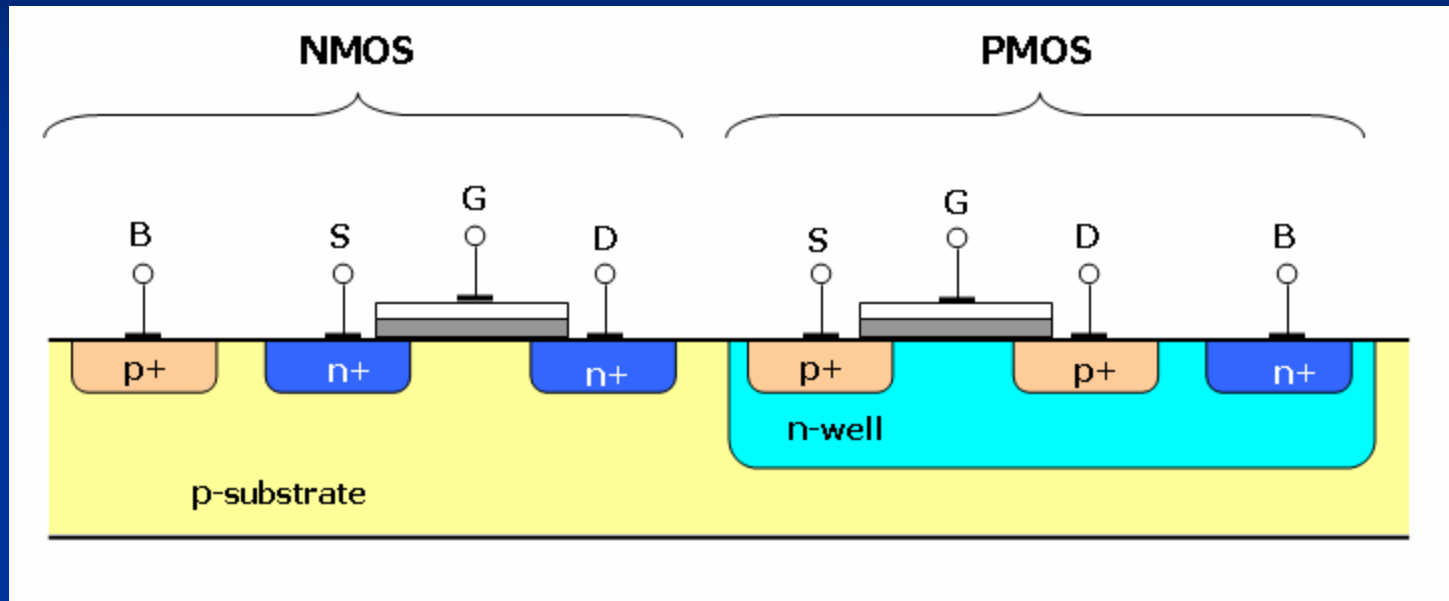


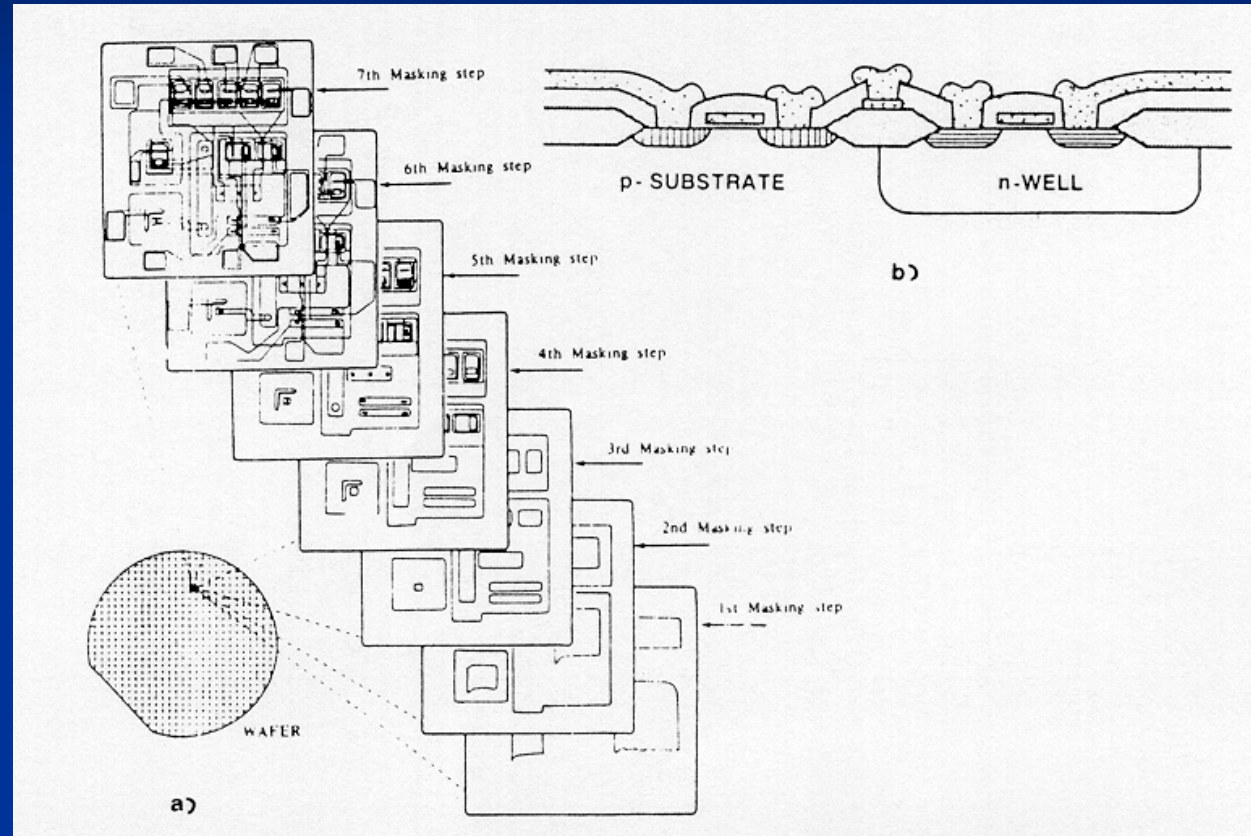
