Supporting Information for

Evolution of Graphene Growth on Pt(111): from Carbon Clusters to Graphene

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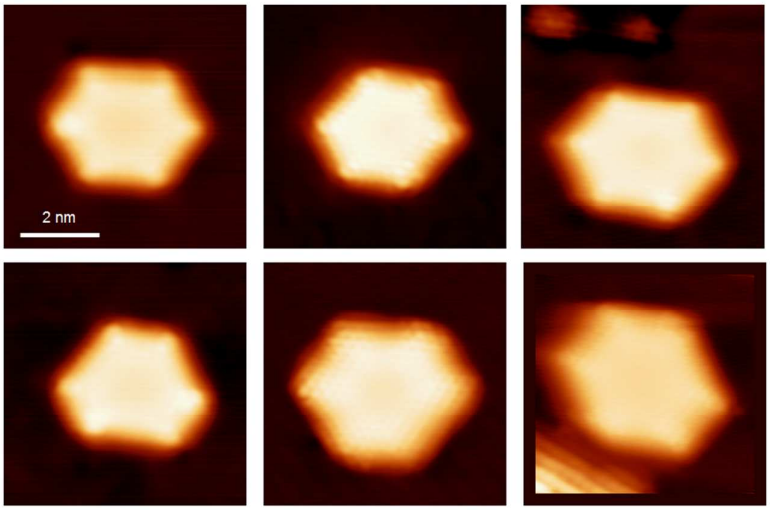

Figure S1. STM images of hexagonal-shaped GNs

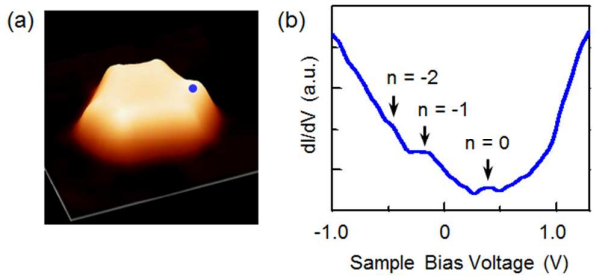

Figure S2. (a) STM image of the GN. (b) Differential conductance (d*I*/d*V*) spectrum taken at the position indicated by the blue dot in (a).

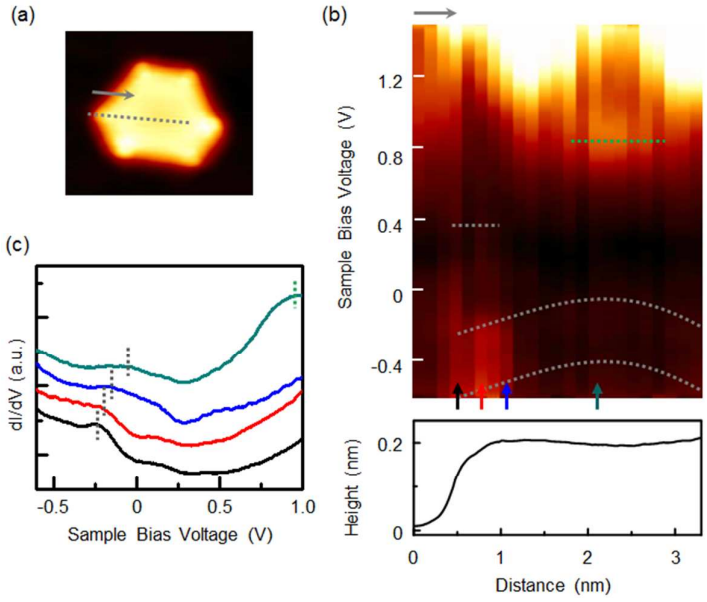

Figure S3. (a) STM image of the basin-shaped GN in Figure 5f. (b) Spatially resolved d*I*/d*V* spectra obtained along the line in (a). The dotted green and gray lines indicate the confined state and LLs, respectively. (c) d*I*/d*V* spectra obtained at the positions indicated by colored arrows in (b).

