

### Motivation

Ultrathin graphite called graphene layers has attracted intense attention as novel electronic materials. Wide graphene layers with intended number of layers are essential for device application. Aiming at establishing their growth techniques, we are developing methods to determine number of graphene layers microscopically.

### Originality

We measured reflectivity of electron from graphene layers formed on SiC microscopically using low-energy electron microscopy (LEEM). We have shown that the number of graphene layers can be determined using the quantized oscillation of the electron reflectivity.

### Impact

Uniform, wide graphene layers could enable us to integrate graphene devices utilizing quantum effects, spin effects, and so on, and would greatly contribute to creating future graphene-based electronics.

Contact person: Dr. Hiroki Hibino  
Materials Science Laboratory, NTT Basic Research Laboratories  
TEL: 046-240-3467 FAX: 046-240-4718  
e-mail: hibino@will.brl.ntt.co.jp