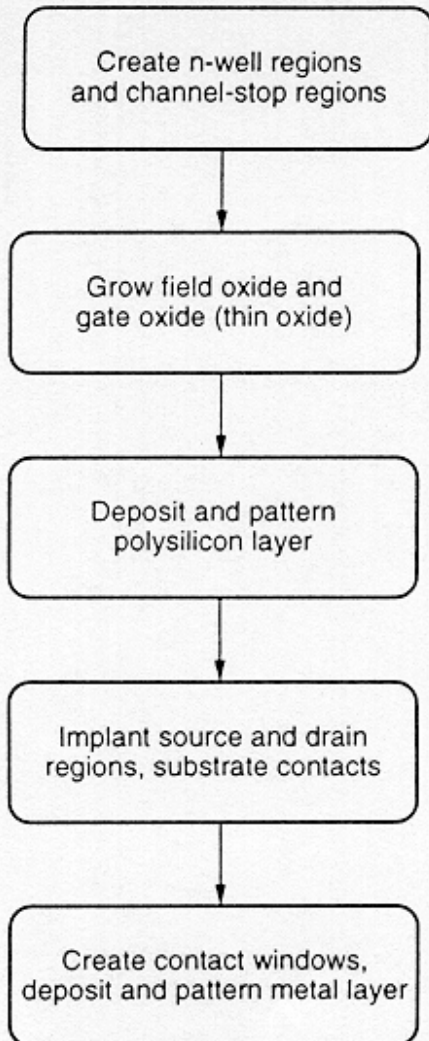
VLSI Design

