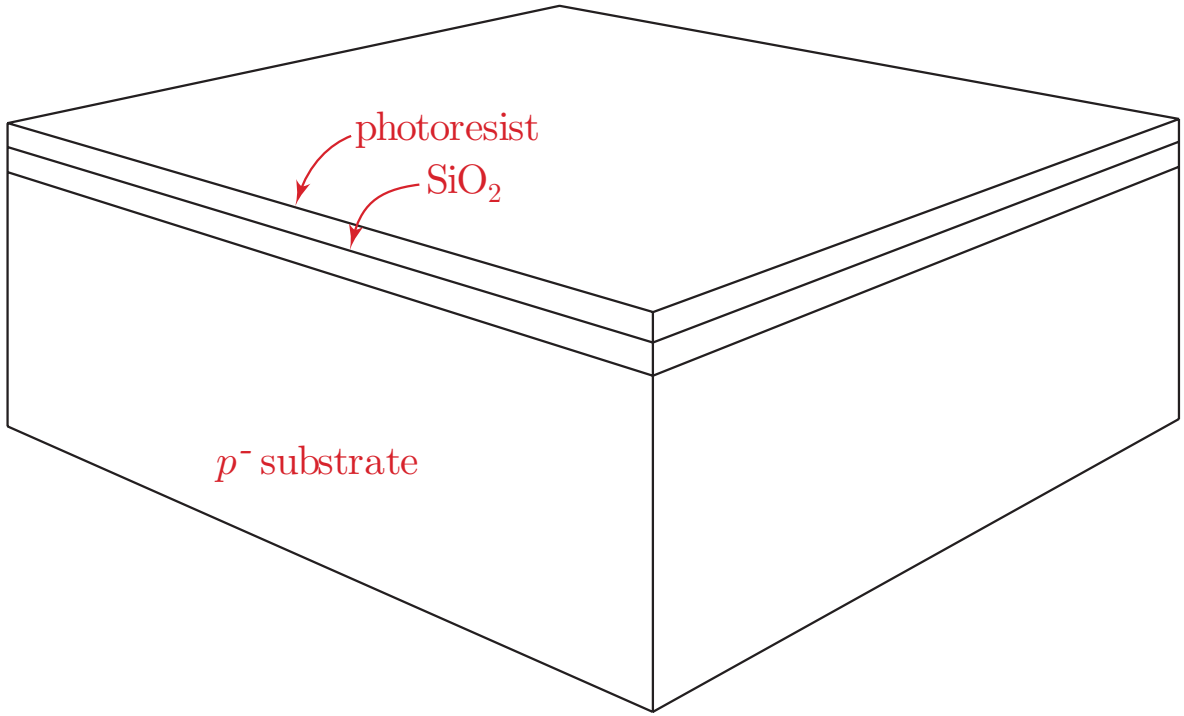
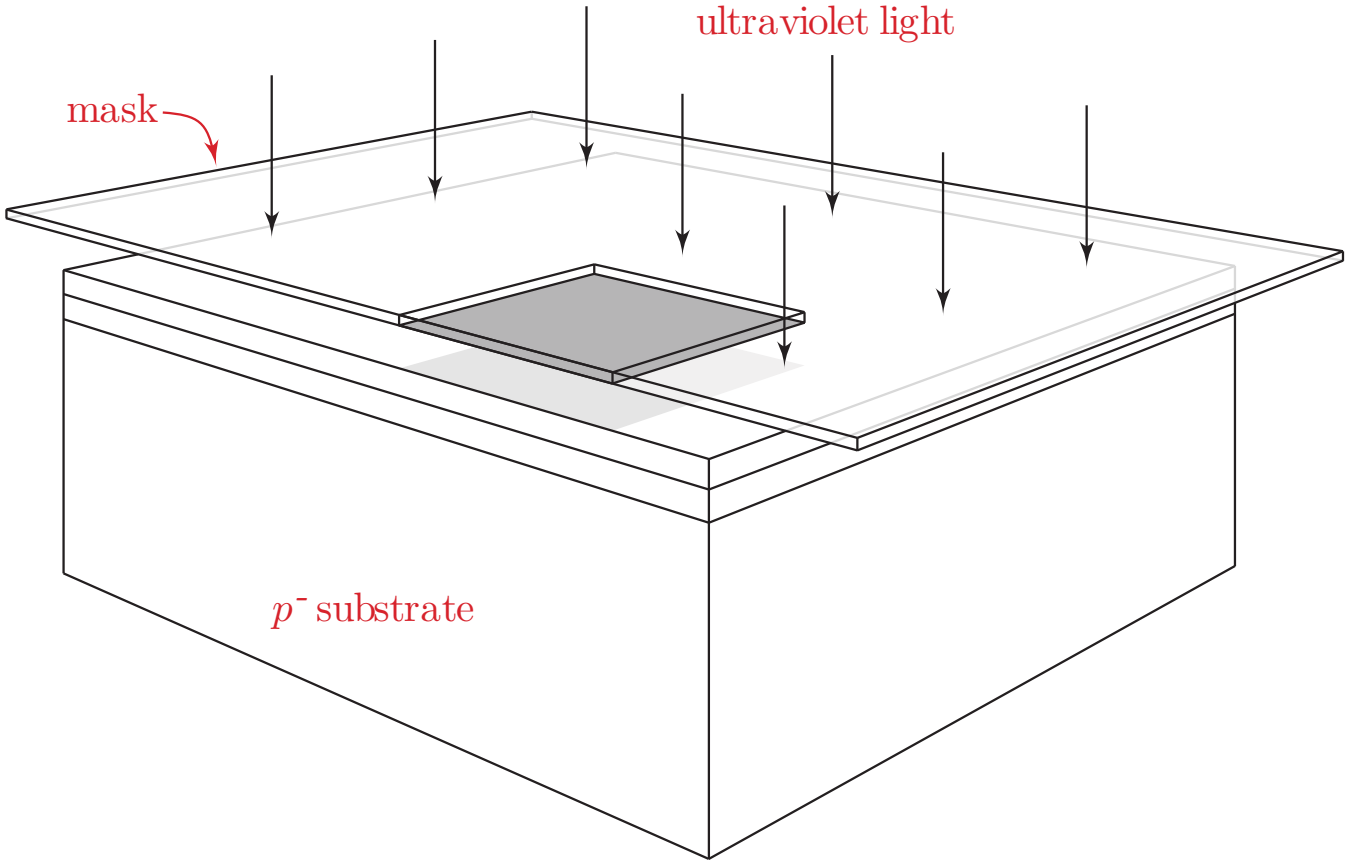
CMOS Fabrication



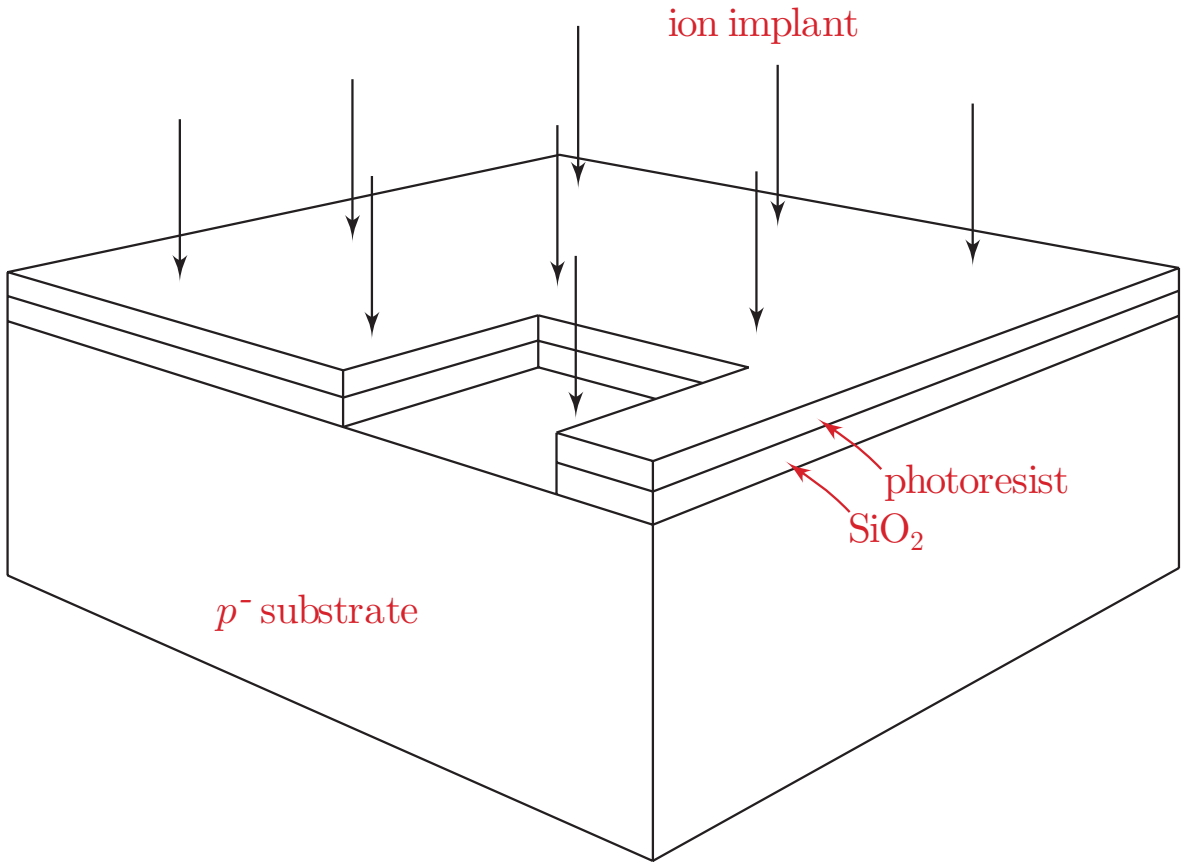
Oxidize silicon surface and coat with photoresist

