

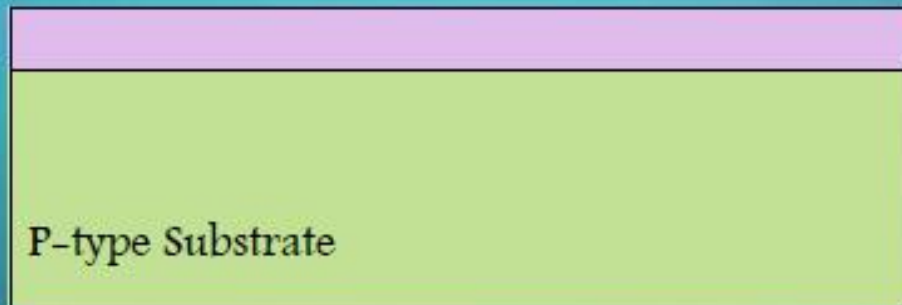
LECTURE-19

CMOS FABRICATION PROCESS



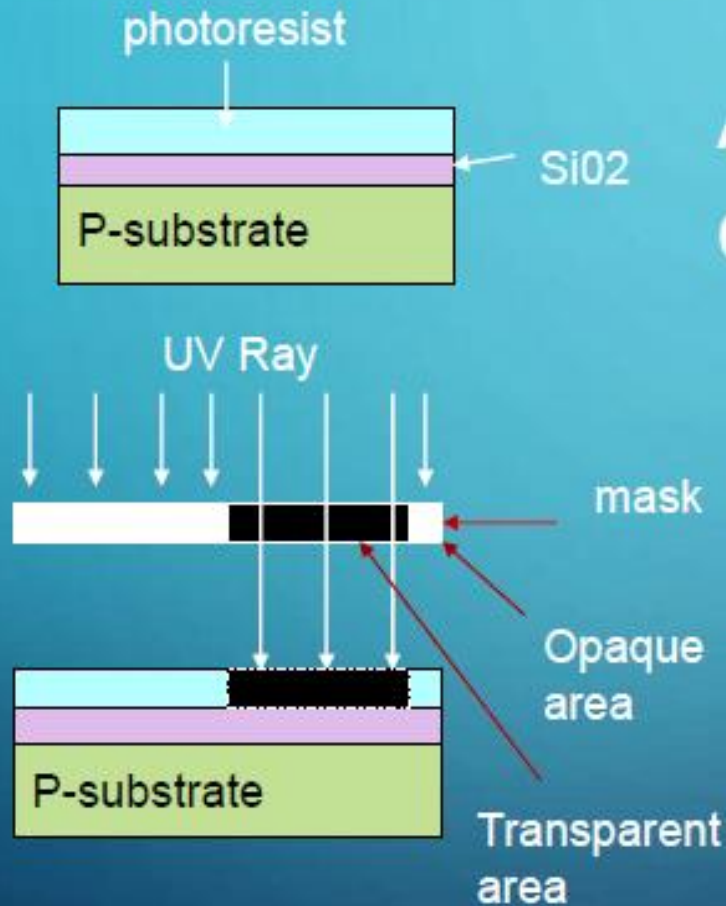
Si-O₂ Layer
Silicon Wafer

Start with clean p-type substrate (p-type wafer)



A Si-O₂ Layer is created by oxidation on top of the wafer

CMOS FABRICATION PROCESS



A Photoresist is coated over the total thing

Masking and exposure under UV light (E)
Resist dissolved after developed (D)

Pre-shape the well pattern at resist layer

PHOTOLITHOGRAPHY



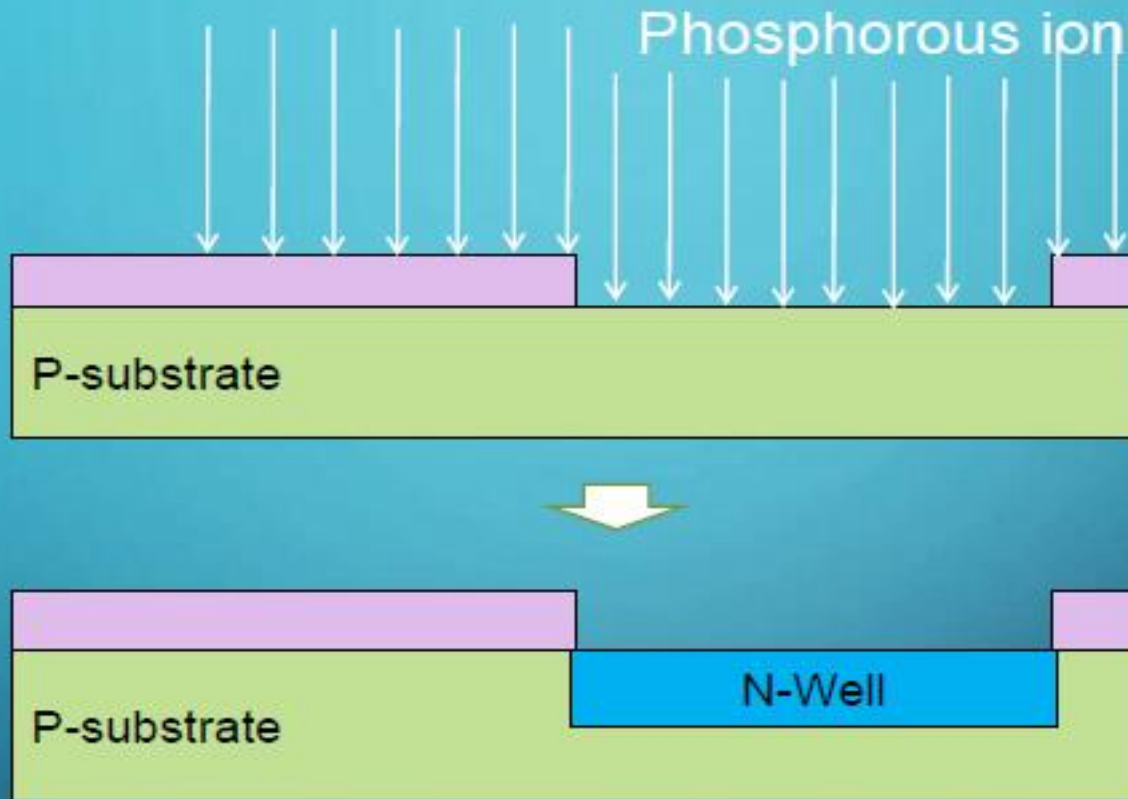
Removing the unwanted pattern by wet etching



Resist clean

Desired pattern formed

DIFFUSION



Ion bombardment by ion implantation

SiO₂ as mask, uncovered area will be exposed to dopant ion