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Functionalization of graphene

Different ways of functionalization in graphene have been explored. This includes, deposition of atoms or molecules, intercalation, substitutional doping, creation of intrinsic defects and several others. In this talk, I will present a brief overview of different approaches we have used to modify the electronic properties of graphene such as nanostructuring of graphene into graphene nanoribbons [1], preparing a well ordered buffer layer graphene [2,3], introducing a superperiodic potential by growing graphene on a vicinal noble metal substrates [4].

References

- [1] I. Palacio et al., Nano Lett. 15 (2015) 182
- [2] M.S. Nevius et al., Phys. Rev. Lett. 115 (2015) 136802
- [3] M. N. Nair et al., Nano. Lett. 17 (2017) 2681
- [4] A. Celis et al., Phy. Rev. B 97 (2018) 195410

Figures

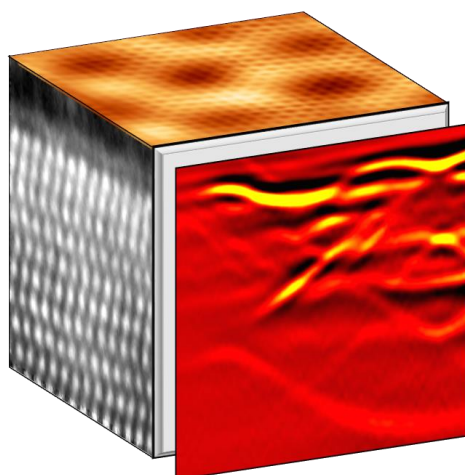


Figure 1: ARPES, STM and scanning transmission electron microscopic view of buffer layer graphene