CMOS Fabrication



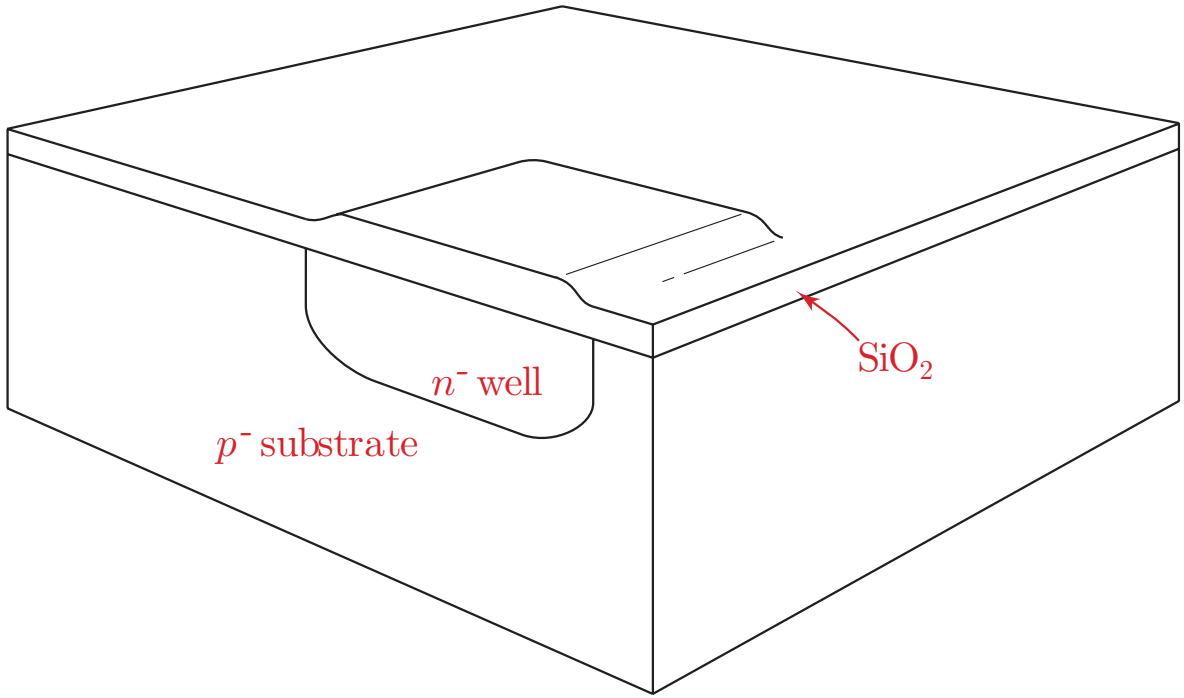
Pattern and selectively etch oxide layer

CMOS Fabrication



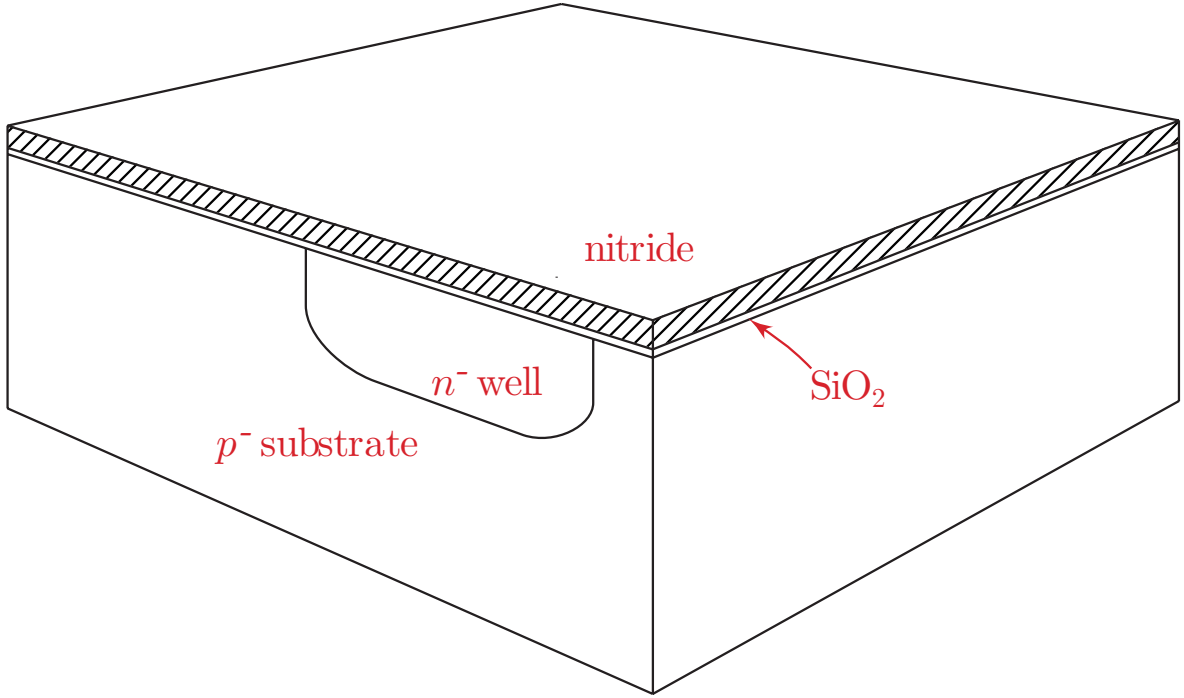
Ion implant for n-well regions

CMOS Fabrication



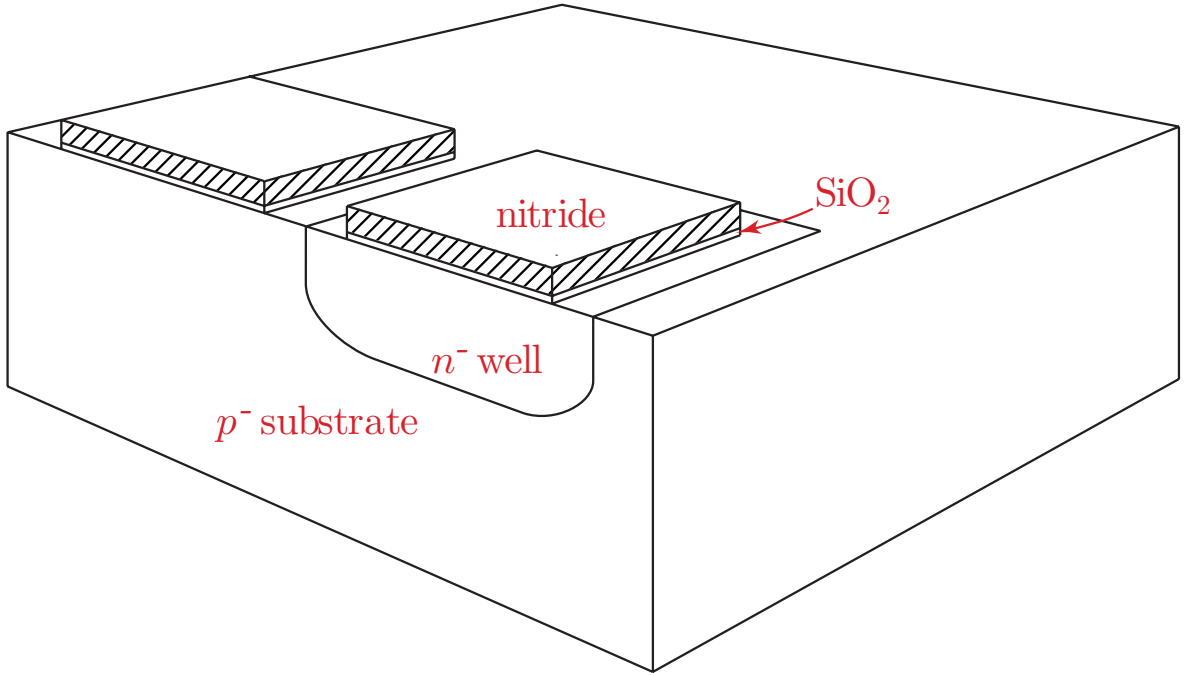
Anneal n-well implant and grow oxide

CMOS Fabrication



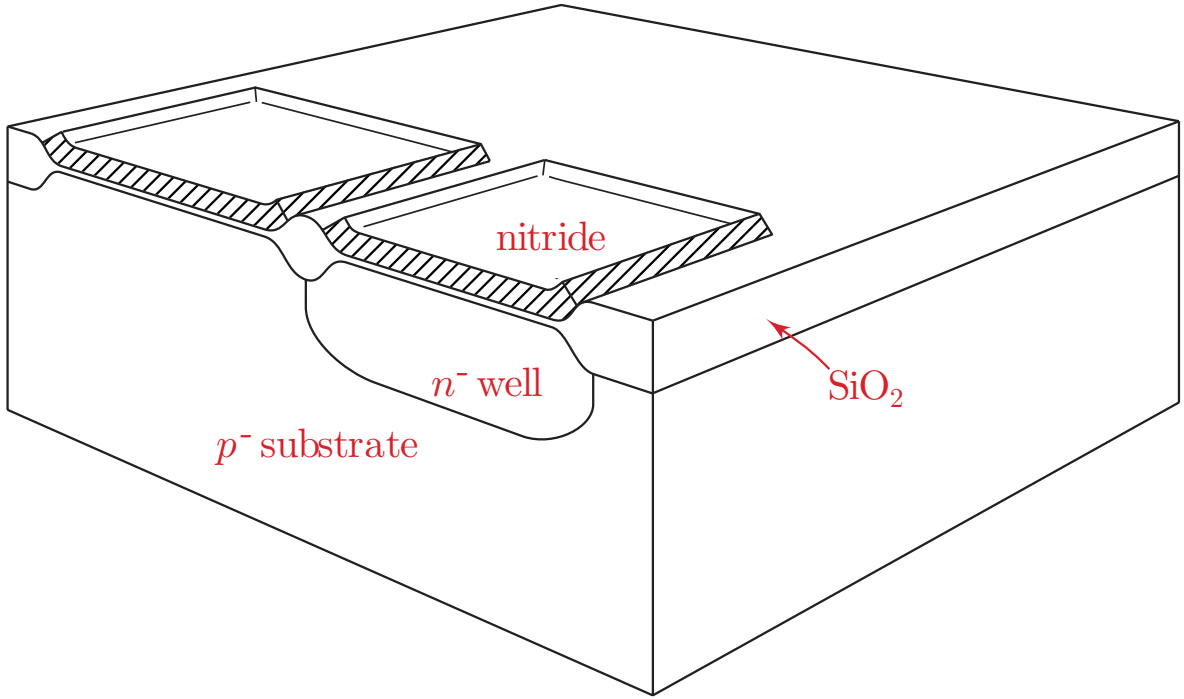
Remove all oxide, regrow thin oxide, and deposit nitride layer

