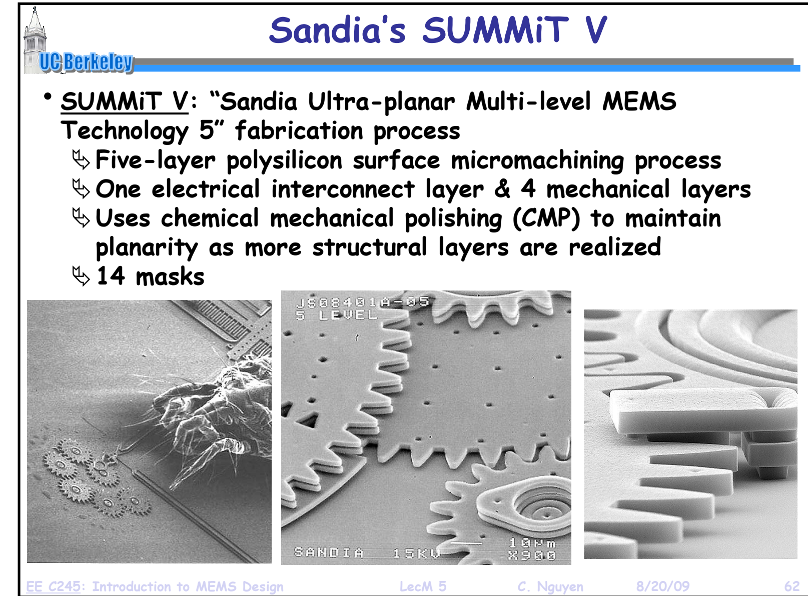
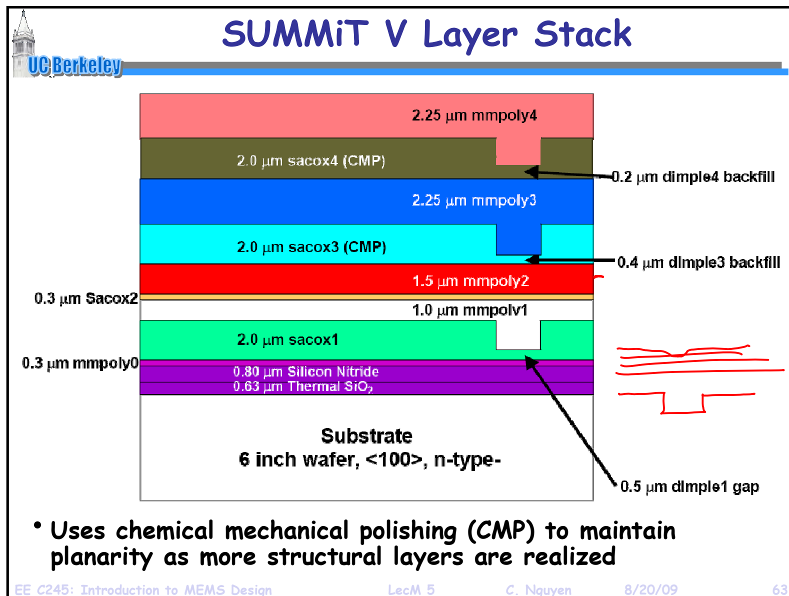
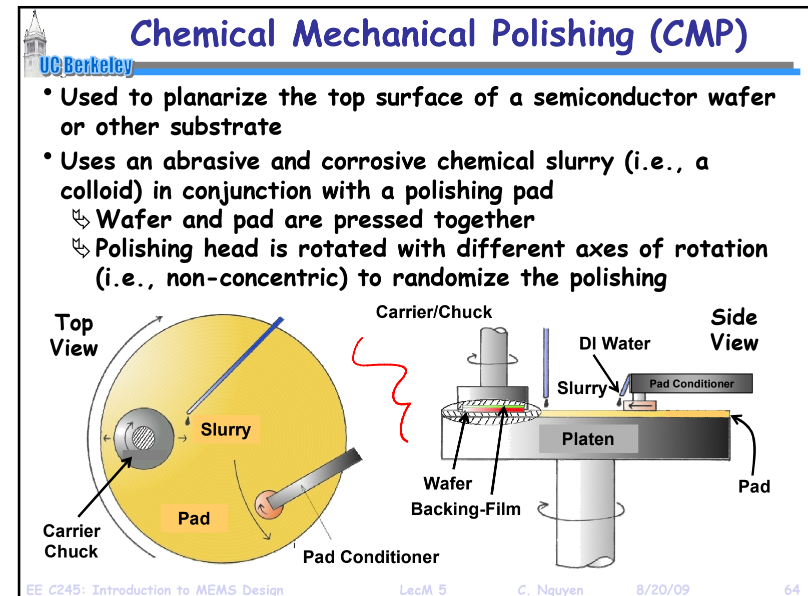
UC Berkeley

The Sandia SUMMIT Process







Copyright @ 2016 Regents of the University of California

CMP: Not the Same as Lapping

Lapping

- Lapping is merely the removal of material to flatten a surface without selectivity
- Everything is removed at approximately the same rate

Removes diff. materials at same rate

Lapping

Chemical Mechanical Polishing

- CMP is selective to certain films, and not selective to others

Dishing

Stops at non-selective layer

CMP

Actual SUMMiT Cross-Section

MMPOLY4
MMPOLY3
MMPOLY2
MMPOLY1
MMPOLY0

- No CMP until after the first three polySi layers
- 1 μm mmpoly1 and 1.5 μm mmpoly2 can be combined to form a 2.5 μm polysilicon film
- Refer to the SUMMiT V manual (one of your handouts) for more detailed information on masks and layout instructions

Copyright @ 2016 Regents of the University of California