

Lecture 11: Bulk Micromachining

- Announcements:
- HW#3: Online, due Wednesday next week
- Did everyone receive my email giving the room for the make-up lecture last time?
 - ↳ Anyway, the make-up lecture is online
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- Today:
- Reading: Senturia Chpt. 3, Jaeger Chpt. 11, Handout: "Surface Micromachining for Microelectromechanical Systems"
- Lecture Topics:
 - ↳ Polysilicon surface micromachining
 - ↳ Stiction
 - ↳ Residual stress
 - ↳ Topography issues
 - ↳ Nickel metal surface micromachining
 - ↳ 3D "pop-up" MEMS
 - ↳ Foundry MEMS: the "MUMPS" process
 - ↳ The Sandia SUMMIT process
- Reading: Senturia Chpt. 3, Jaeger Chpt. 11, Handouts: "Bulk Micromachining of Silicon"
- Lecture Topics:
 - ↳ Bulk Micromachining
 - ↳ Anisotropic Etching of Silicon
 - ↳ Boron-Doped Etch Stop
 - ↳ Electrochemical Etch Stop
 - ↳ Isotropic Etching of Silicon
 - ↳ Deep Reactive Ion Etching (DRIE)
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- Last Time: Going through Module 5 ... now continue