Fabrication Process

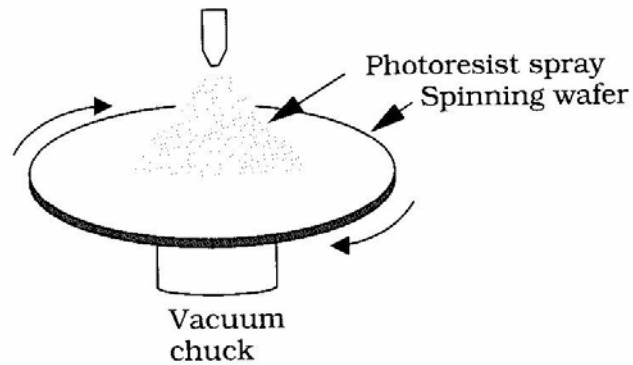
CMOS Transistors



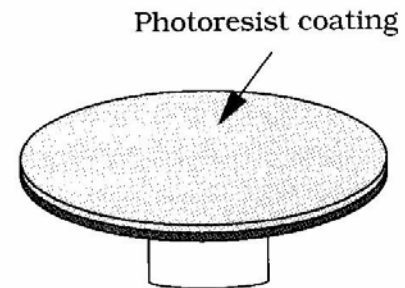
Overview



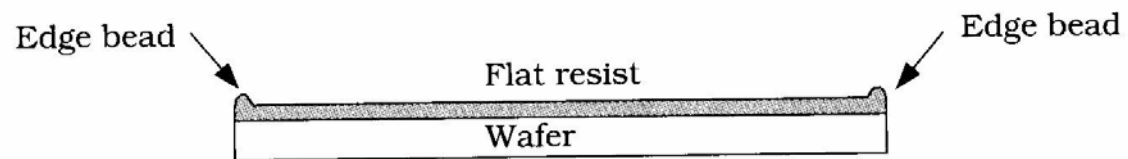
