CHE323/CHE384
Chemical Processes for Micro- and Nanofabrication
www.lithoguru.com/scientist/CHE323

Lecture 27
Device Isolation

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Reading:
Chapter 15, *Fabrication Engineering at the Micro- and Nanoscale*, 4th edition, Campbell

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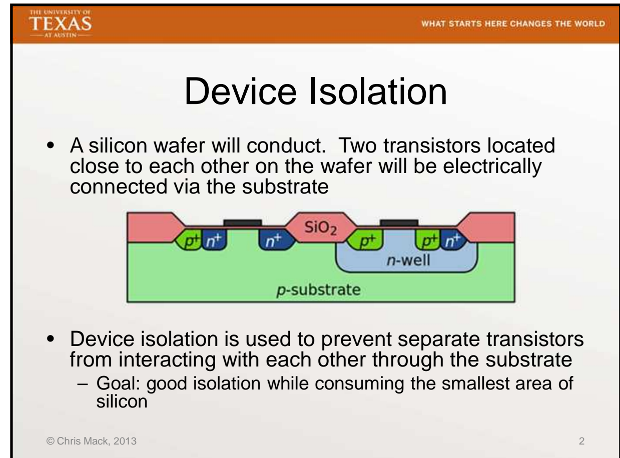

Device Isolation

- There are two common approaches to device isolation
- LOCOS – Local Oxidation of Silicon
  - Popular in the 1970s and 1980s
- STI – Shallow Trench Isolation
  - Came in to use in the 1990s
  - Preferred method for 250 nm technologies and below

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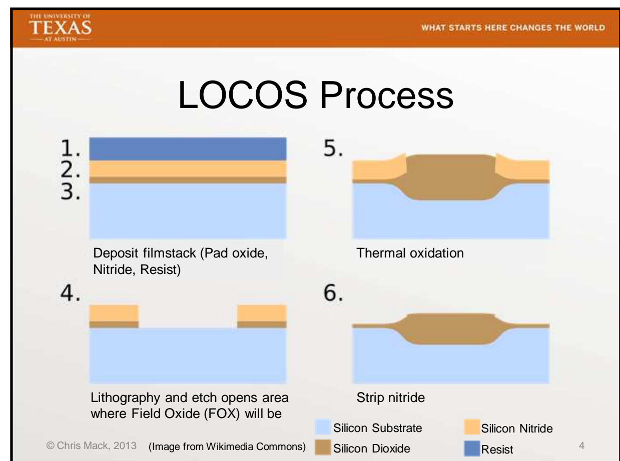

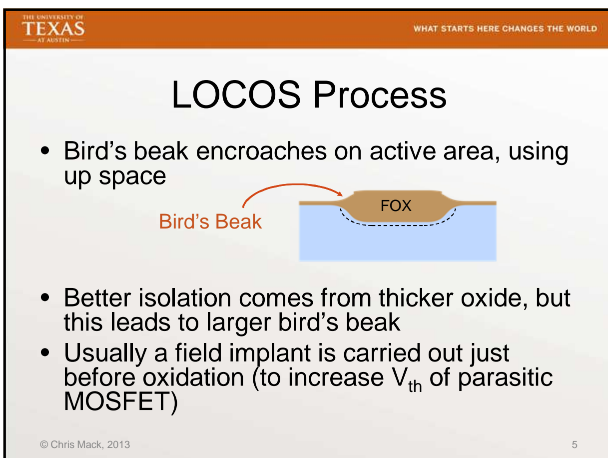

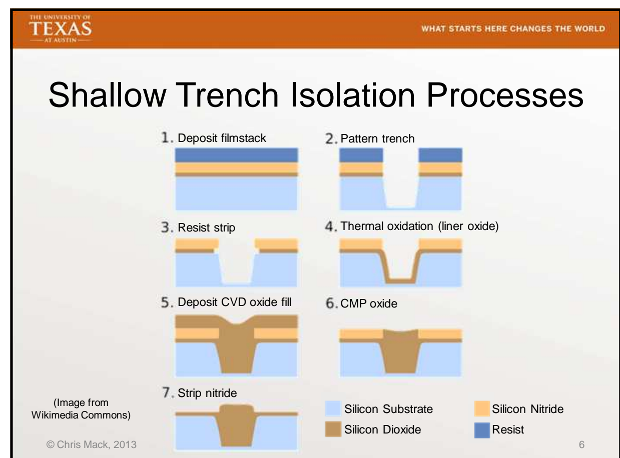

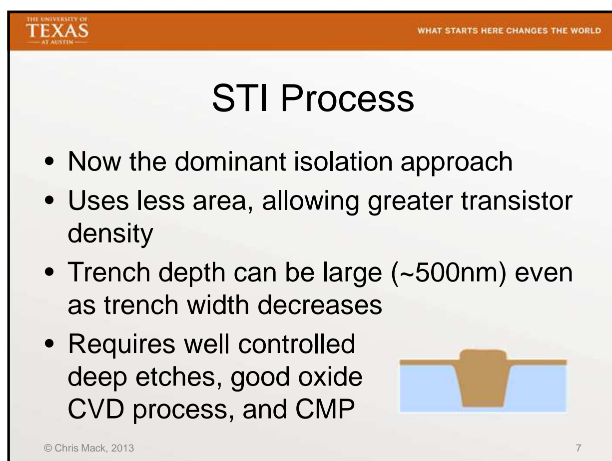

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WHAT STARTS HERE CHANGES THE WORLD

Lecture 27: What have we learned?

- Why is device isolation needed?
- What are the two most common device isolation processes?
- Why is STI the more common today?

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