CMOS Fabrication



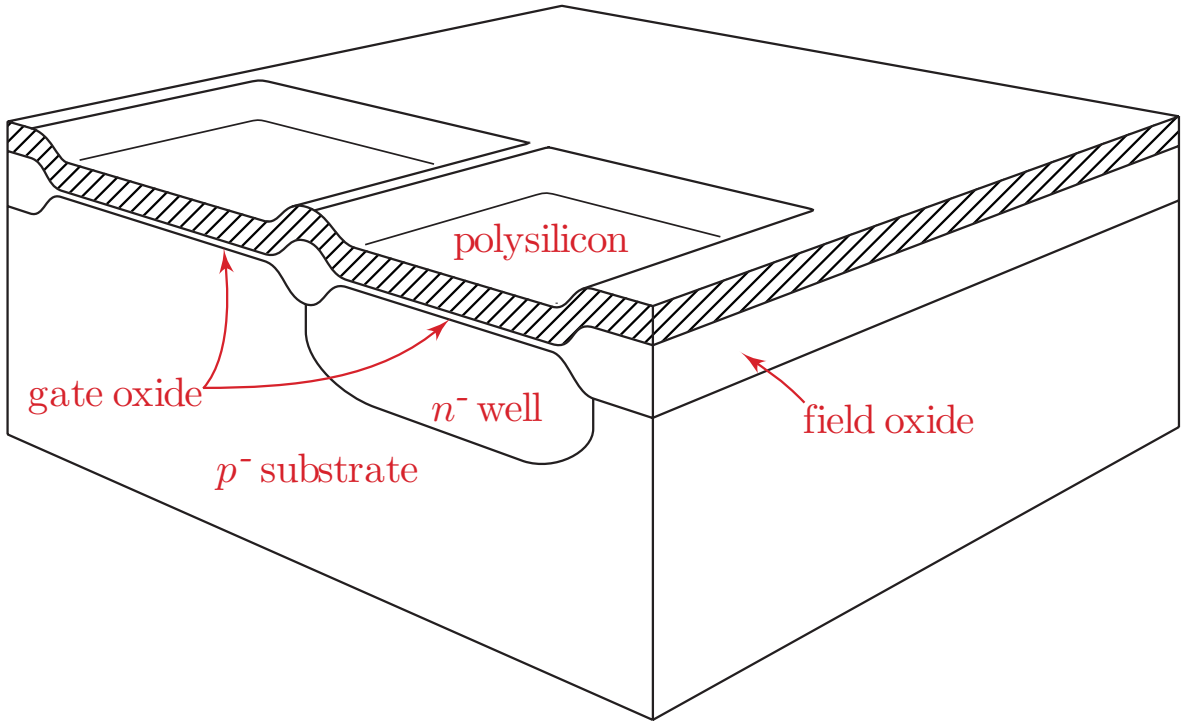
Pattern and selectively etch oxide and nitride layers

CMOS Fabrication



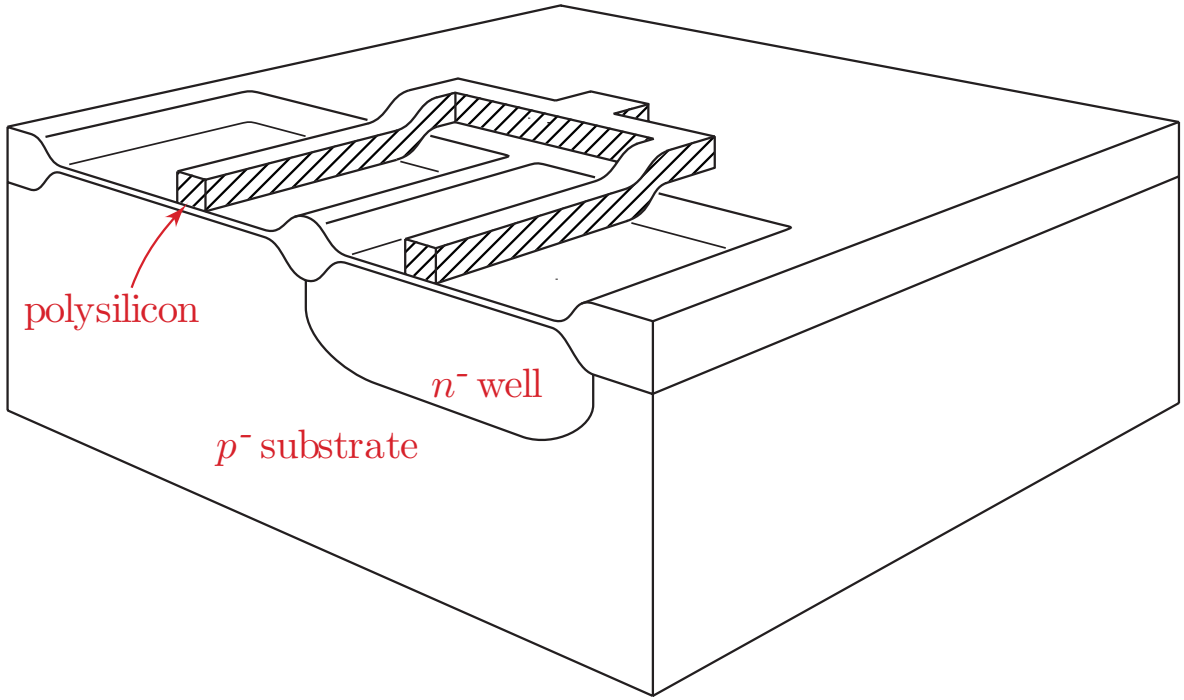
Grow field oxide in areas without nitride

CMOS Fabrication



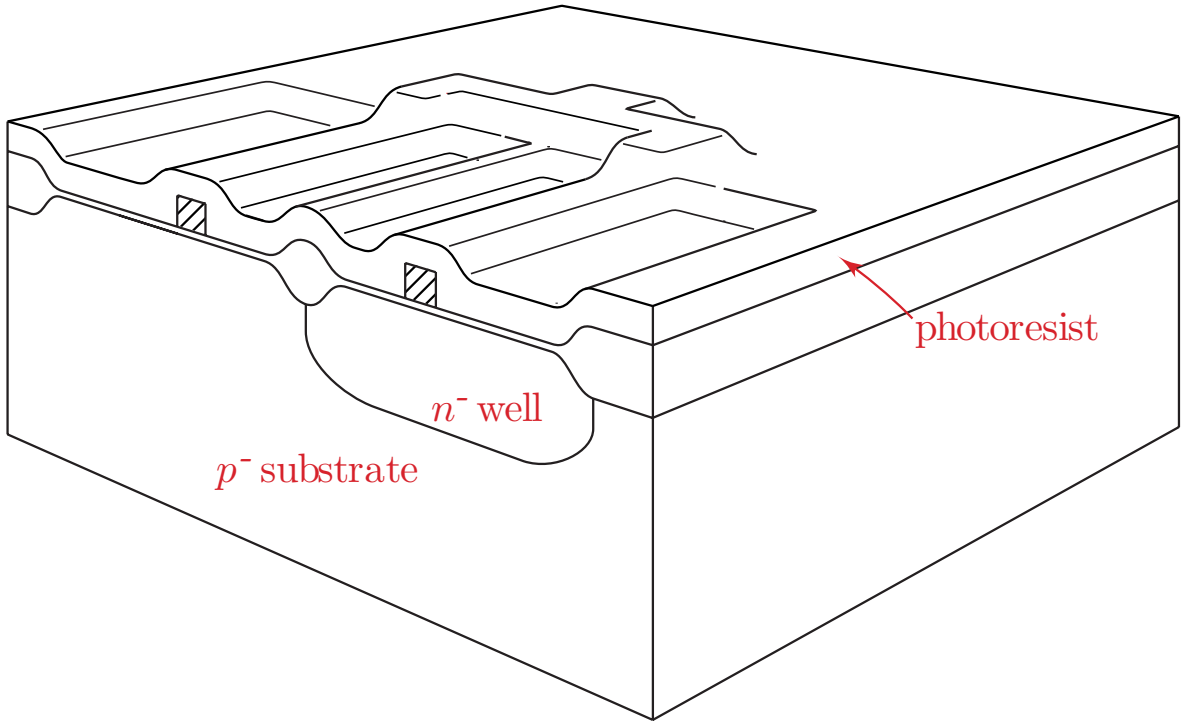
Remove nitride and thin oxide, grow gate oxide, and deposit poly

CMOS Fabrication



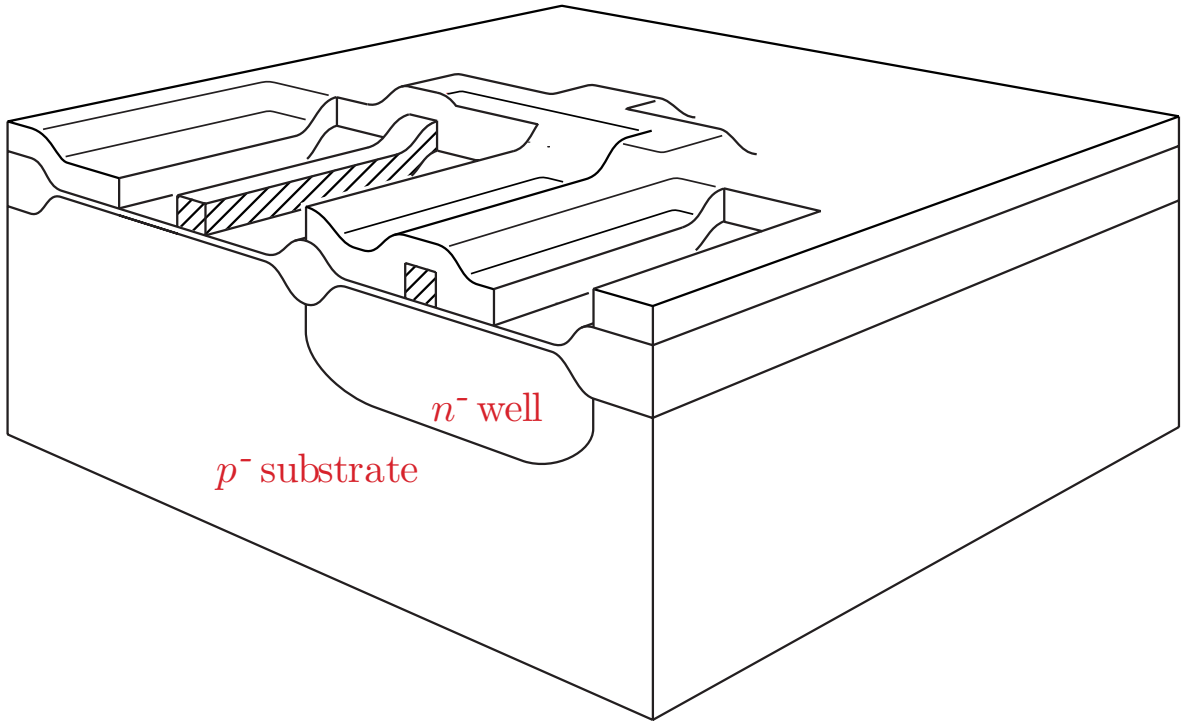
Pattern and selectively etch polysilicon

