

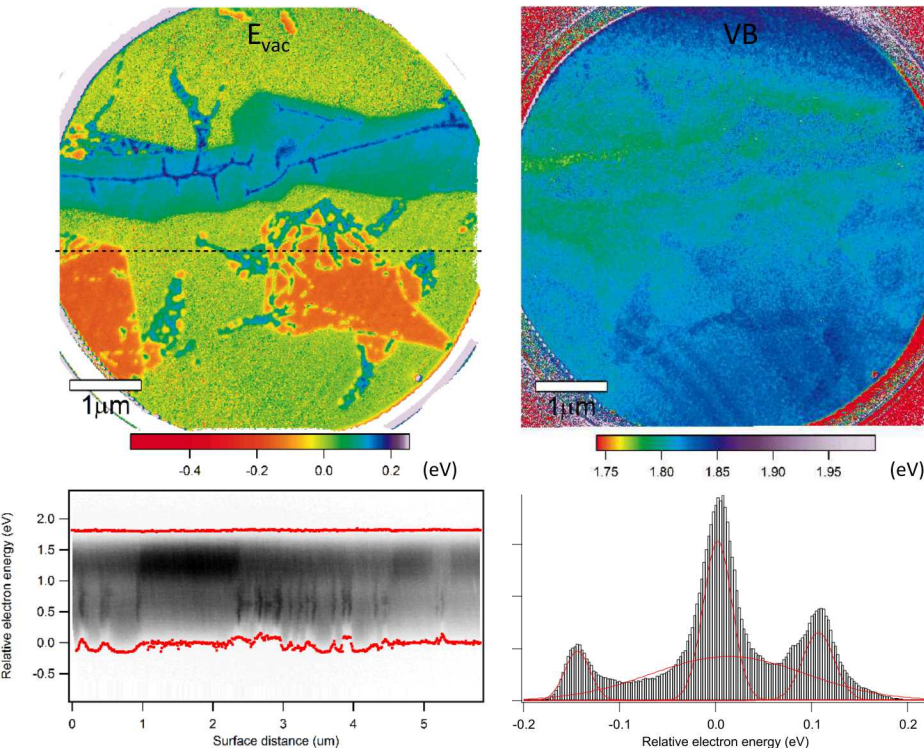
# CW laser commissioning SAND2018-12867D

$\lambda=213\text{nm}$ : 5.82eV

(currently) Smallest electron spectrometer slit:  $\sim 200\text{meV}$  nominal resolution

Measurement time:  $\sim 90\text{min}$

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  $E_{\text{vac}}$  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  $E_{\text{vac}} \sim 30\text{-}40\text{meV}$  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



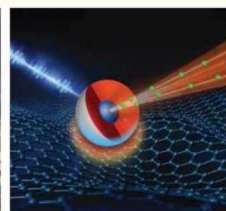
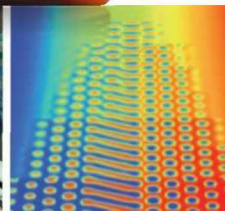
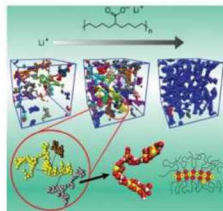
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