

## MACHIDA LAB.

## Science of Atomic Layer Materials



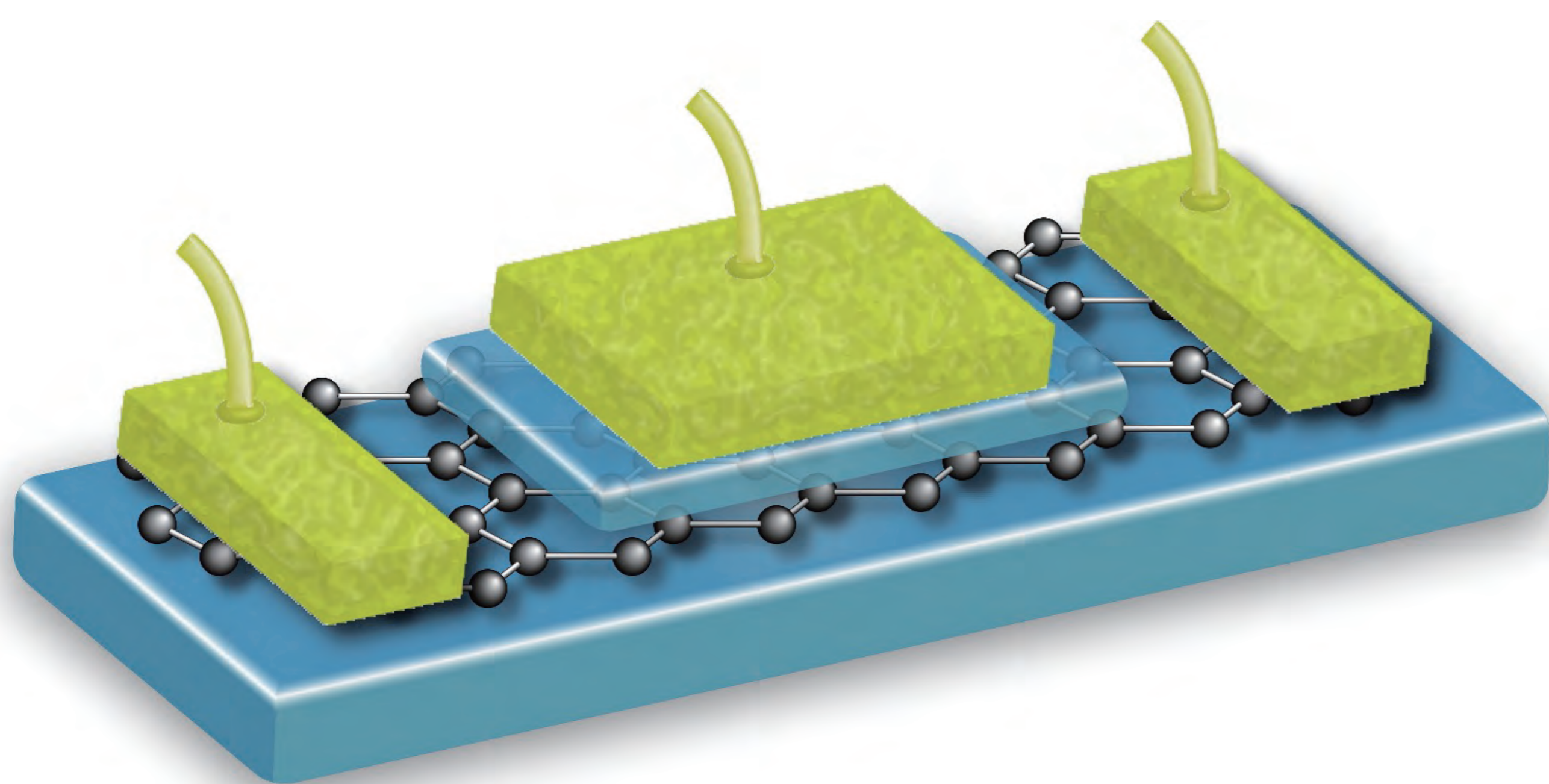
Department of Fundamental Engineering

