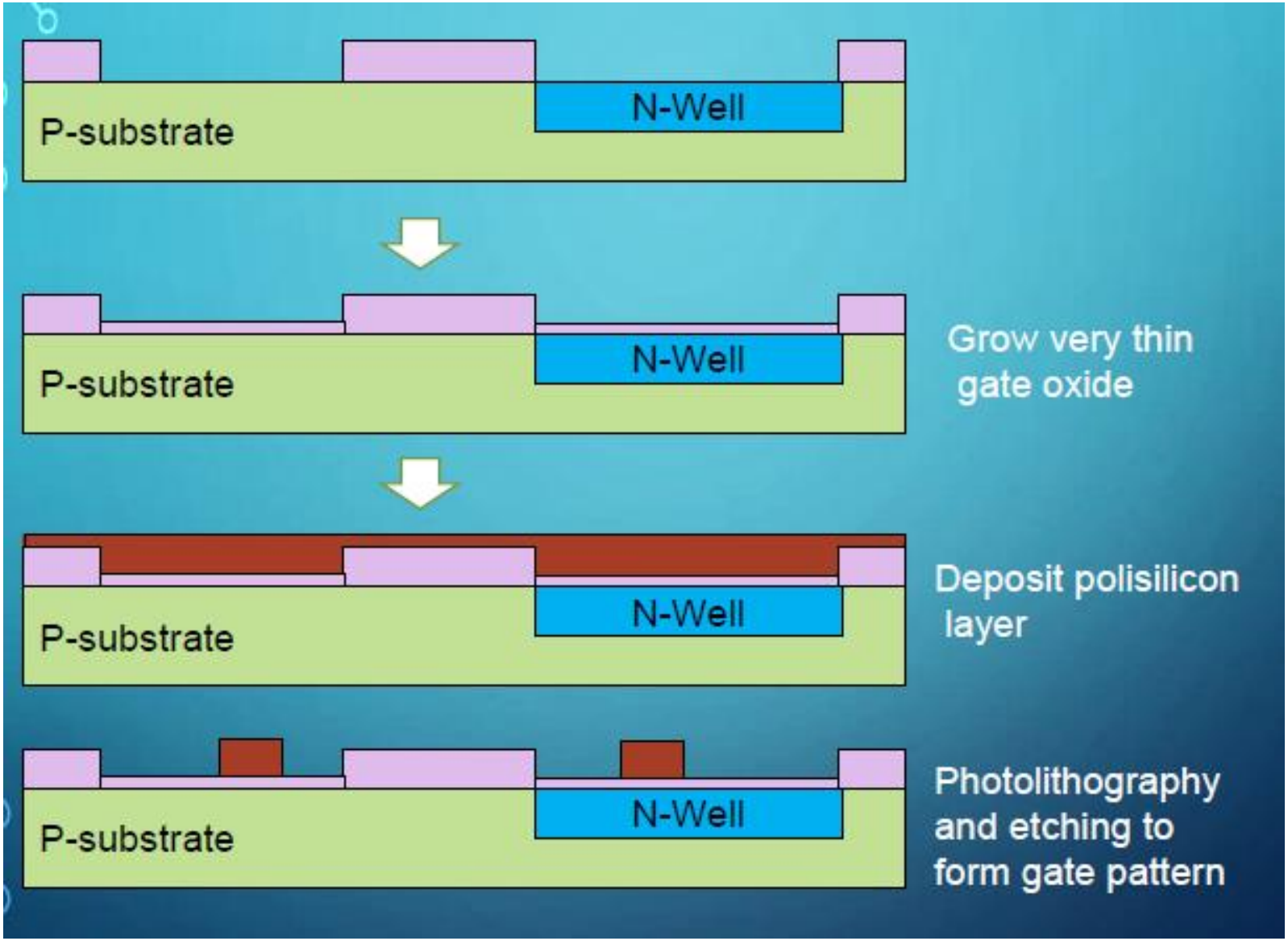