Coating



(a) Resist application

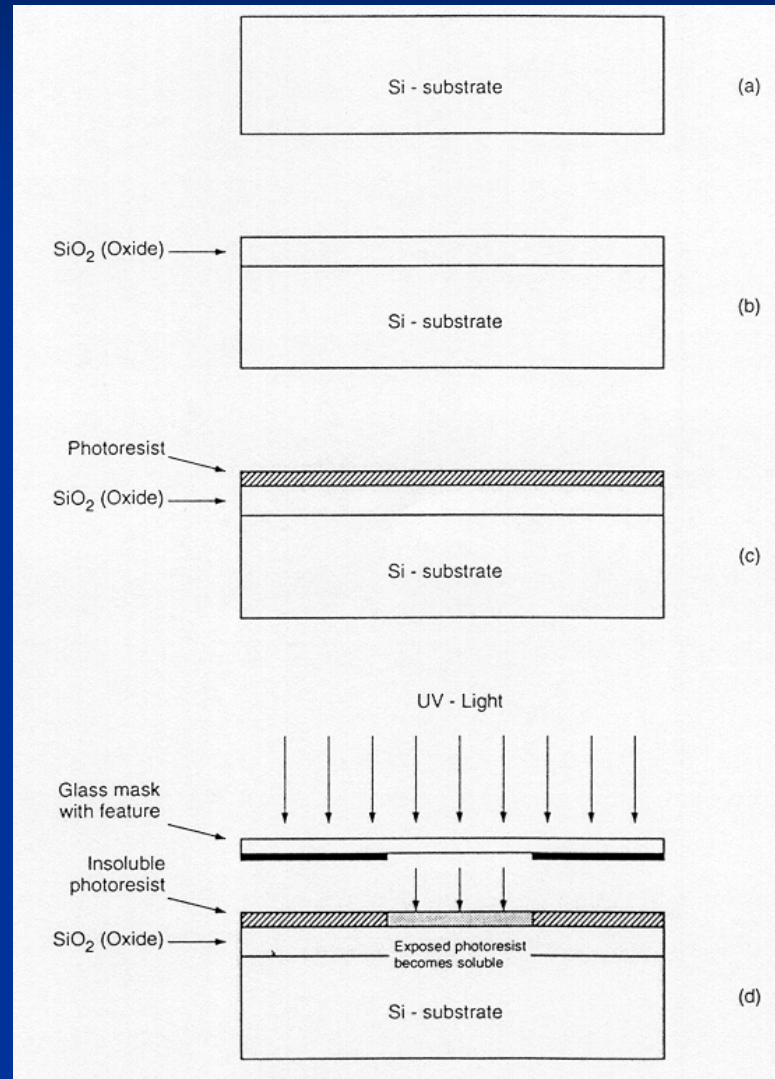


(b) Coated wafer

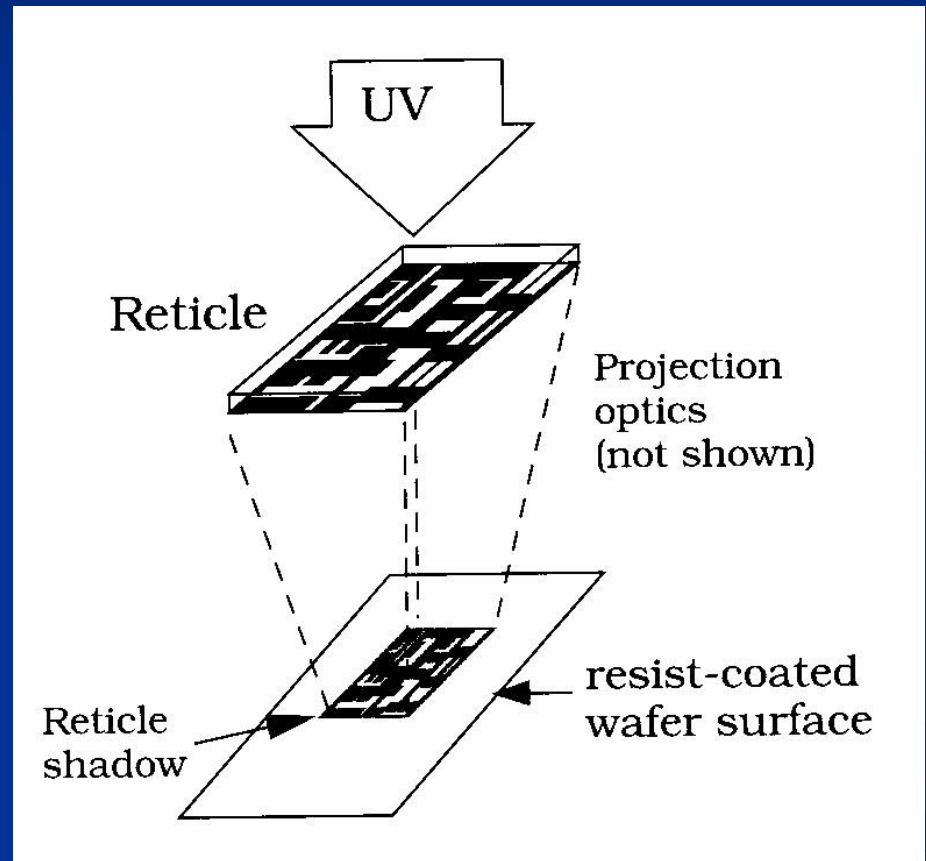
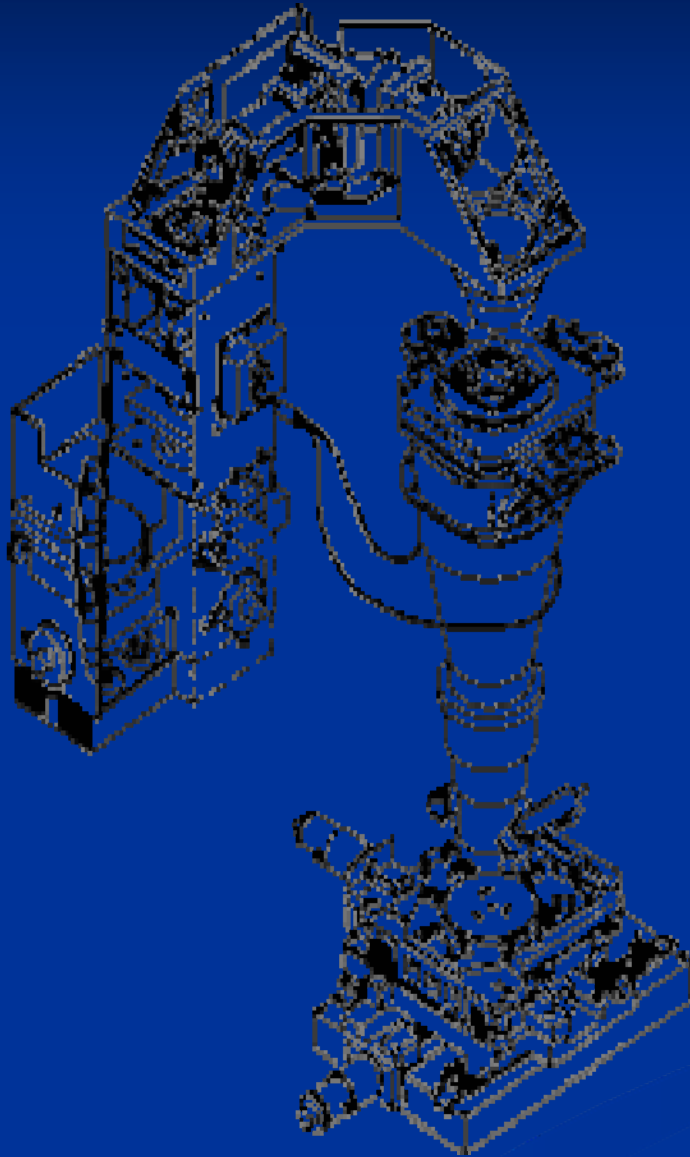


