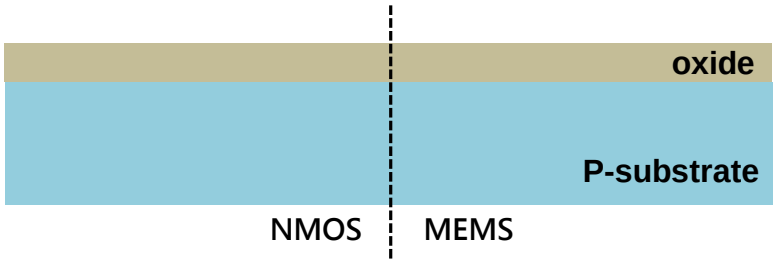
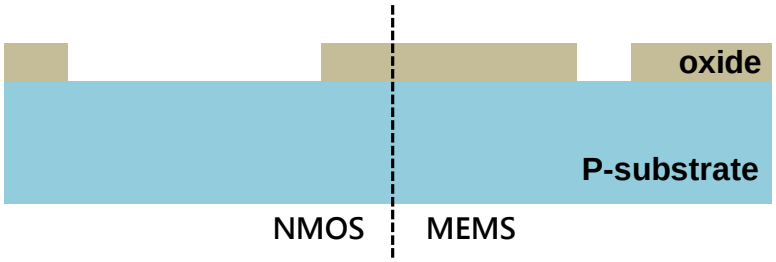
Fabrication Process Flow

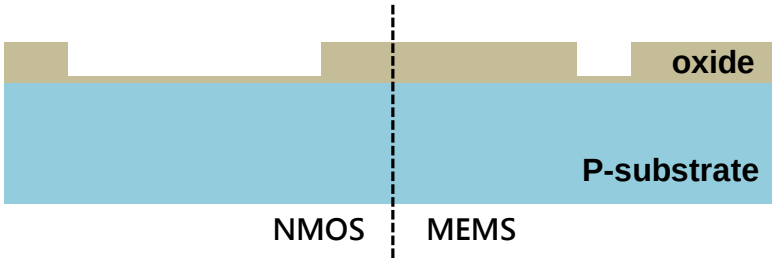
Week 3: Field oxidation (5000 Å)



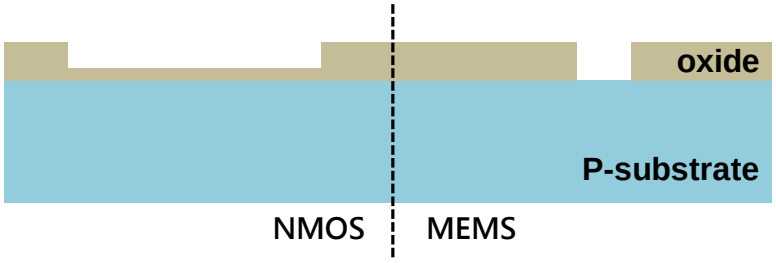
Week 4: Lithography (Mask I, Active) – define active area (NMOS) and anchor (MEMS)



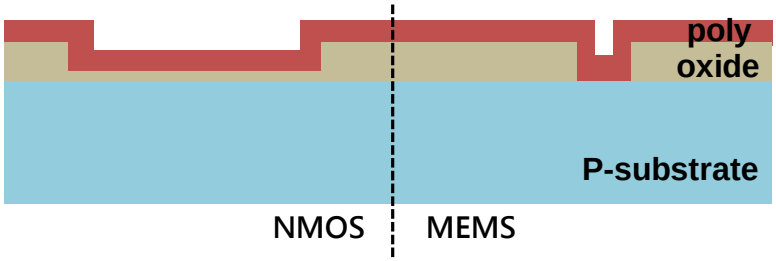
Week 5: Gate oxidation (800 Å)