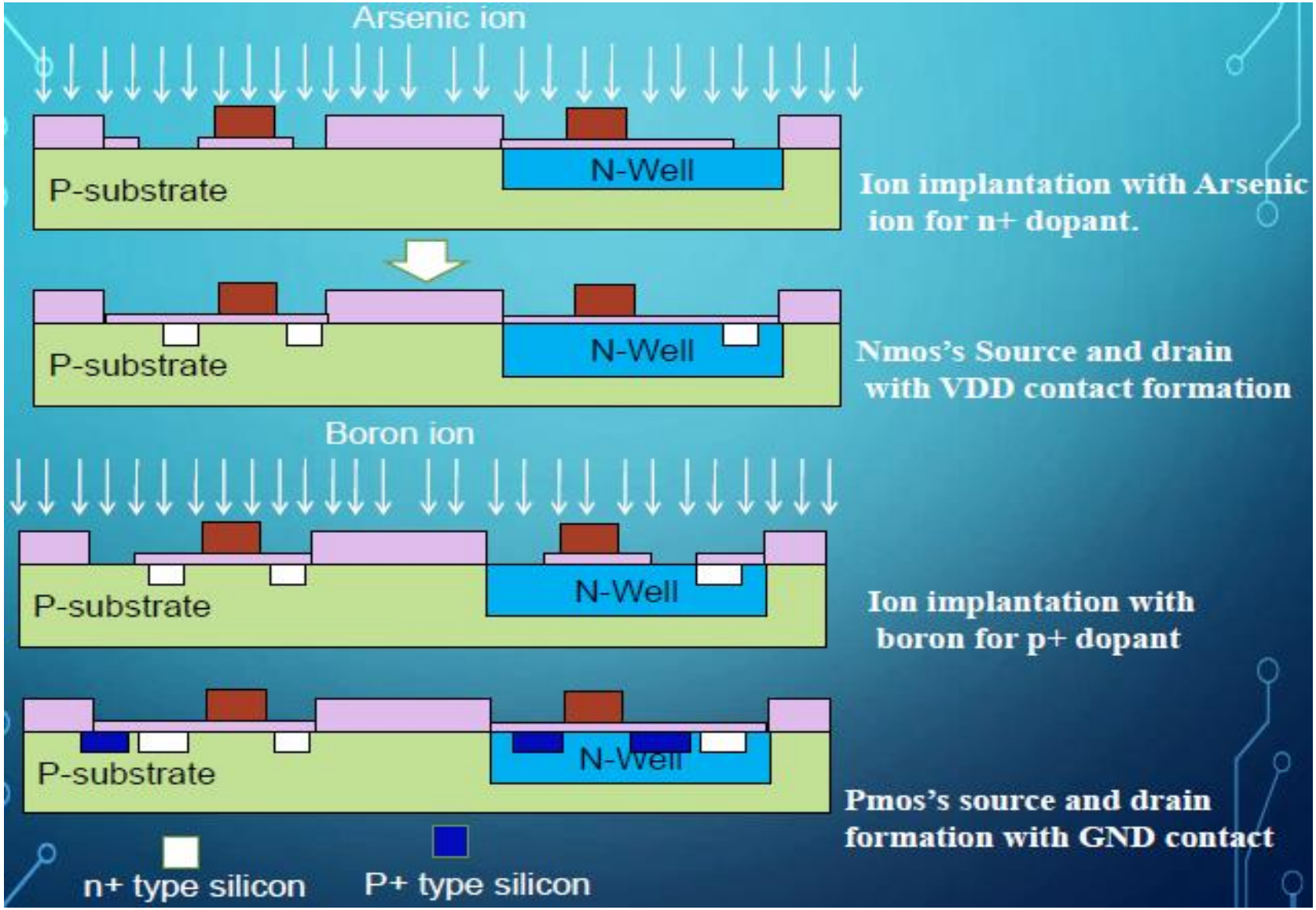