Quantum Transport in Low-dimensional Systems

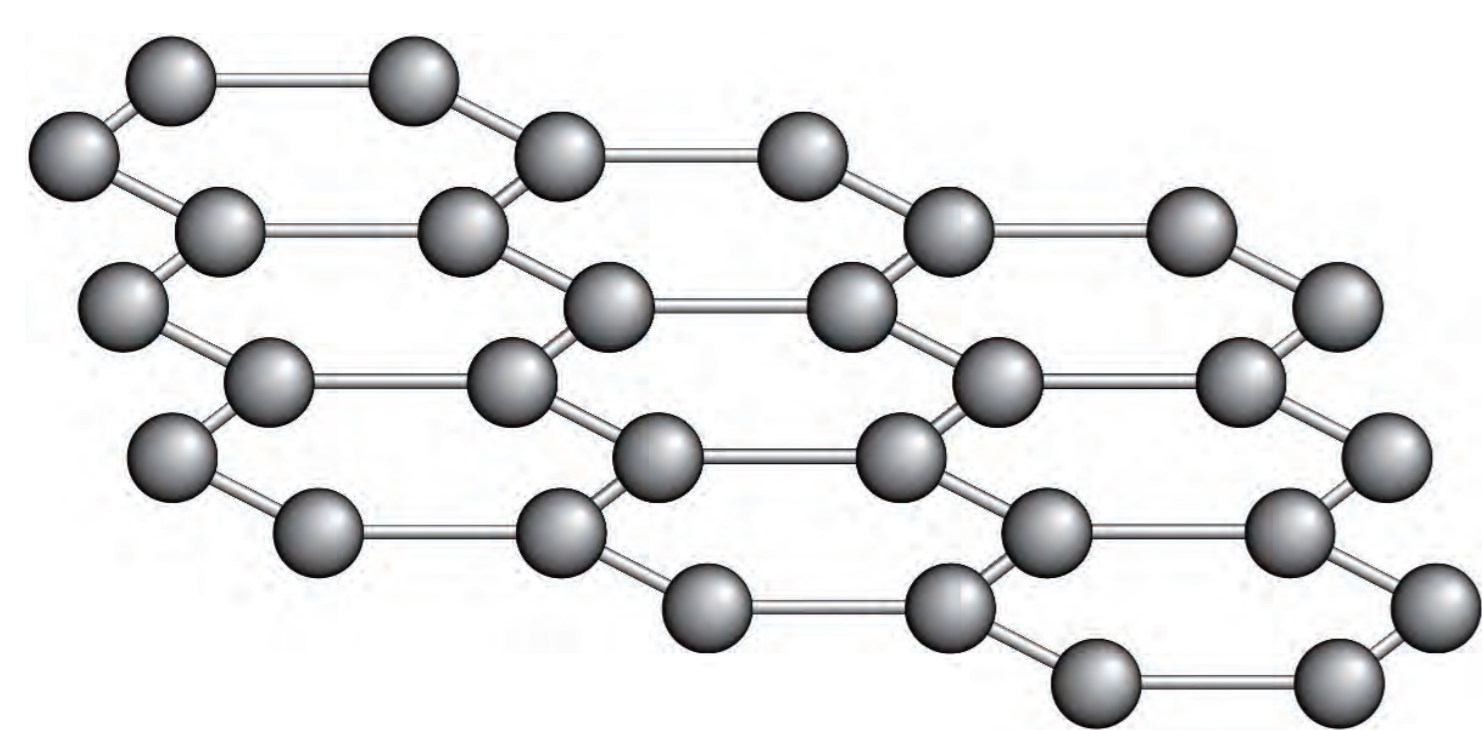
Department of Materials Engineering, Graduate School of Engineering

