

Observation of 4 nm-Pitch Stripe Domains Formed by Exposing Graphene to Ambient Air

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We study epitaxial graphene on the 6H-SiC(0001) surface under ambient conditions with frequency-modulation atomic force microscopy. We observe large terraces with a self-assembled stripe structure within a highly adsorbate covered surface, on top of the graphene. To identify the origin of the structure, we compare the experimental data on graphene with calculations that predict the formation of a solid-gas-mono-layer in the solid-liquid interface of hydrophobic surfaces.

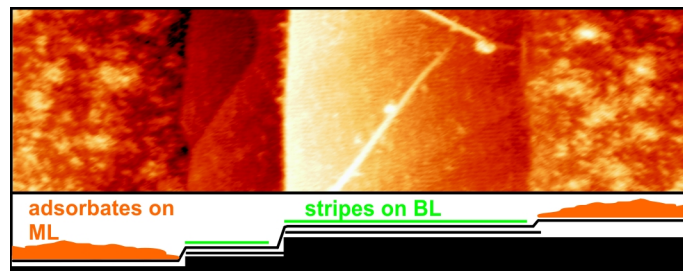


Figure 1: Epitaxial grown mono- and bilayer graphene on SiC(0001). The monolayer part is covered by a high density of disordered adsorbates, where the bilayer part carries a well ordered stripe structure.

References

- [1] Daniel S. Wastl, Florian Speck, Elisabeth Wutscher, Markus Ostler, Thomas Seyller, and Franz J. Giessibl, under review