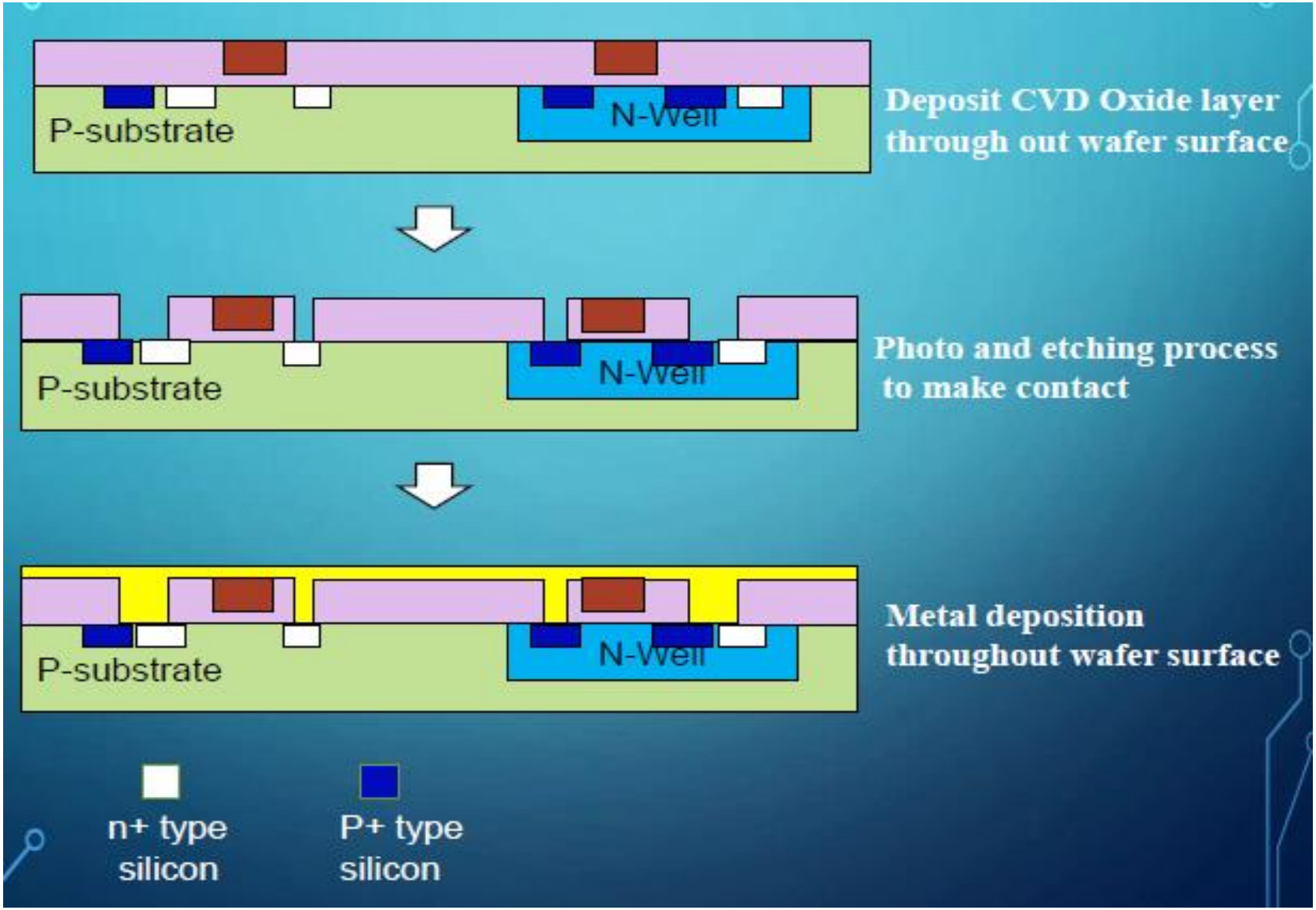
LECTURE-20


