

# Publications and Invited Talks

Atsushi Oshiyama

## (A) Original Papers

1. A. Oshiyama, J.-i. Iwata, K. Uchida and Y. Matsushita, “Large-Scale Real-Space Density-Functional Calculations: Moiré-Induced Electron Localization in Graphene” Proceedings of invited talks in 32nd International Conference on the Physics of Semiconductors, J. Appl. Phys **117**, 112811 (2015).
2. S. Suda and A. Oshiyama, “Energetics, Electron States, and Magnetization in Nearly Zigzag-Edged Graphene Nano-Ribbons” J. Phys. Soc. Jpn. **84**, 024704 (2015).
3. Y. Sakai and A. Oshiyama, “Structural Stability and Energy-Gap Modulation through Atomic Protrusion in Freestanding Bilayer Silicene” Phys. Rev. B **91**, 201405(R) (2015).
4. K. Sawada, J.-I. Iwata and A. Oshiyama, “Origin of Repulsive Interactions between Bunched Steps on Vicinal Solid Surfaces” e-Journal of Surf. Sci Technol. **13**, 231-234 (2015).
5. Z.-X. Guo and A. Oshiyama, “Crossover between silicene and ultra-thin Si atomic layers on Ag (111) surfaces” New J. Phys. **17**, 045028 (2015).
6. Y. Sugihara, K. Uchida and A. Oshiyama, “Electron and Hole Confinement in Hetero-Crystalline SiC Superlattice” J. Phys. Soc. Jpn. **84**, 084709 (2015).
7. Y. Sakai and A. Oshiyama, “Electron doping through lithium intercalation to interstitial channels in tetrahedrally bonded SiC” J. Appl. Phys. **118**, 175704 (2015).
8. Z.-X. Guo, Y.-Y. Zhang, H. Xiang, X.-G. Gong and A. Oshiyama, “Structural evolution and optoelectronic applications of multilayer silicene” Phys. Rev. B, **92**, 201413(R) (2015).

## (B) Review and Books

1. B. Mauro and A. Oshiyama, “Car-Parrinello Molecular Dynamics”, *Encyclopedia of Nanotechnology, Chapter* (Springer 2015).

## (C) Invited Talks

1. A. Oshiyama, “Static and Dynamical Density-Functional Calculations for Nano-Materials: Moiré-Induced Electron Localization in Graphene and Laser-Triggered Crystallization in SiO<sub>2</sub>” MANA International Symposium 2015 (March 11 - 13, 2015, Tsukuba, Japan)