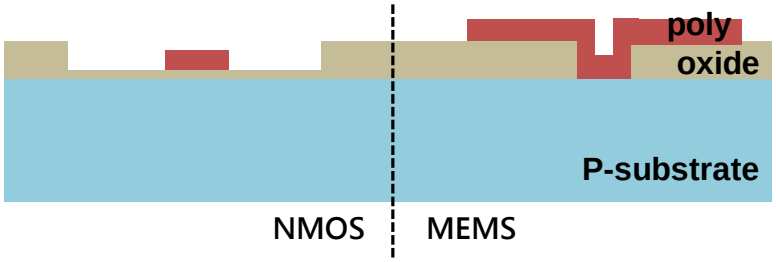
Week 6a: Lithography (Mask V, Release) – open anchor (MEMS)



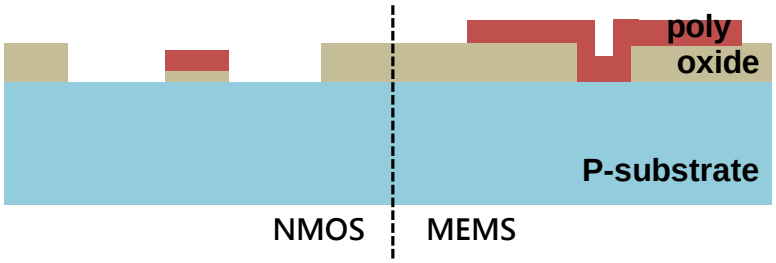
Week 6b: Polysilicon deposition (done in Microlab by TA)



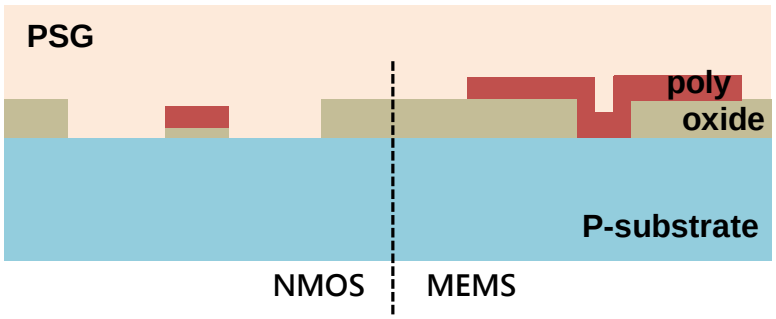
Week 7a: Lithography (Mask II, Poly) – define poly-Si gate (NMOS) and structures (MEMS)



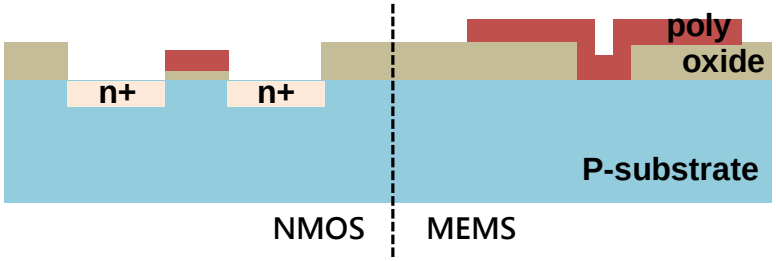
Week 7b: Etch thin oxide – open source-drain area



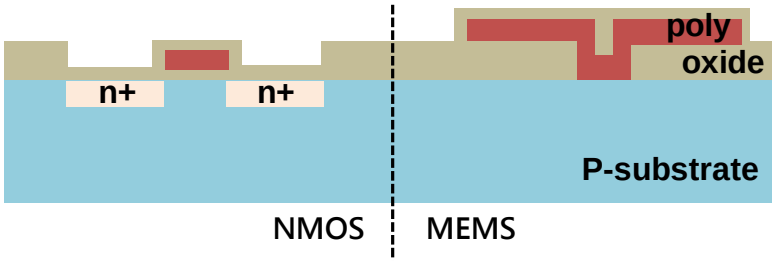
Week 8a: Source-drain (S/D) pre-deposition