CMOS Fabrication



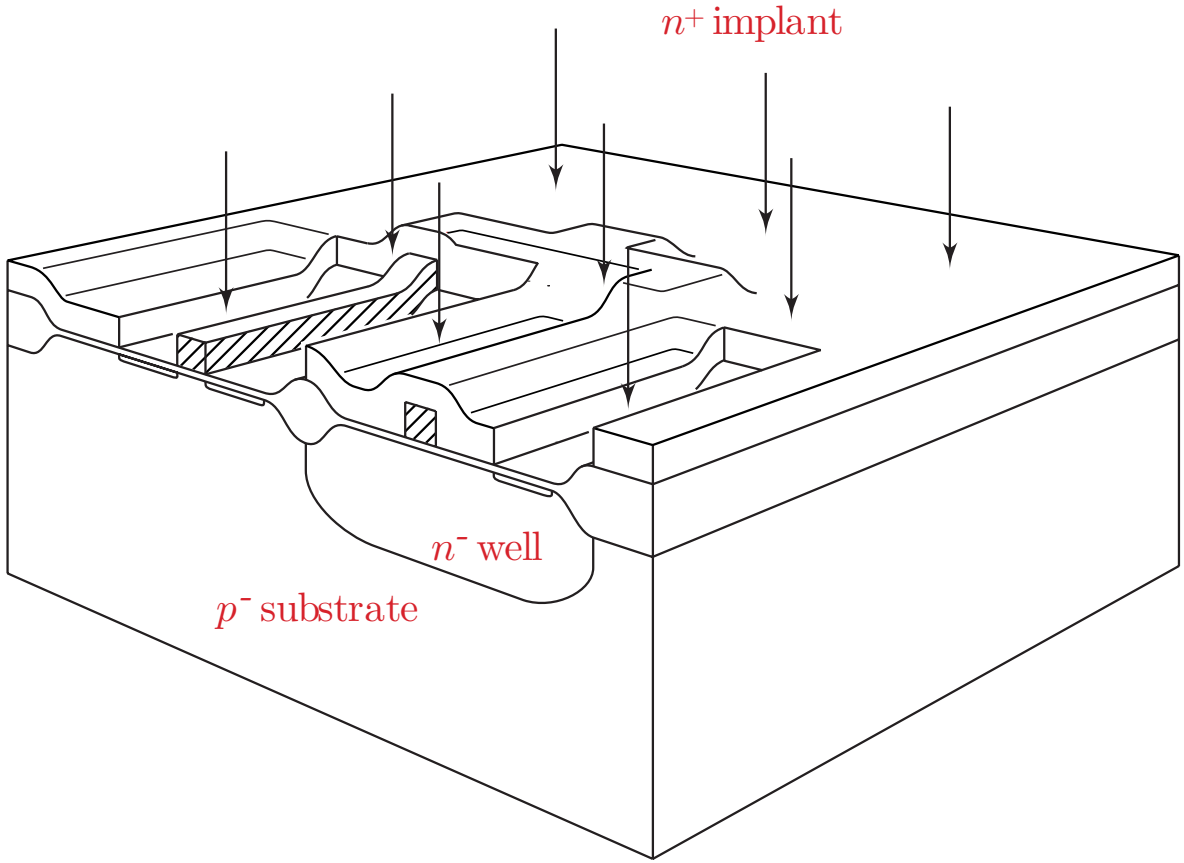
Conformally coat entire surface with photoresist

CMOS Fabrication



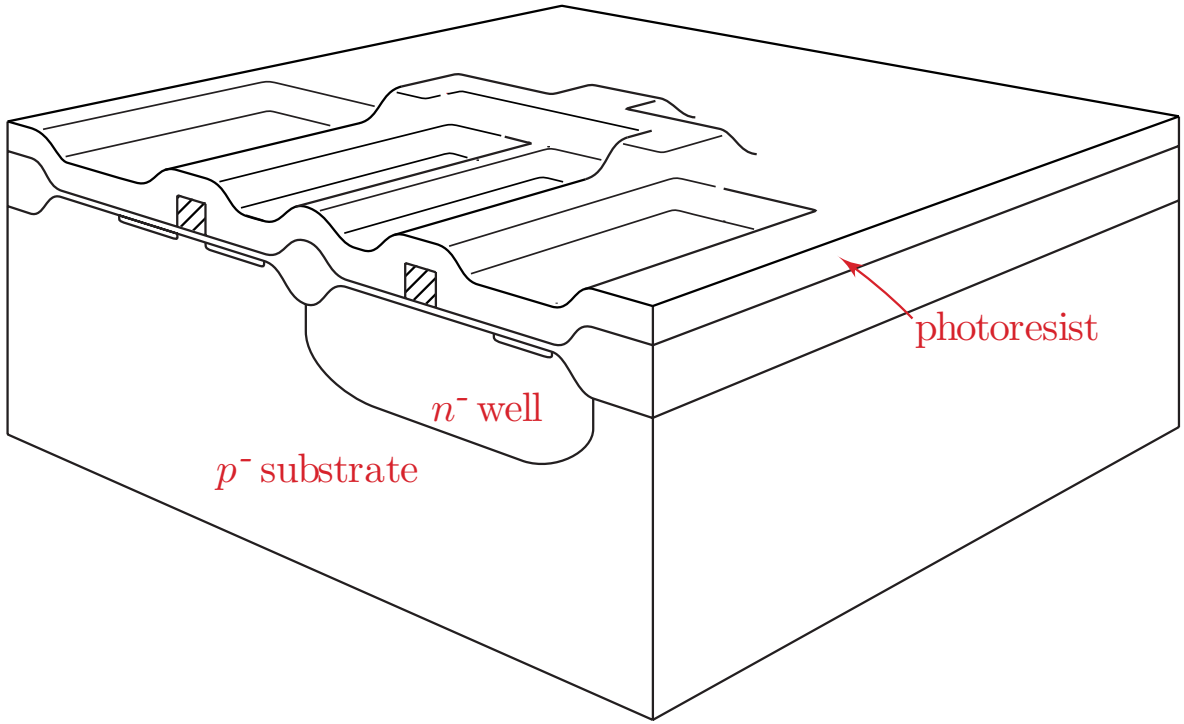
Remove photoresist to expose regions for n^+ implant

CMOS Fabrication



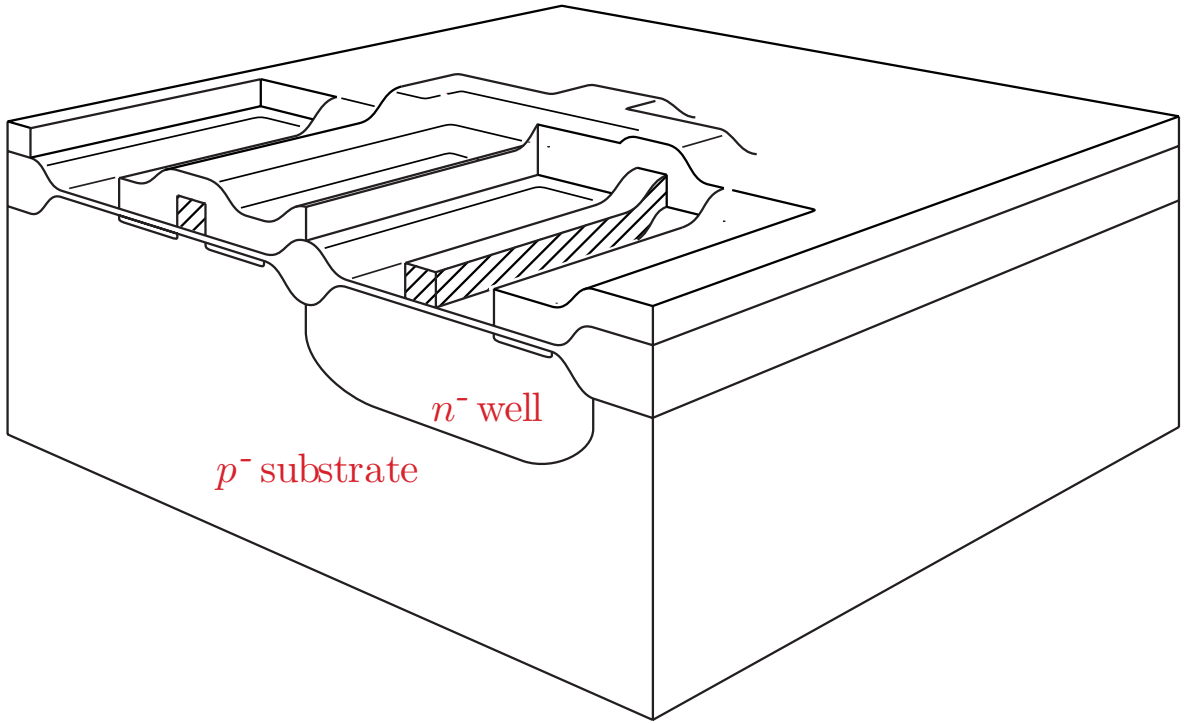
Ion implant for n^+ regions and remove all photoresist