(c) Beading

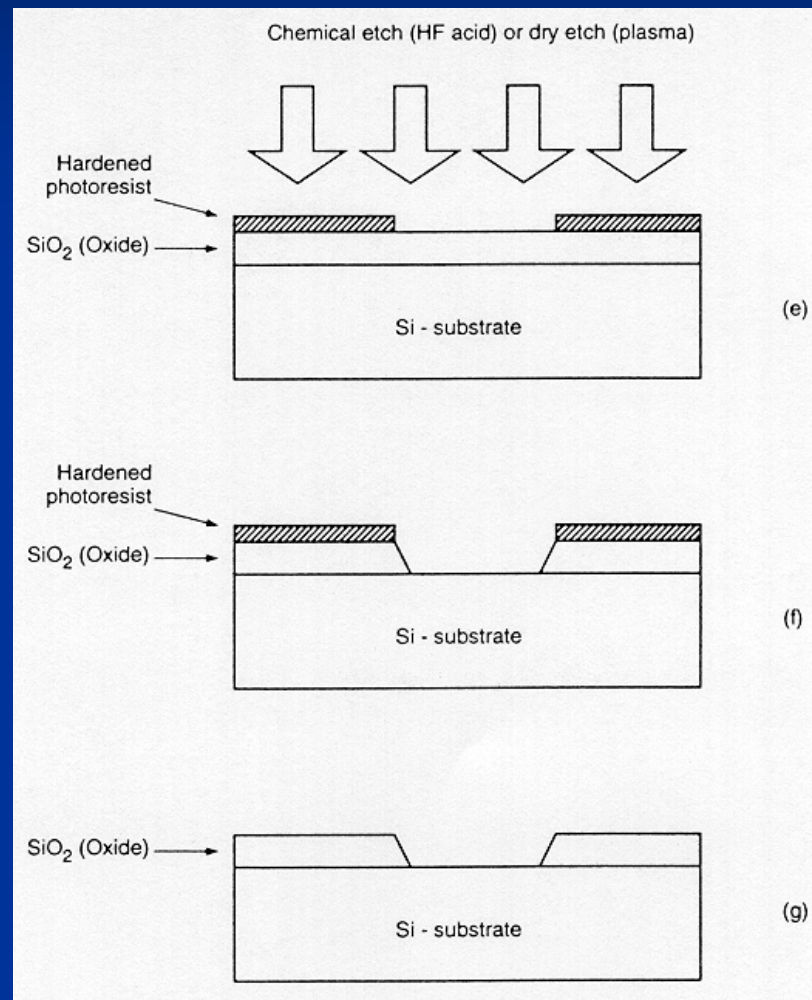
Patterning



Exposure

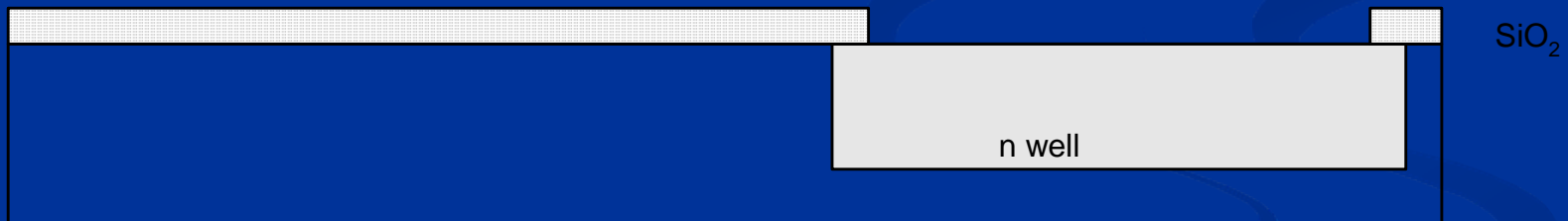


Etching

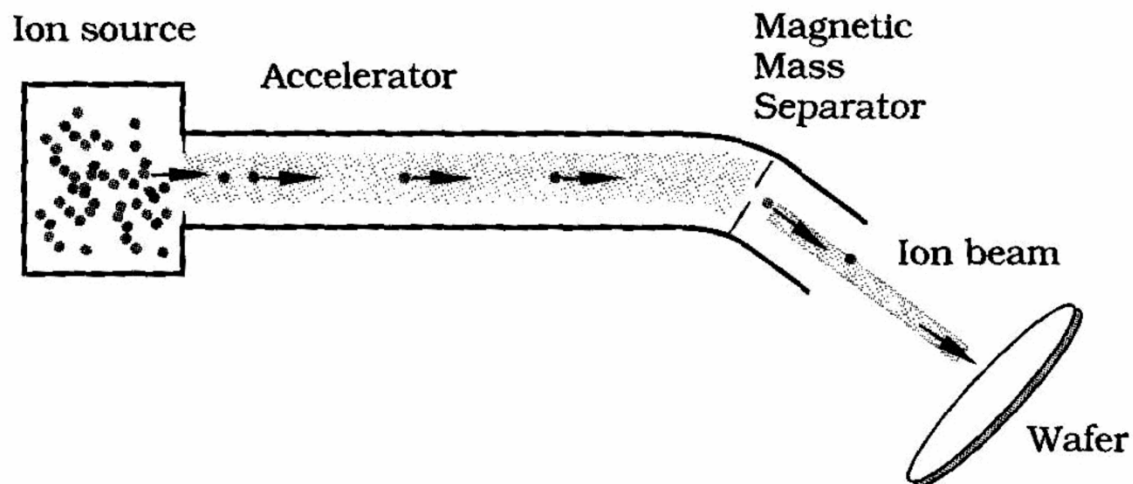
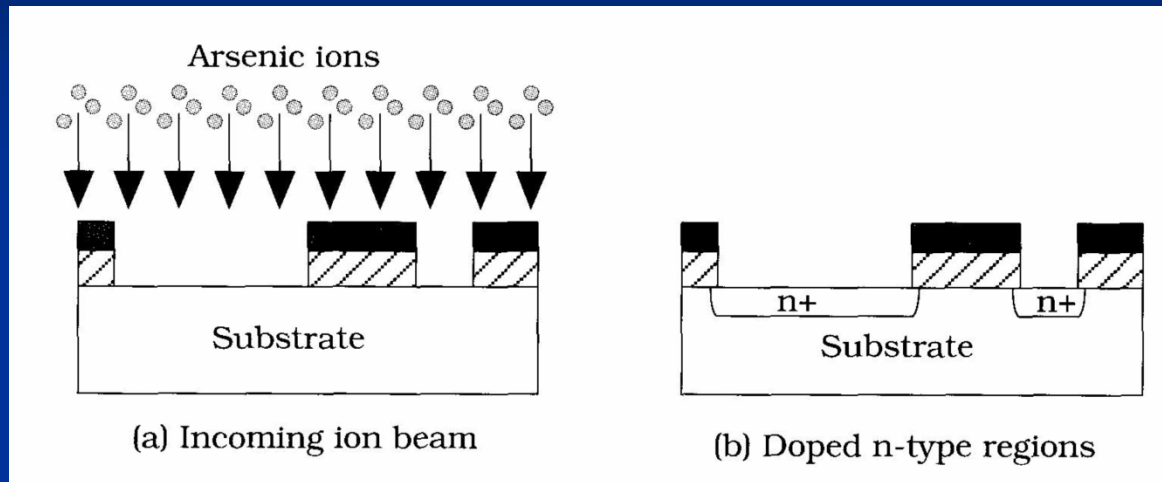