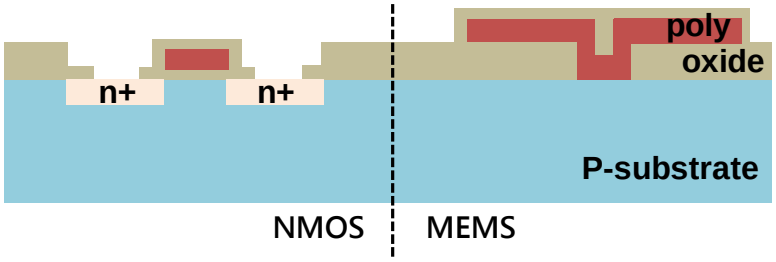
Week 8b: S/D drive-in



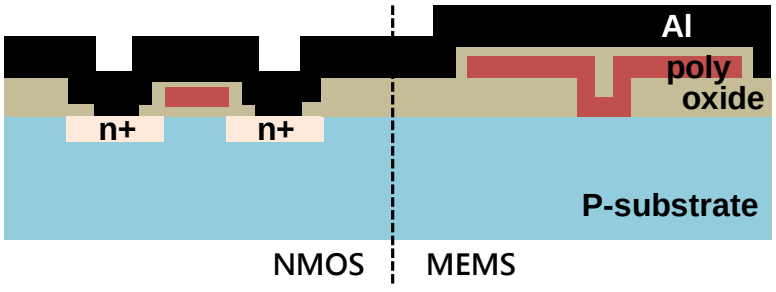
Week 8c: Intermediate oxidation (1500 Å)



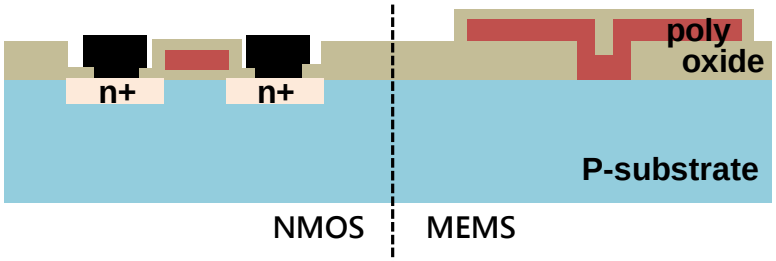
Week 9: Lithography (Mask III, Contact) – open S/D contact (NMOS)



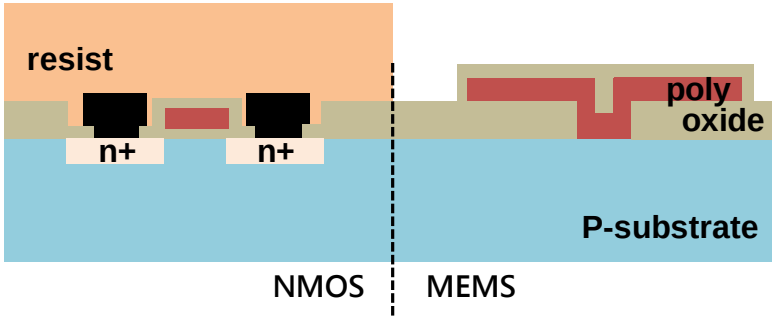
Week 10: Metallization (Aluminum evaporation: 8000 Å)



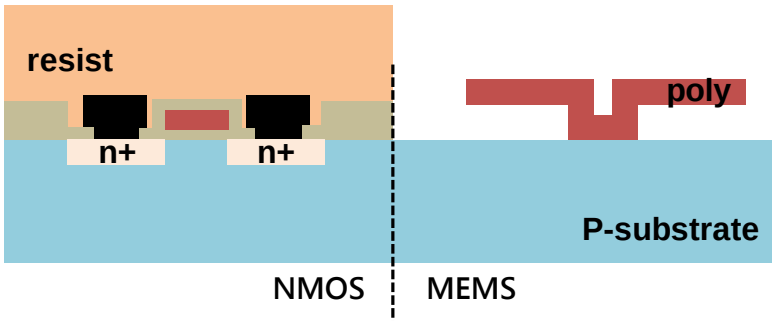
Week 11: Lithography (Mask IV, Metal) – define aluminum lines



Week 12a: Lithography (Mask V, Release) – protect NMOS area



Week 12b: Release MEMS comb-drive structures in HF



Final cross-section