CMOS Fabrication



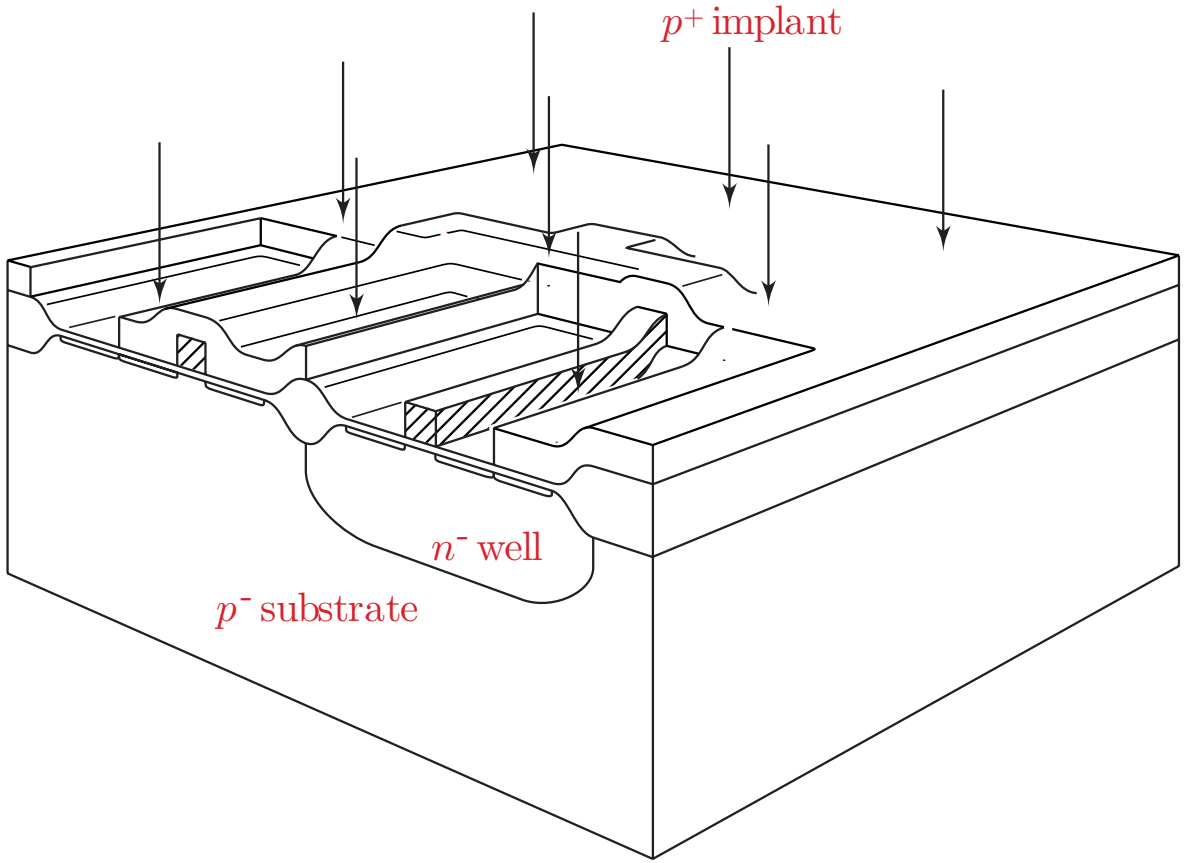
Conformally coat entire surface with photoresist

CMOS Fabrication



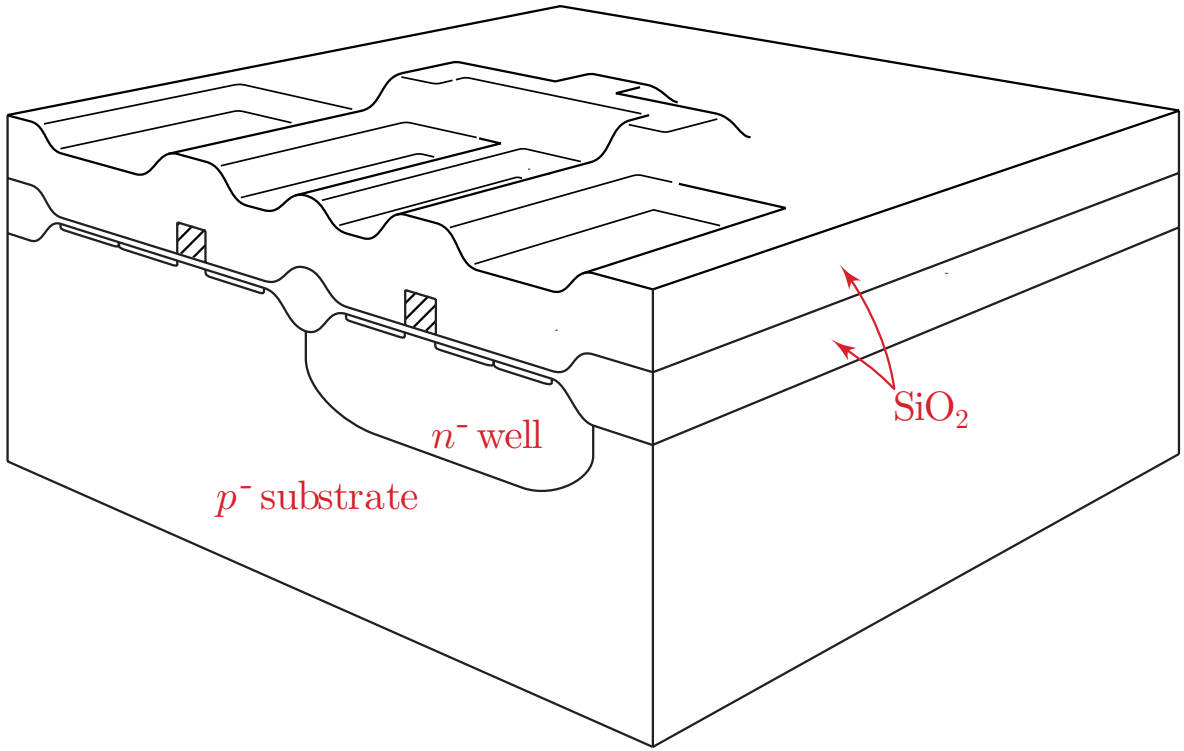
Remove photoresist to expose regions for p^+ implant

CMOS Fabrication



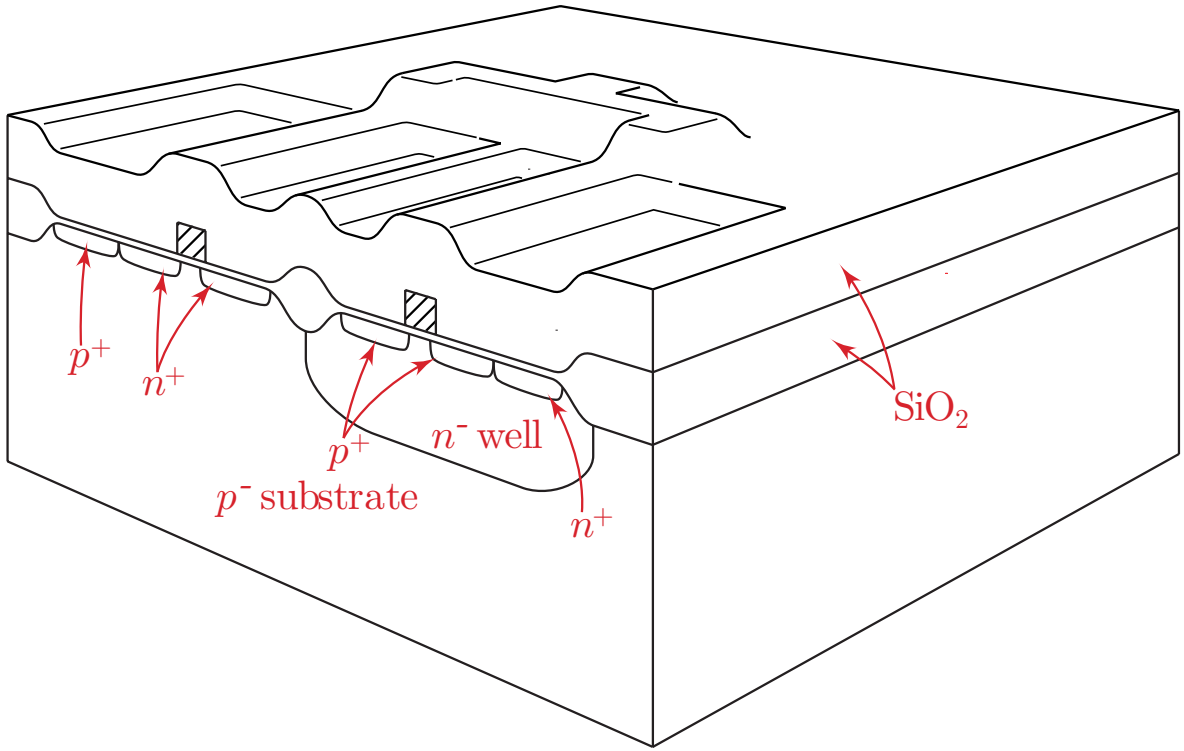
Ion implant for p^+ regions and remove all photoresist