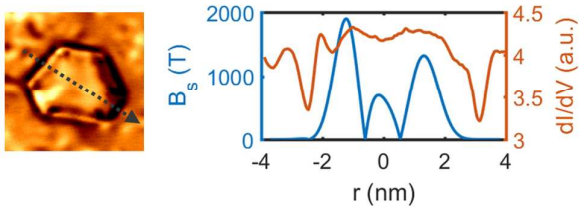

Figure S4. Line profile of the pseudo-magnetic field and d*I*/d*V* taken from Figure 4d and Figure 5g, respectively.

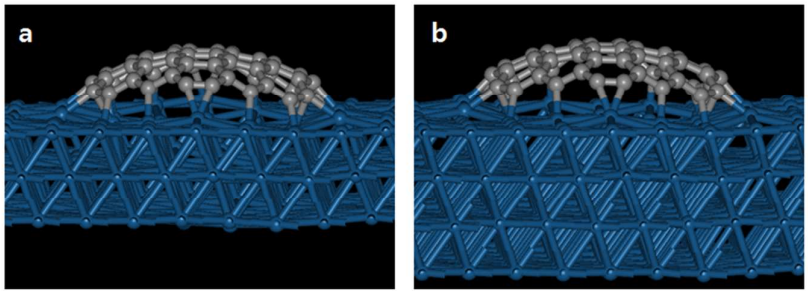

Figure S5. DFT-optimized structures of dome-shaped graphene nanoislands on (a) three and (b) four layers of Pt slab. Calculations were carried out with no frozen atoms.

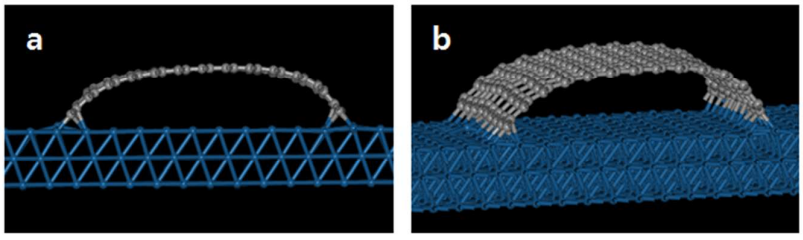

Figure S6. Graphene ribbon on Pt(111) shown in Figures 2c and d optimized with the standard version of the pseudopotential for carbon with a cutoff energy of 400.0 eV.

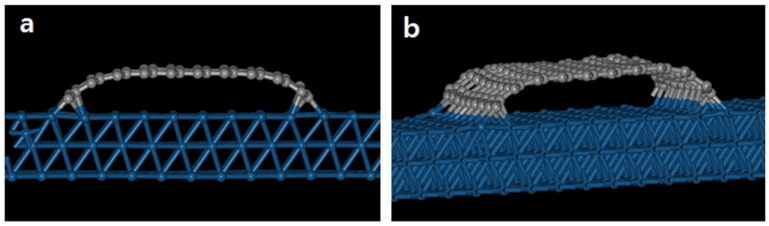

Figure S7. DFT-optimized structure of graphene ribbon on Pt(111) with dispersion corrections using the DFT-D3 method of Grimme *et al*.[s1] with Becke–Johnson damping.[s2]

References

(S1) Grimme, S.; Antony, J.; Ehrlich, S.; Krieg, H. A Consistent and Accurate *ab initio* *P*arametrization of Density Functional Dispersion Correction (DFT-D) for the 94 Elements H-Pu. *J. Chem. Phys*. **2010,** *132*, 154104

(S2) Grimme, S.; Ehrlich, S.; Goerigk, L. Effect of the Damping Function in Dispersion Corrected Density Functional Theory. *J. Comp. Chem*. **2011**, *32*, 1456-1465.