Intercalation of graphene on Ru(0001): possible mechanisms

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We used scanning tunneling microscopy (STM), low energy electron microscopy (LEEM) and low energy electron diffraction (LEED) to study the mechanisms of intercalation of epitaxial graphene (EG) grown on Ru(0001) by thermal decomposition of ethylene (C_2H_4) [1]. The results revealed direct influence of graphene's preparation method on its structure and the intercalation mechanisms. The experimental results were supported by theoretical ab initio calculations.

References:

[1] S. Marchni, S. Günther, and J. Wintterlin, Phys. Rev. B 76 (2007) 075429.

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