Diffusion

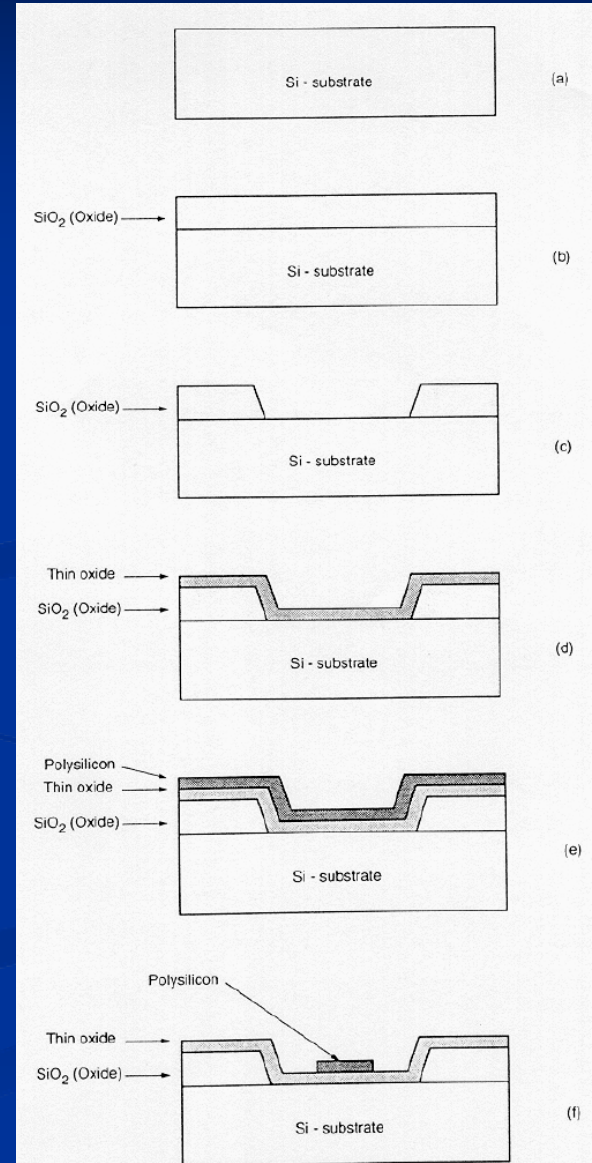
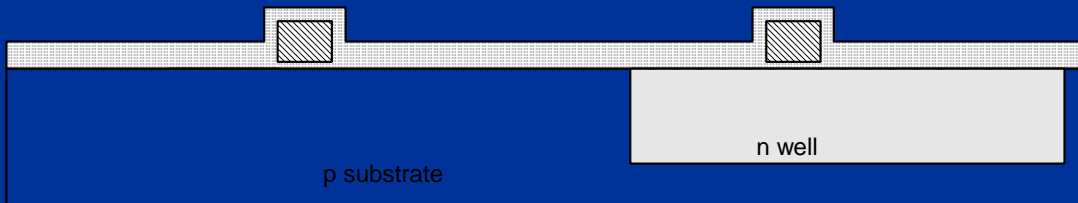
- To create a n well:
 - Diffusion
 - Heat wafer in gas chamber until diffusion occurs.
 - Ion Implantation
 - Arsenic or phosphorous are implanted in window.