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

## Science of Atomically Thin Crystals

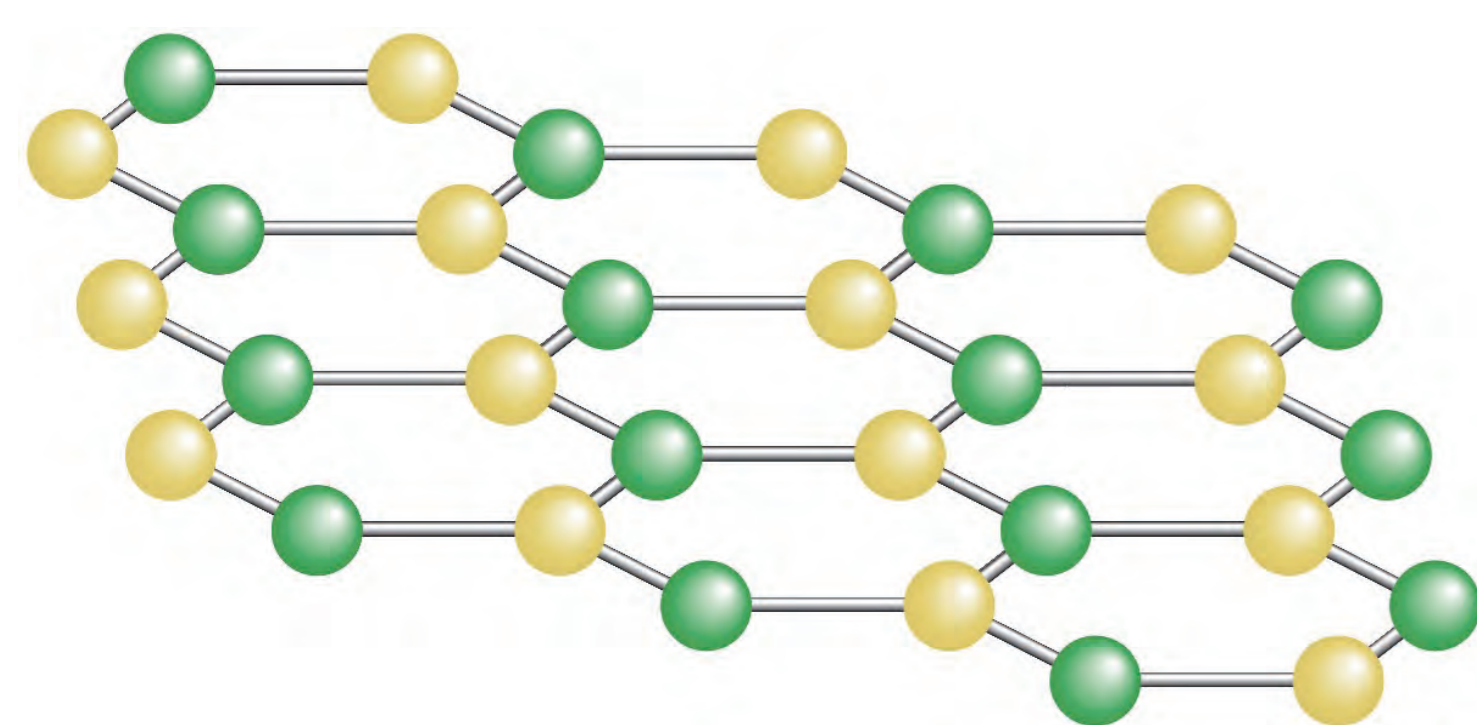


The graphene and other one atomic layer thick crystals reveal unusual quantum physics. By combining material science, nano-fabrication, and low temperature (10 mK) measurement, we explore the science and the engineering of graphene and two-dimensional crystals.