CMOS Fabrication



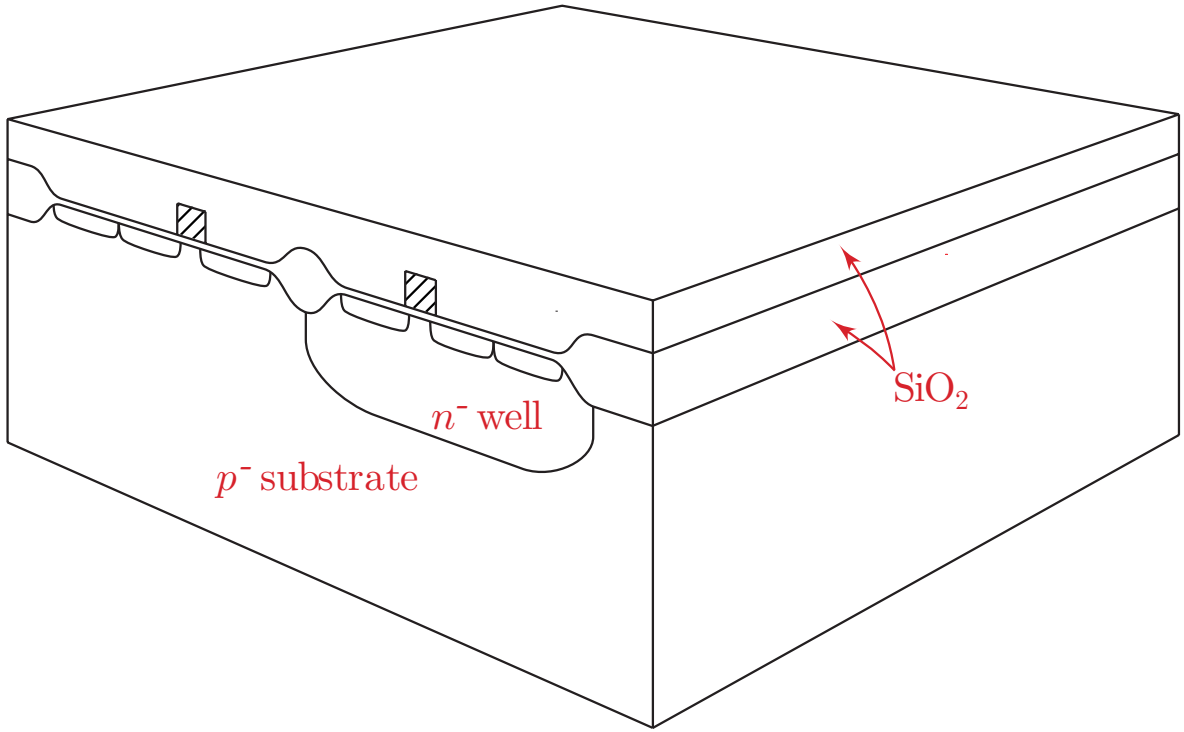
Deposit thick oxide layer over entire surface

CMOS Fabrication



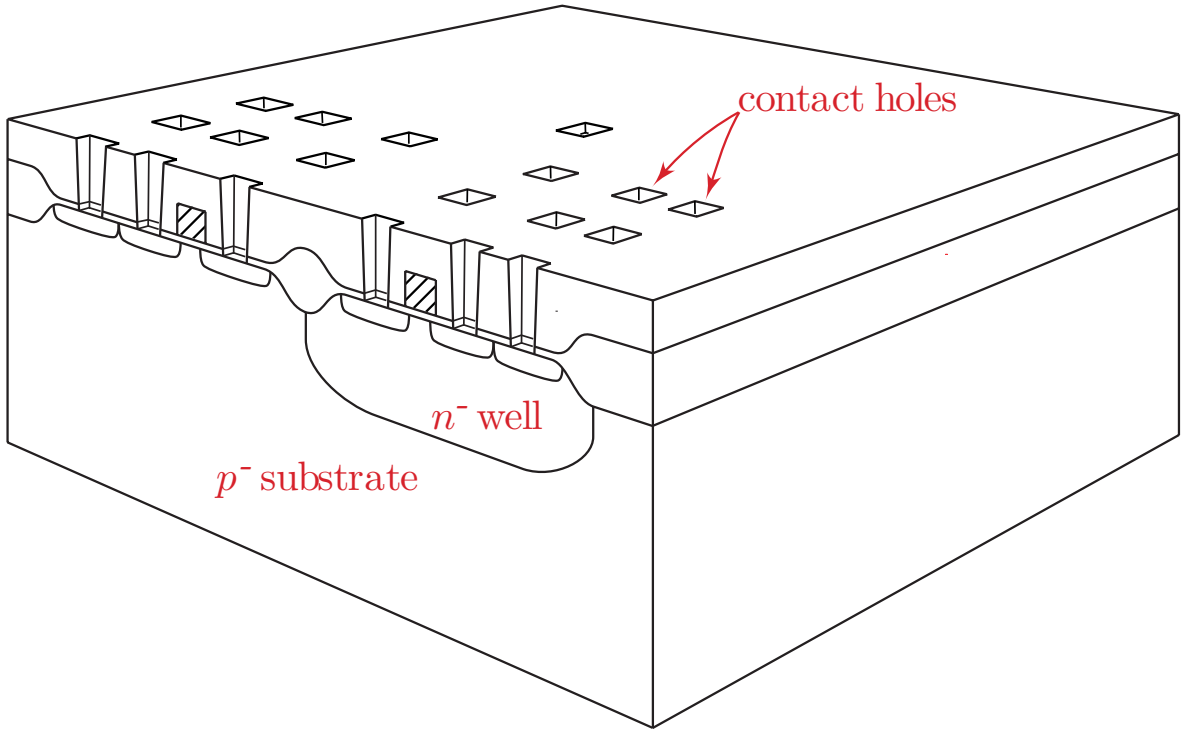
Anneal and drive in both implants

CMOS Fabrication



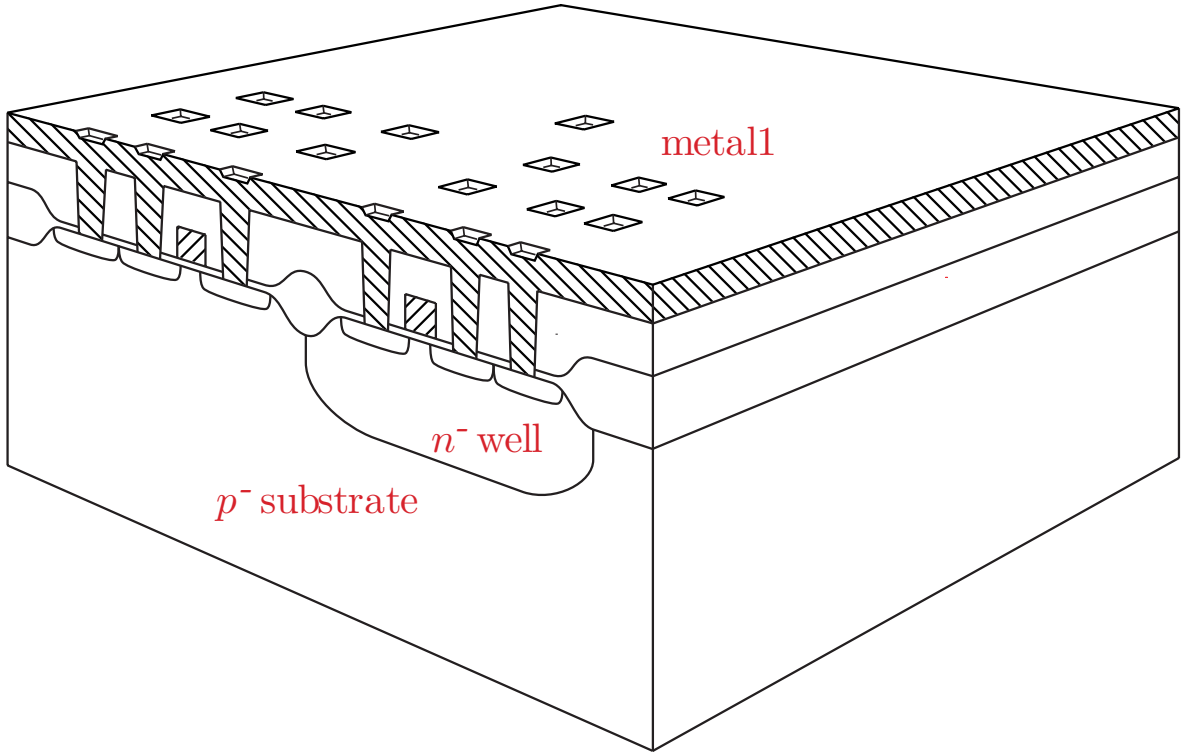
Planarize surface by chemical-mechanical polishing

