Low-dimensional Systems

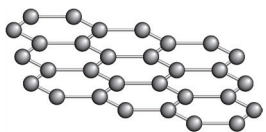
Department of Materials Engineering, Graduate School of Engineering

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

Science of Atomically Thin Crystals

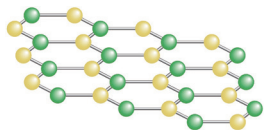
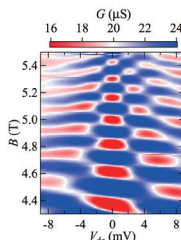
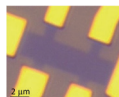


The graphene and other one atomic layer thick crystals reveal unusual quantum physics. By combining material science, nano-fabrication, and low temperature (10 mK) measurement, we explore the science and the engineering of graphene and two-dimensional crystals.



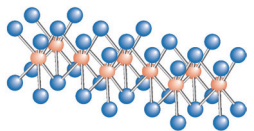
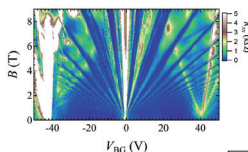
Graphene

One atomic layer thick Dirac material

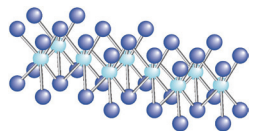
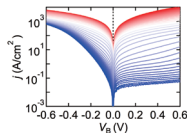


h-BN

2D insulator

MoS₂

Monolayer semiconductor

NbSe₂

Superconductivity in one monolayer