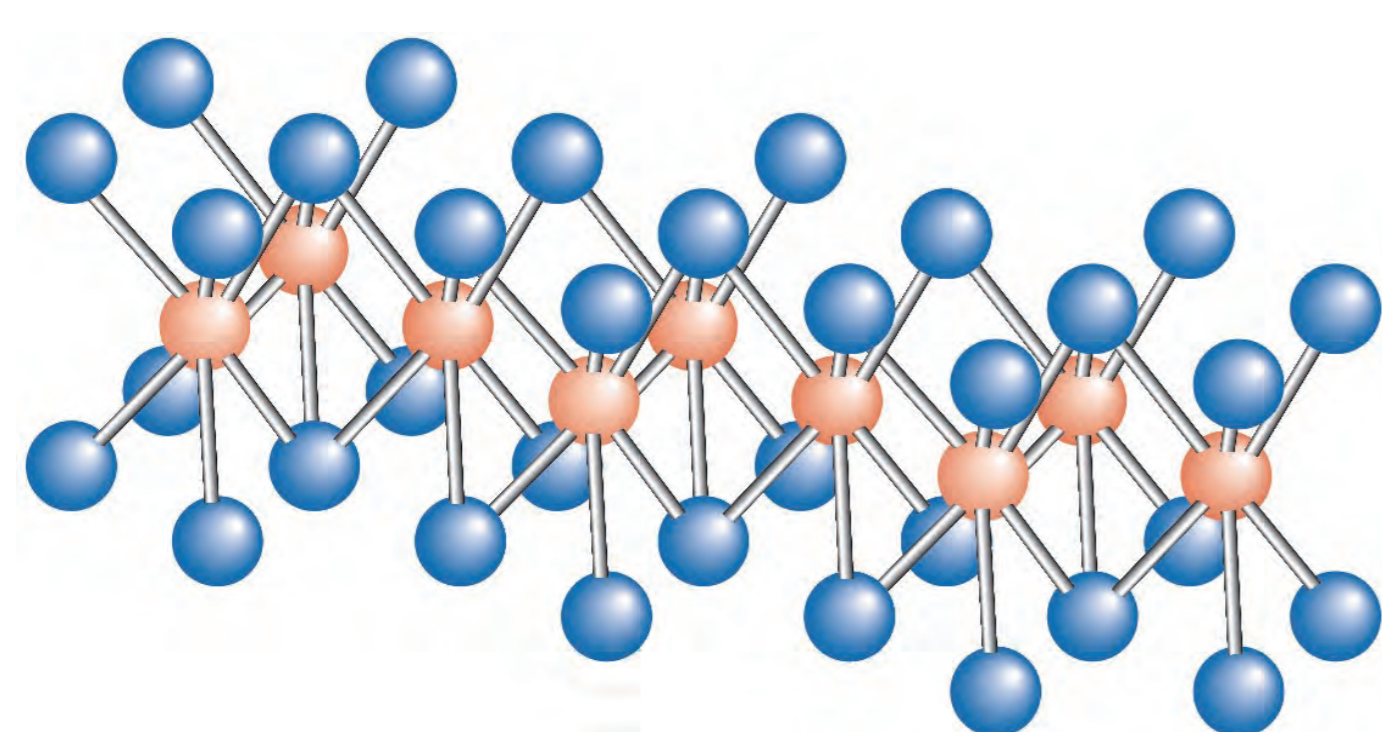
### Graphene

One atomic layer thick Dirac material



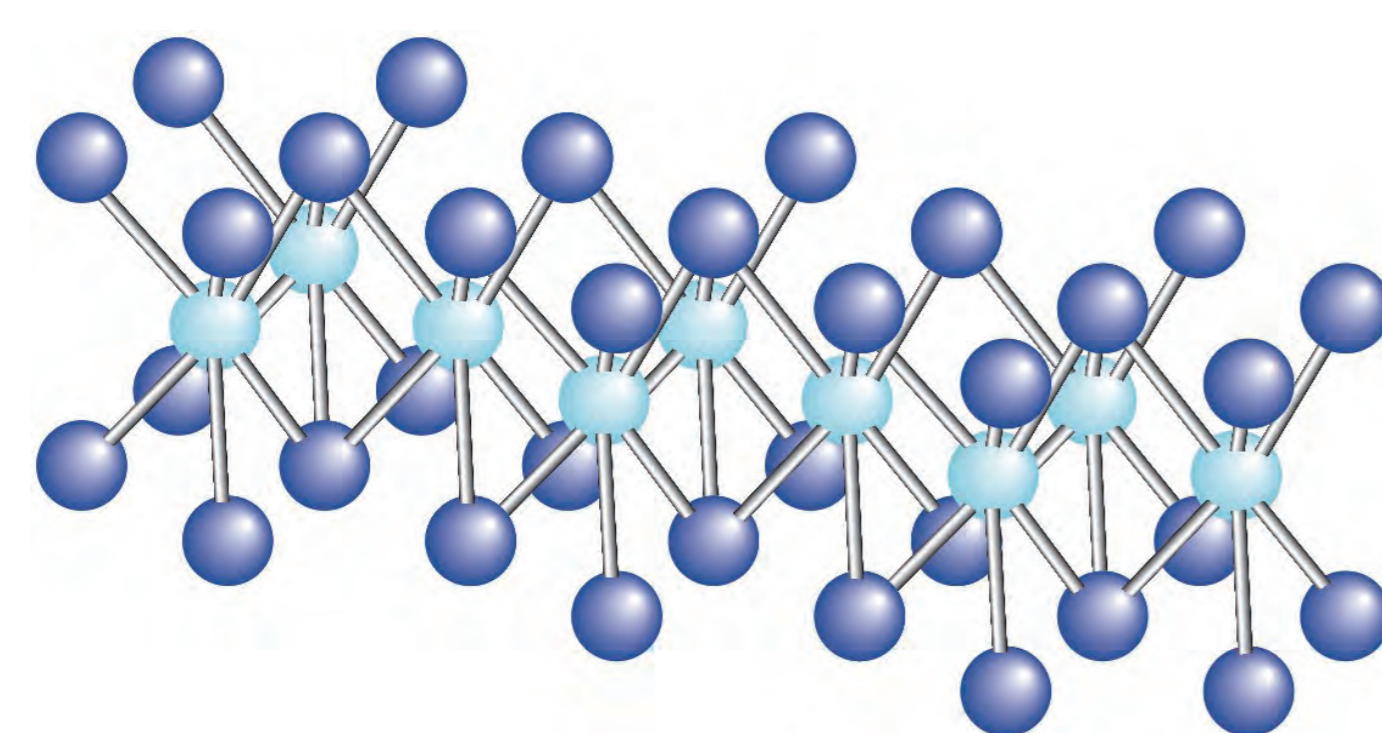
### h-BN

2D insulator



### MoS<sub>2</sub>

Monolayer semiconductor



### NbSe<sub>2</sub>

Superconductivity in one monolayer