CMOS Fabrication



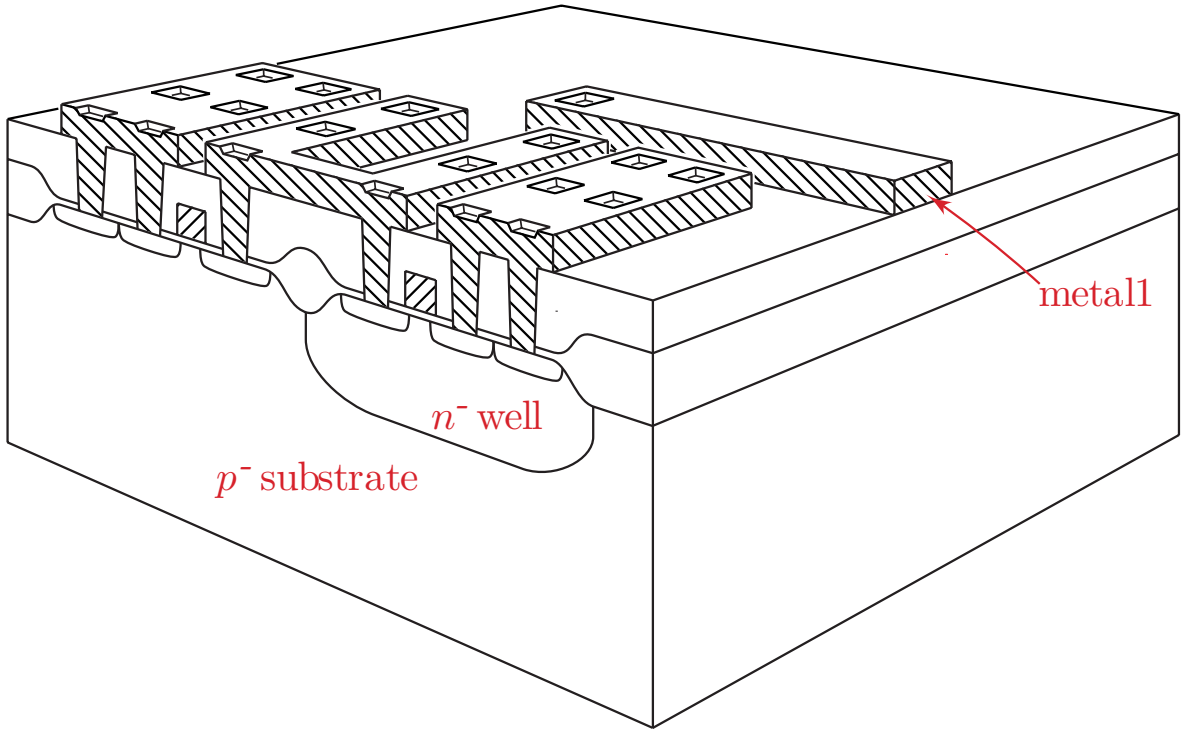
Open contact windows in the oxide

CMOS Fabrication



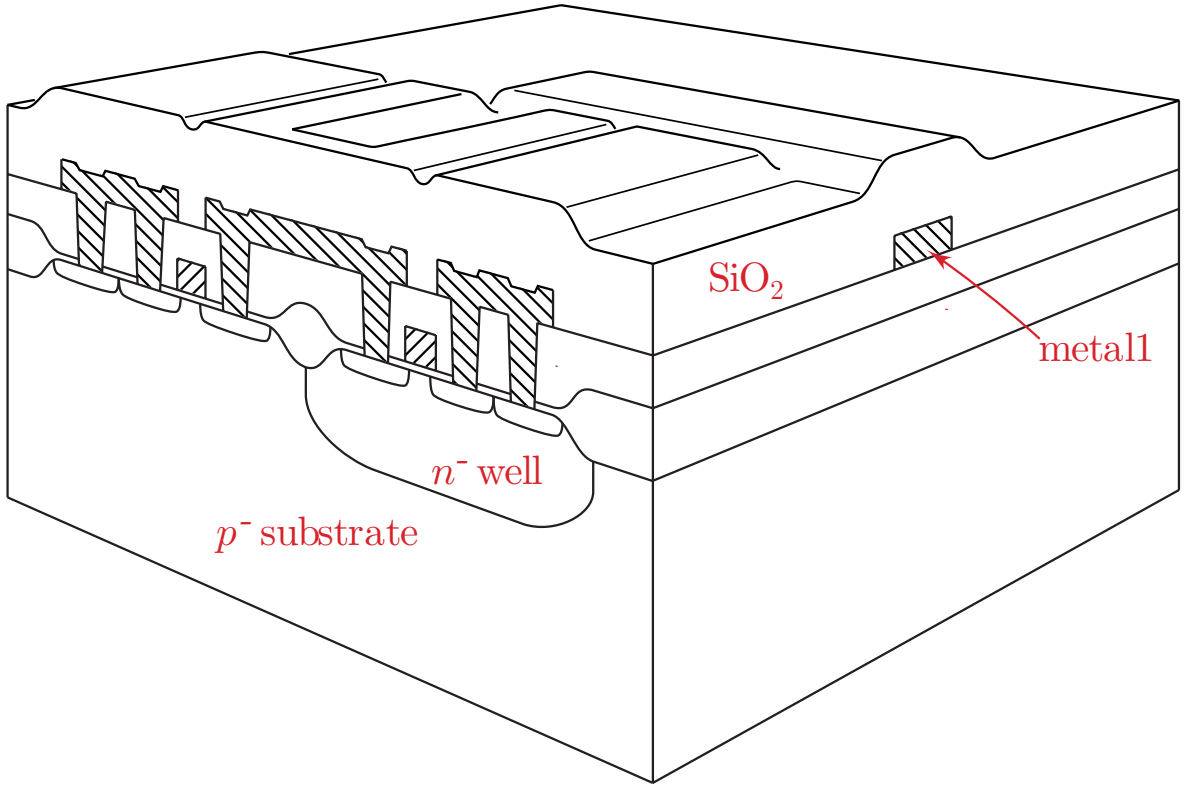
Fill contact holes with metal and deposit metal1

CMOS Fabrication



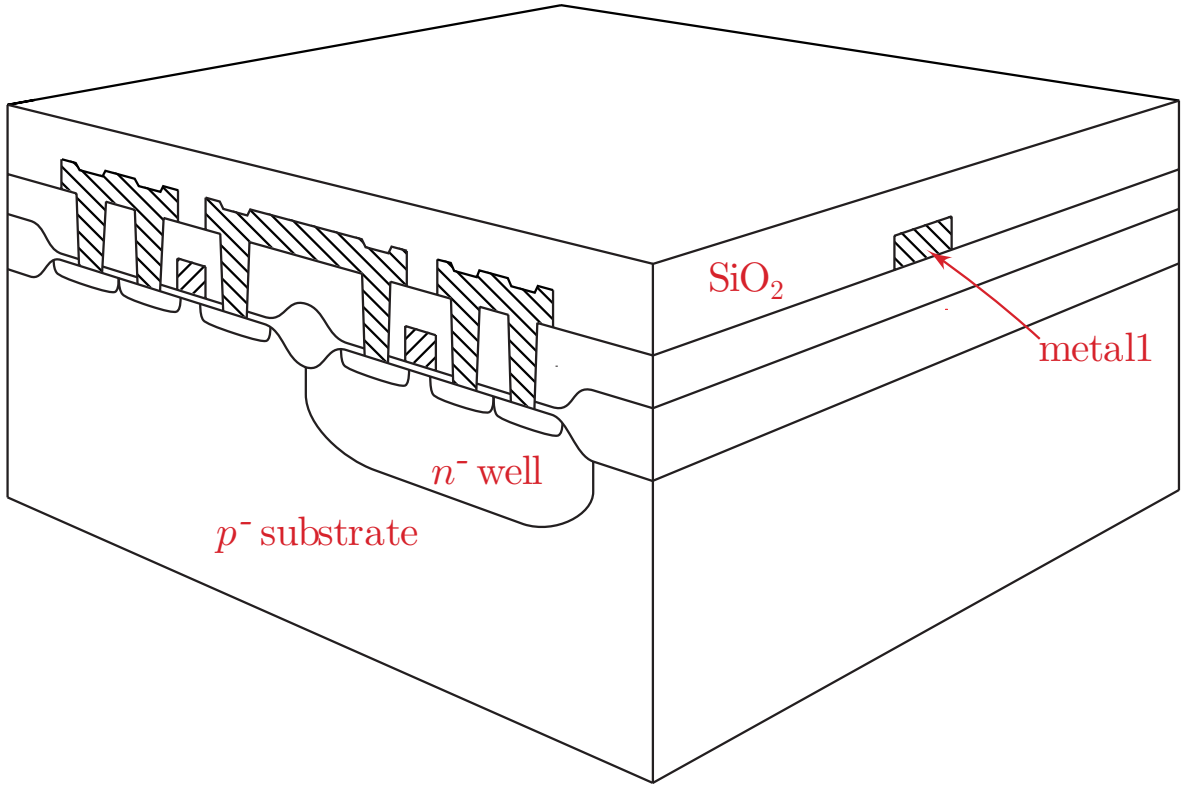
Pattern and selectively etch metal1

CMOS Fabrication



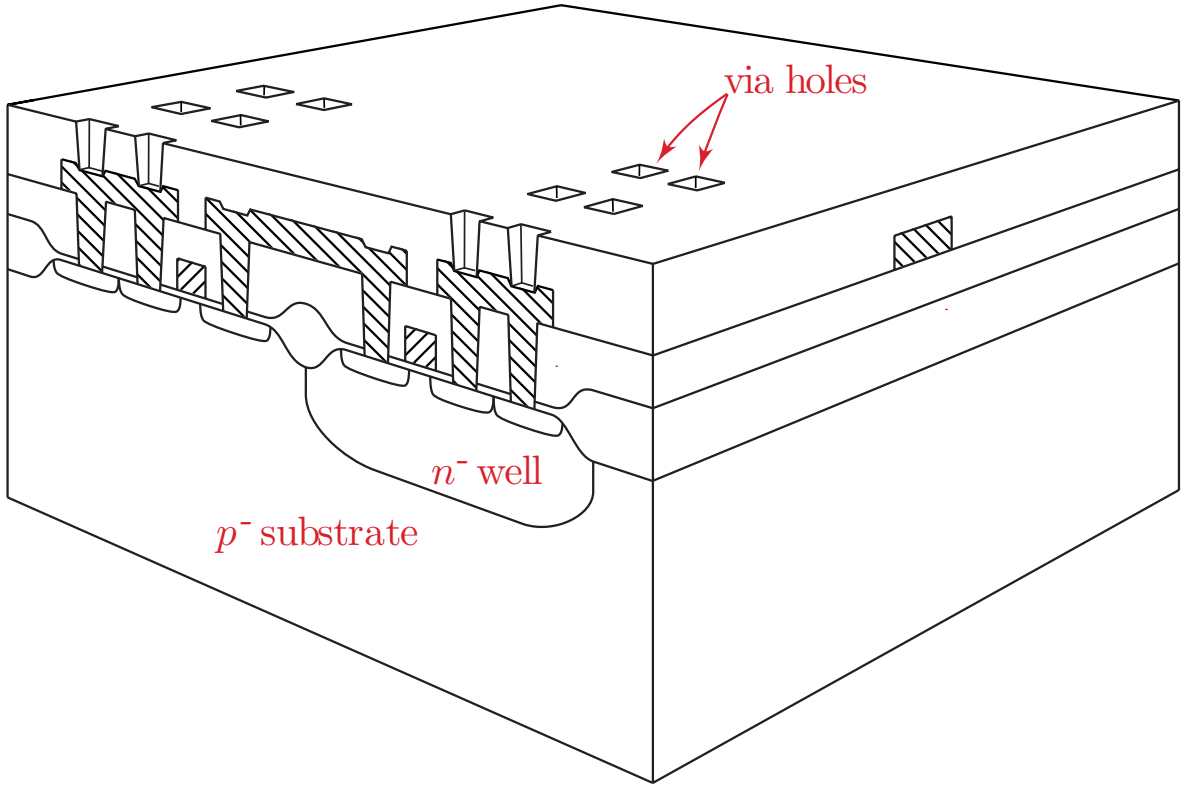
Deposit thick oxide layer over entire surface

