Components on integrated circuits

- NMOS transistors
- PMOS transistors
- Resistors
  \((100\Omega - 1\text{M}\Omega)\)
- Capacitors
  \((0.1\text{pF} - 100\text{pF})\)
- Inductors
  \((1\text{nH} - 10\text{nH})\)
- (Diodes)
- (BJTs)
Basic IC processing technology

- Lithography.
- Oxidation.
- Diffusion.
- Implantation.
- Film deposition.
- Etching.
- Annealing.
- Metalisation.

Side view; from Tower Semiconductor
Typical CMOS Layers

- N well.
- active.
- polysilicon.
- n+ select.
- contact.
- metal 1.
- via.
- metal 2...
- pad opening.

Top view