Implantation

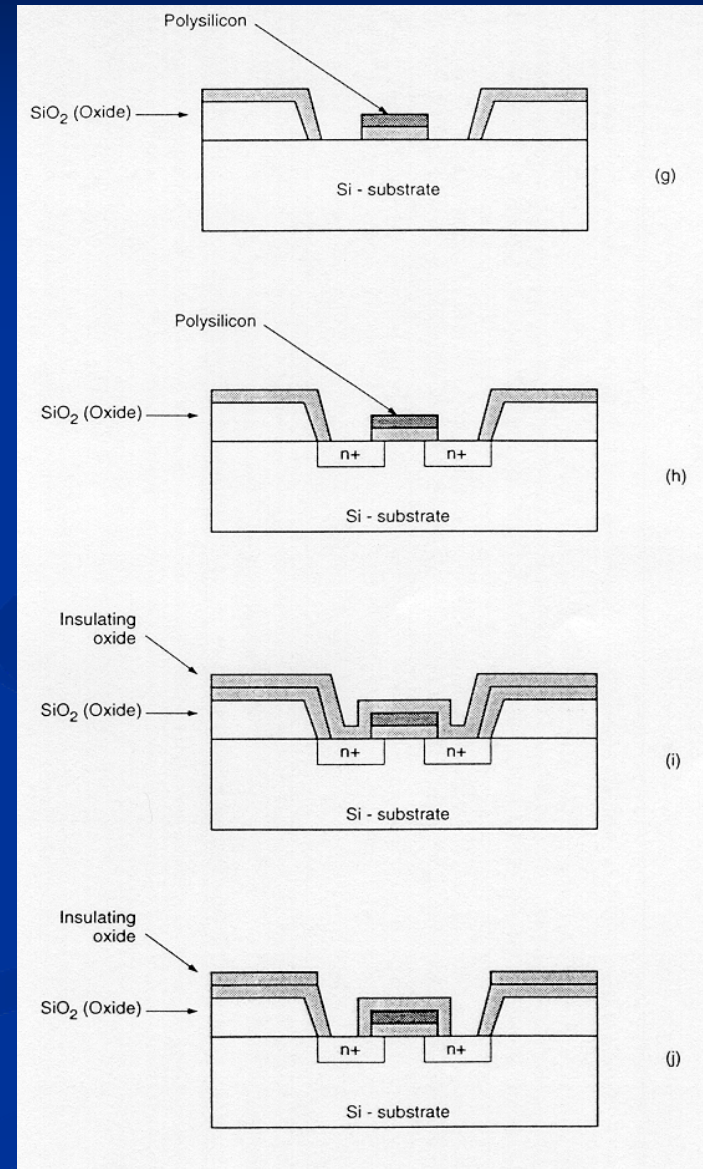


Poly Deposition

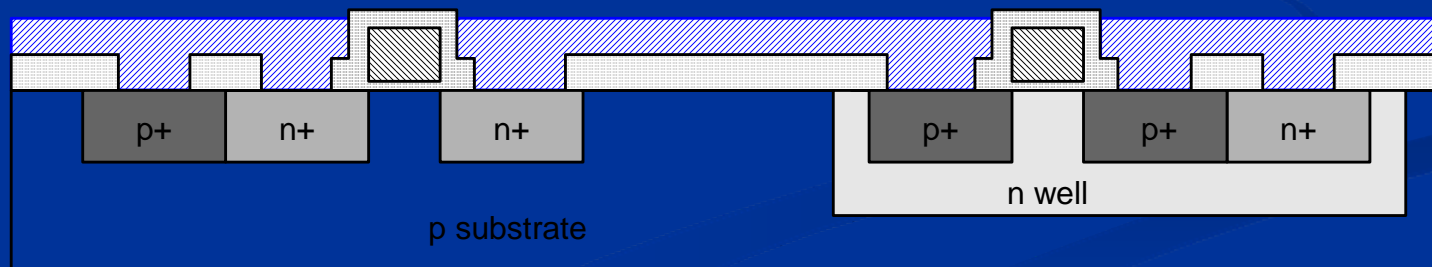
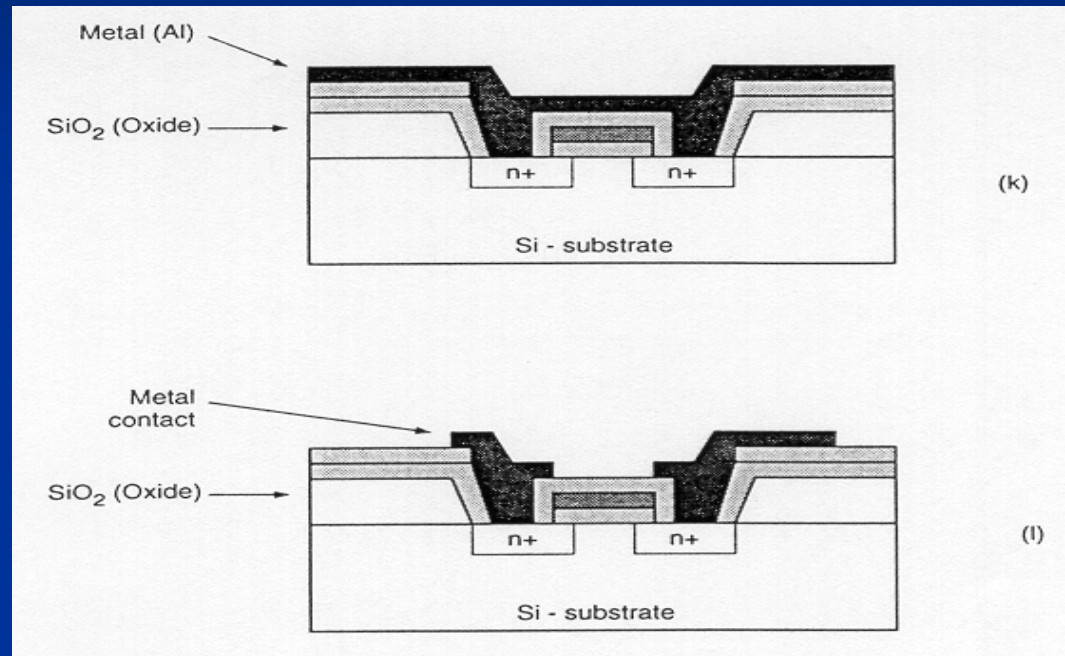