CMOS Fabrication



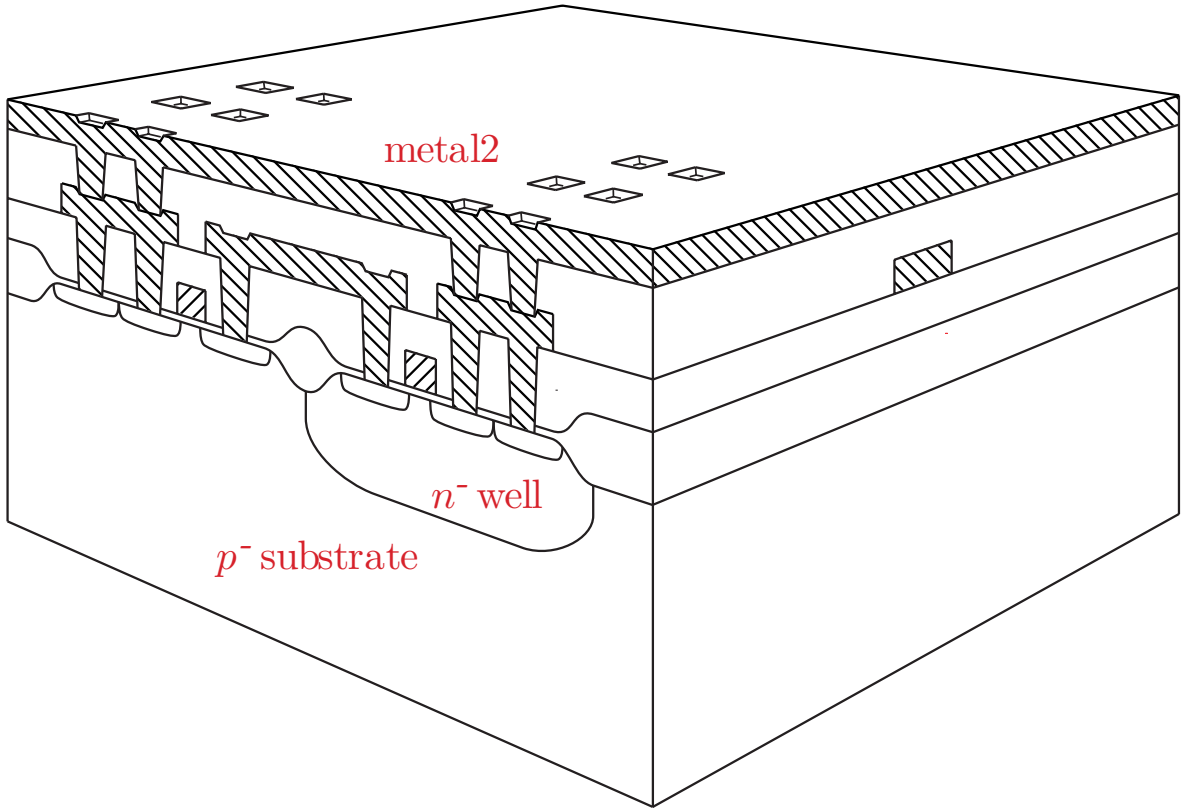
Planarize surface by chemical-mechanical polishing

CMOS Fabrication



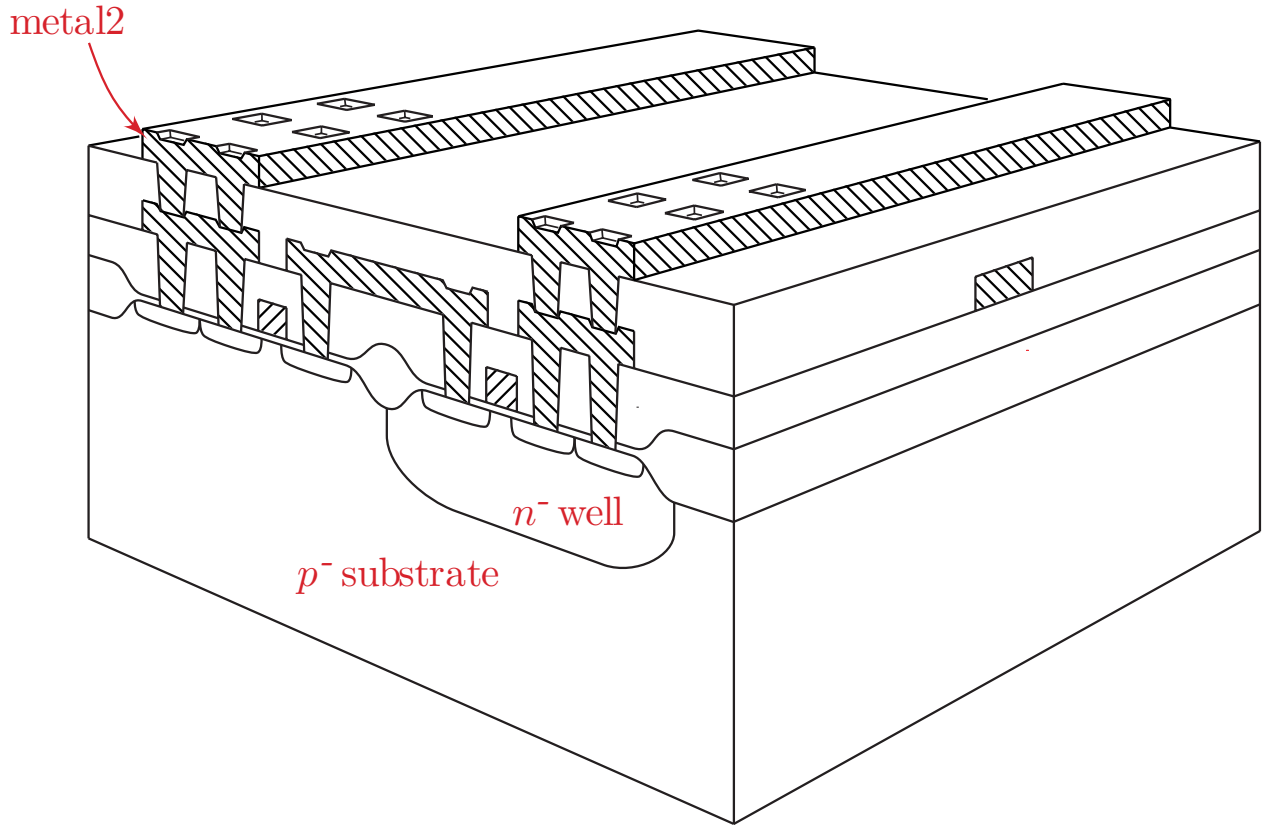
Open via windows in the oxide

CMOS Fabrication



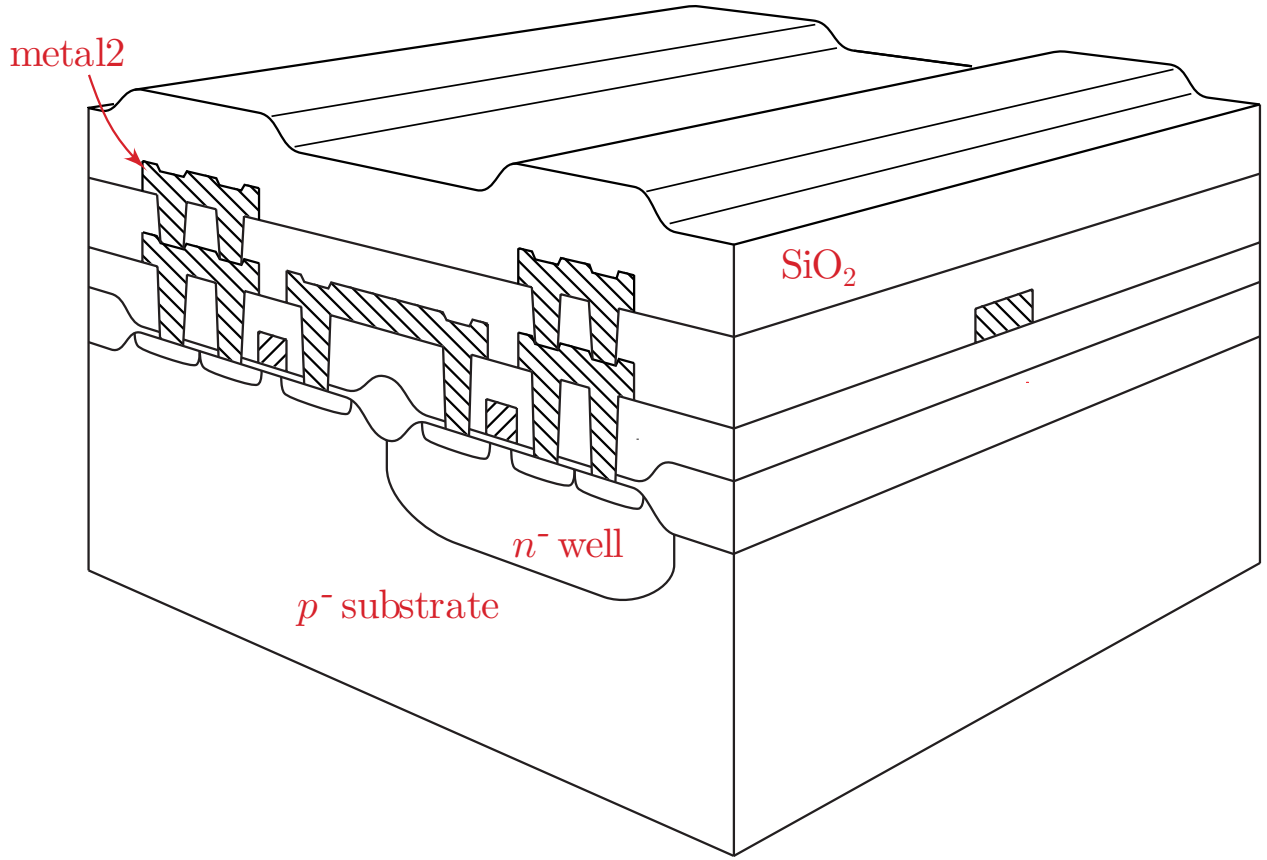
Fill via holes with metal and deposit metal2

CMOS Fabrication



Pattern and selectively remove metal2

CMOS Fabrication



Deposit thick oxide layer over entire surface