P-substrate
N-Well
P-substrate
N-Well
Grow very thin gate oxide
P-substrate
N-Well
Deposit polisilicon layer
P-substrate
N-Well
Photolithography and etching to form gate pattern


Arsenic ion
P-substrate
N-Well
Ion implantation with Arsenic ion for n+ dopant.
P-substrate
N-Well
Nmos's Source and drain with VDD contact formation
Boron ion
P-substrate
N-Well
Ion implantation with boron for p+ dopant
P-substrate
N-Well
Pmos's source and drain formation with GND contact
n+ type silicon
P+ type silicon


P-substrate
N-Well
Deposit CVD Oxide layer through out wafer surface
P-substrate
N-Well
Photo and etching process to make contact
P-substrate
N-Well
Metal deposition throughout wafer surface
n+ type silicon
P+ type silicon

COMPLETE CMOS

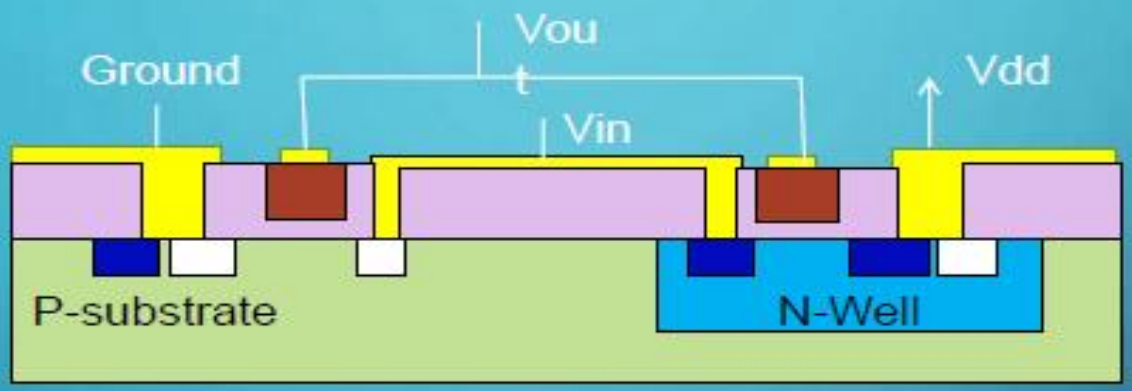


Photo and etching processes to pattern interconnection

n+ type silicon

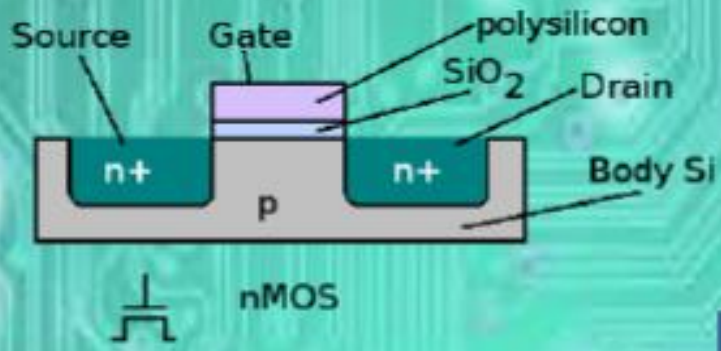
P+ type silicon

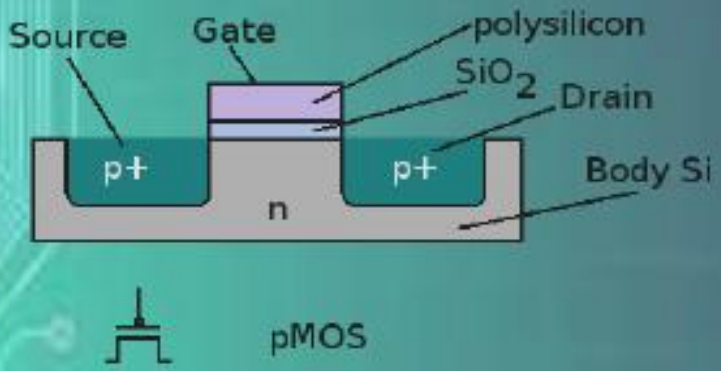
Metal contact

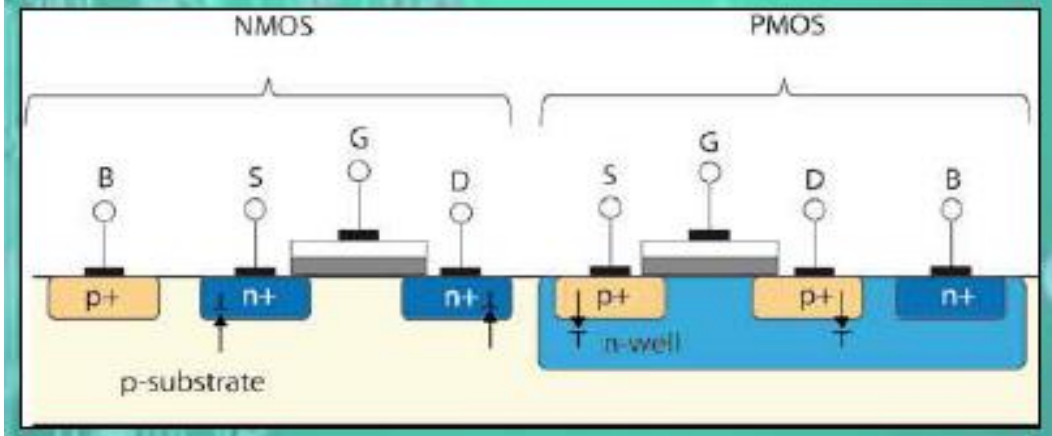
SiO2 Layer

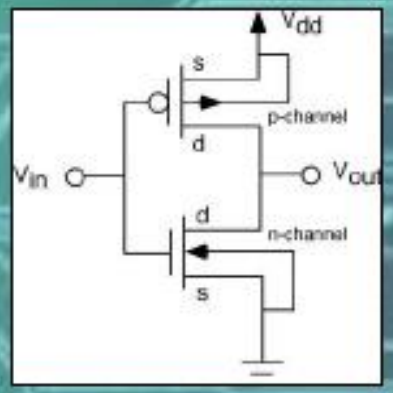
Polysilicon

Complementary MOS (or CMOS)









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Thanks