Creating D and S

- Remove oxide layer using acid.
- Dope open area using Ion implantation or diffusion.

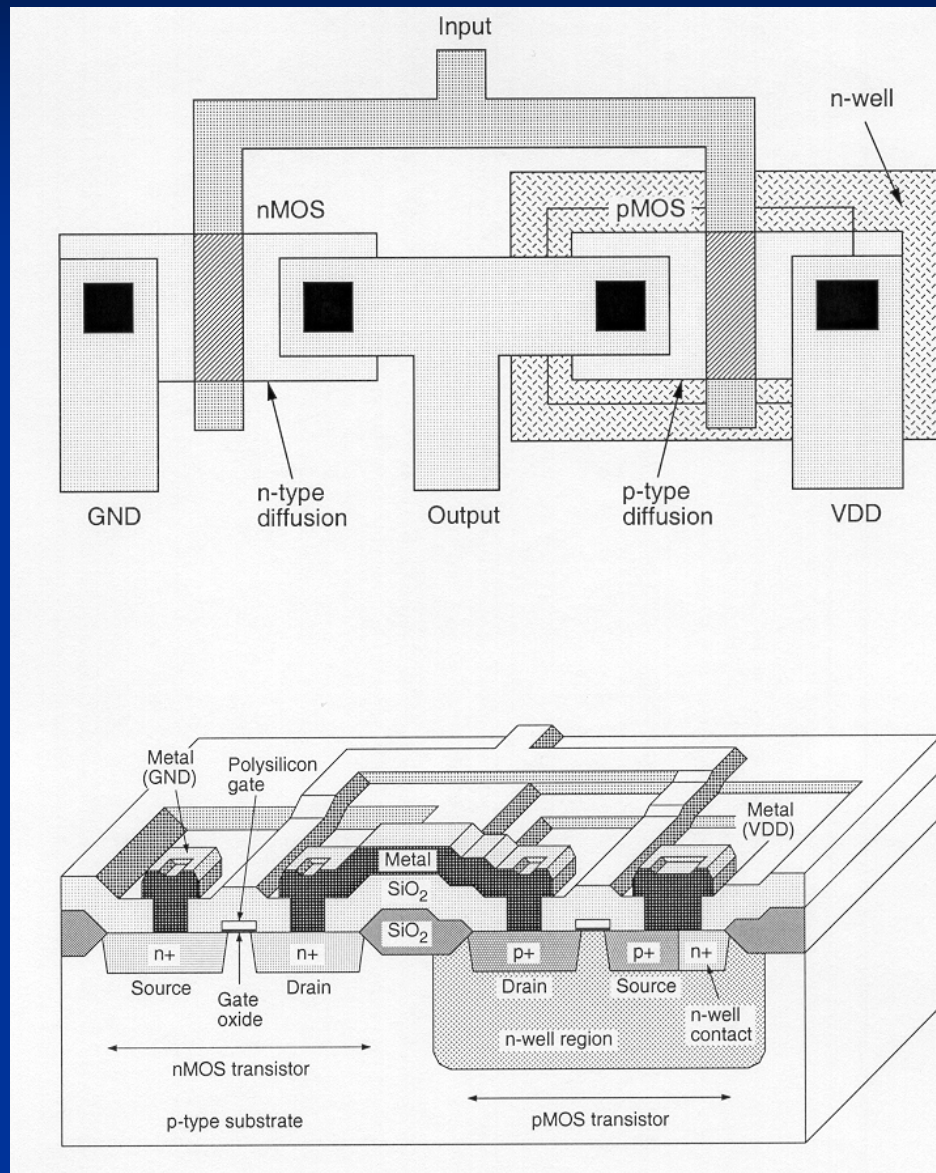


Metal Deposition



Metal
Thick field oxide

Inverter



Silicon on Insulator

