

# SANDIA's NATIONAL SECURITY PHOTONIC CENTER

[www.sandia.gov/mstc/nspc](http://www.sandia.gov/mstc/nspc)

A member of



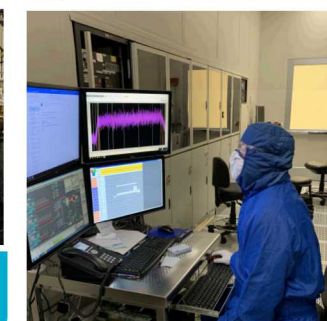
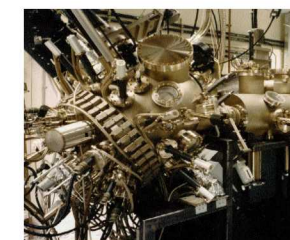
Silicon Fab:  
Silicon Photonics

Microfab:  
Compound Semiconductor  
Photonics



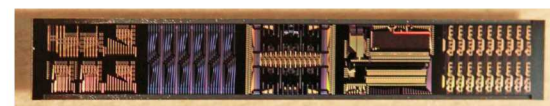
PDK and  
8" Multi-Project Wafers

Custom Epitaxial Growth & III-V Devices  
(GaAs, InP, GaSb, GaN)  
PDK and Multi-Project Wafers (InP)

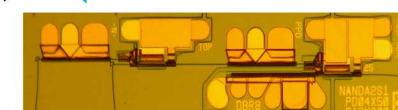
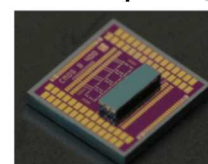
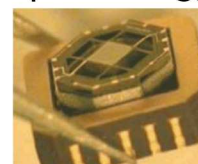


60+ Photonics Staff  
Device Design, Modeling, Simulation  
Semiconductor Device Fabrication  
Microsystem Fabrication  
Testing, Rad Effects, Cryo  
Reliability

Microsystems and Heterogeneous Integration  
(Flip Chip Bonding, micro-optics, assembly, packaging)



Photonic circuits



Photonic circuits & Lasers



backup



# SANDIA's MESA COMPLEX

## MESA= Microsystems Engineering, Science and Applications

### Co-joined Fab Facility

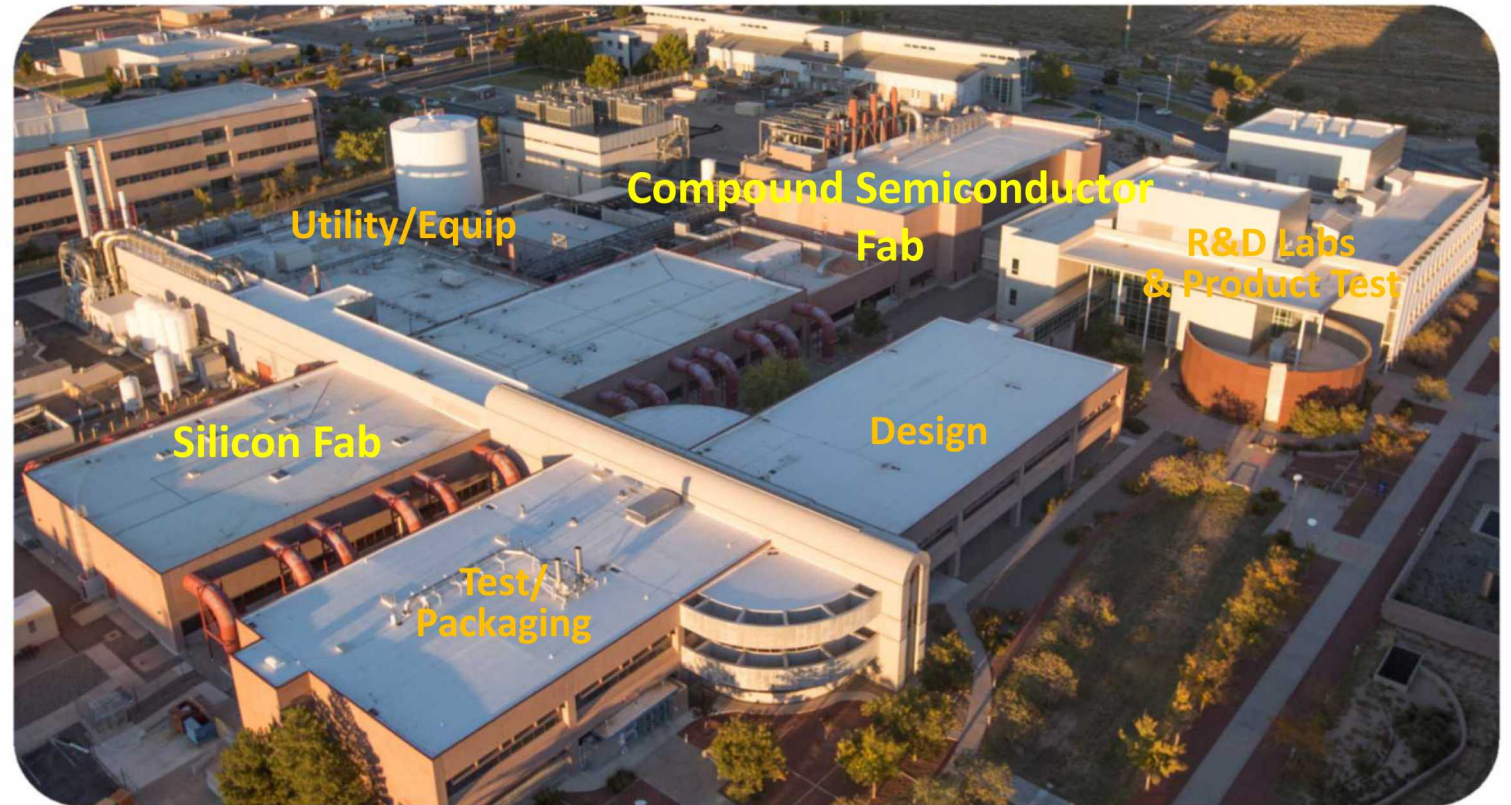
- Silicon Fab
- Compound Semiconductor Fab

### Charter:

- design, develop, fabricate, qualify, and produce at low-volume for DOE applications
- conduct leading edge research

### Currently dozens of products:

- ASICs, III-V SSICs, MEMS, FPAs, RFICs, Optoelectronics



## Co-located R&D and Production