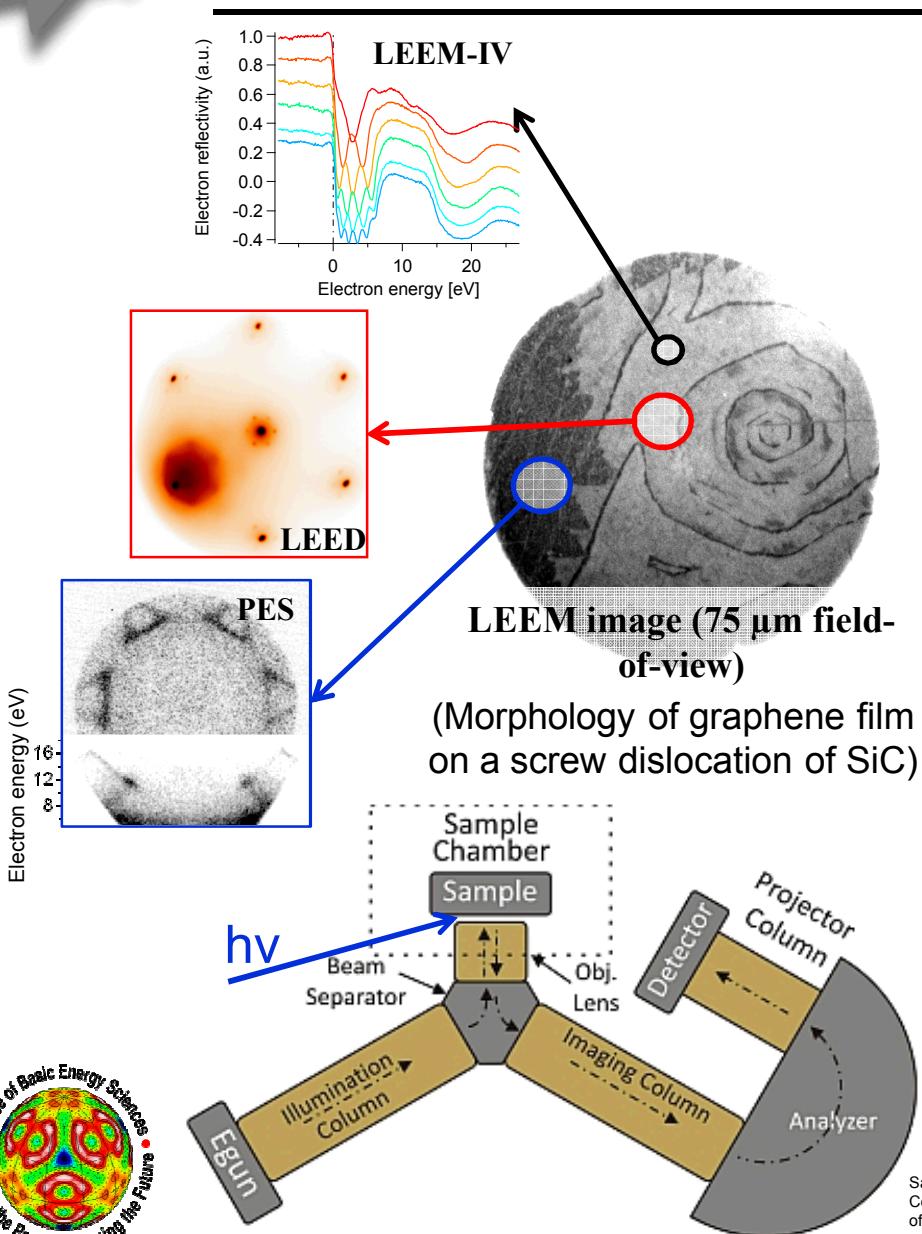


# We study nano-structures/materials using micro-spectroscopy

SAND2012-8373P



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)