CW laser commissioning

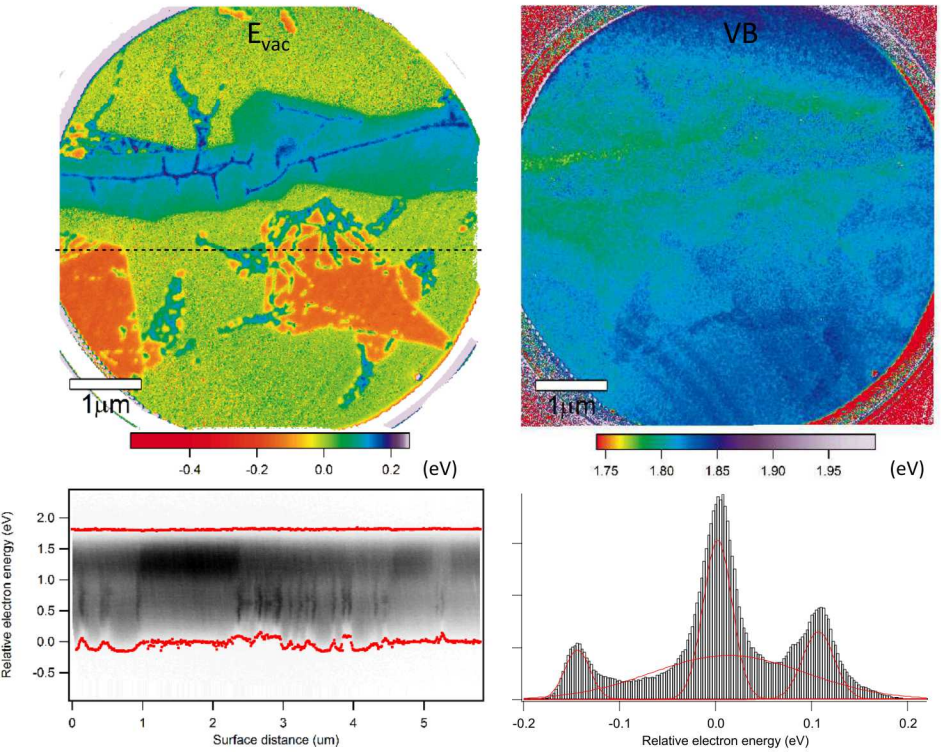
SAND2018-12867D

λ=213nm: 5.82eV

(currently) Smallest electron spectrometer slit: ~200meV nominal resolution

Measurement time: ~90min

Objective lens compensation: used to eliminate the effect of the start voltage



- Sample: multilayer epitaxial graphene grown on SiC(0001)
  - Areas of different thicknesses form domains with different electronic properties
- Features down to 30-50nm resolved in E_{vac} map
- VB map almost featureless due to uniform metallic, but low DOS of graphene
- Multimodal histogram with symmetric distribution of each mode
  - Each mode originates from the area of different graphene thickness
- The histogram width of E_{vac} ~30-40meV reflects the energy resolution of the electron spectrometer's slit used

Acknowledgements

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  - CINT, US DOE Office of Science (DE-AC04-94AL85000)
  - Sandia LDRD

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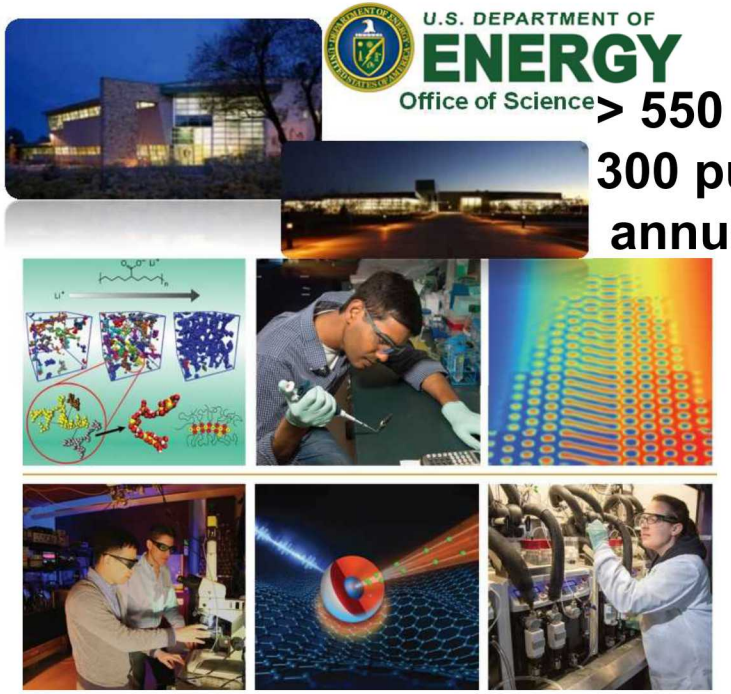
- **<u>Open</u> access for the research community via a proposal process!**



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