

Growth and electronic structure of graphene on one-dimensionally-modulated SiC substrate

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Gapless graphene Dirac band has been attracted much attention both for understanding novel electronic properties due to its chiral nature and for their useful applications. It has been theoretically shown that the group velocity of the bands can be tuned anisotropically by external potentials of a few tens nanometer scale. [1] A three-fold anisotropy of the conical band was found for a single-layer graphene modified by adsorbed metal clusters [2] while it was partly masked by the intrinsic trigonal warping of the bands. Here, we report uniaxial deformation of the Dirac cone of the single-layer graphene [3] grown on a vicinal SiC(0001) substrate. Growth, structure and electronic states of graphene on SiC(0001) will be discussed using the experimental results by LEED, AFM, STM and ARPES.

References

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