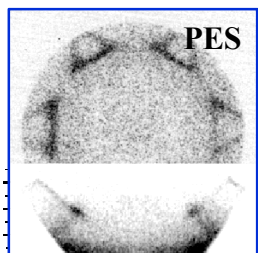
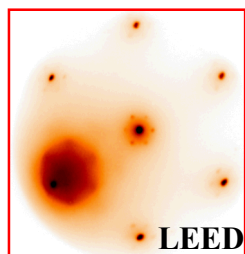
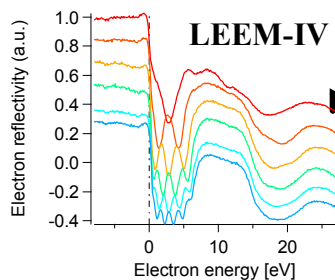


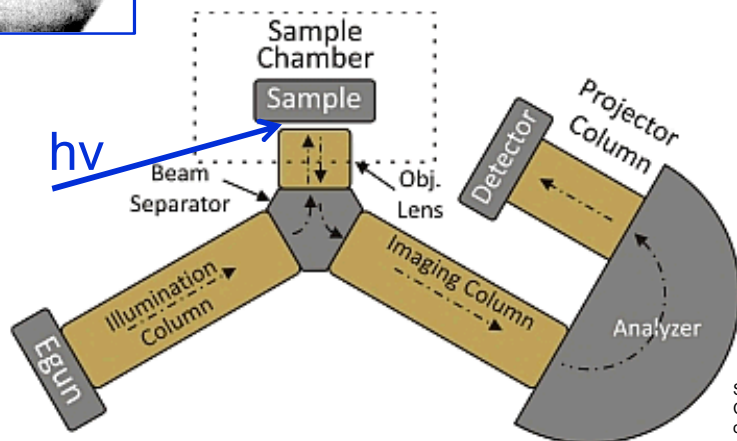
# We study nano-structures/materials using micro-spectroscopy

SAND2012-8373P



LEEM image (75  $\mu\text{m}$  field-of-view)

(Morphology of graphene film on a screw dislocation of SiC)



LEEM-PEEM (low energy & photoemission electron microscopy) research at Sandia NM

– Members: Gary Kellogg, Taisuke Ohta, Bogdan Diaconescu

- Probe surface and thin-film morphology

- Covering wide length-scale (10nm to 100 $\mu\text{m}$ )
- Atomic-scale vertical sensitivity
- Locate and characterize dislocations/defects

- Determine atomic structures

- Low energy electron diffraction (LEED)

- Characterize electronic properties

- Unoccupied states using electron reflectivity measurement (called LEEM-IV)
- Occupied states using photoemission spectroscopy (PES)



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