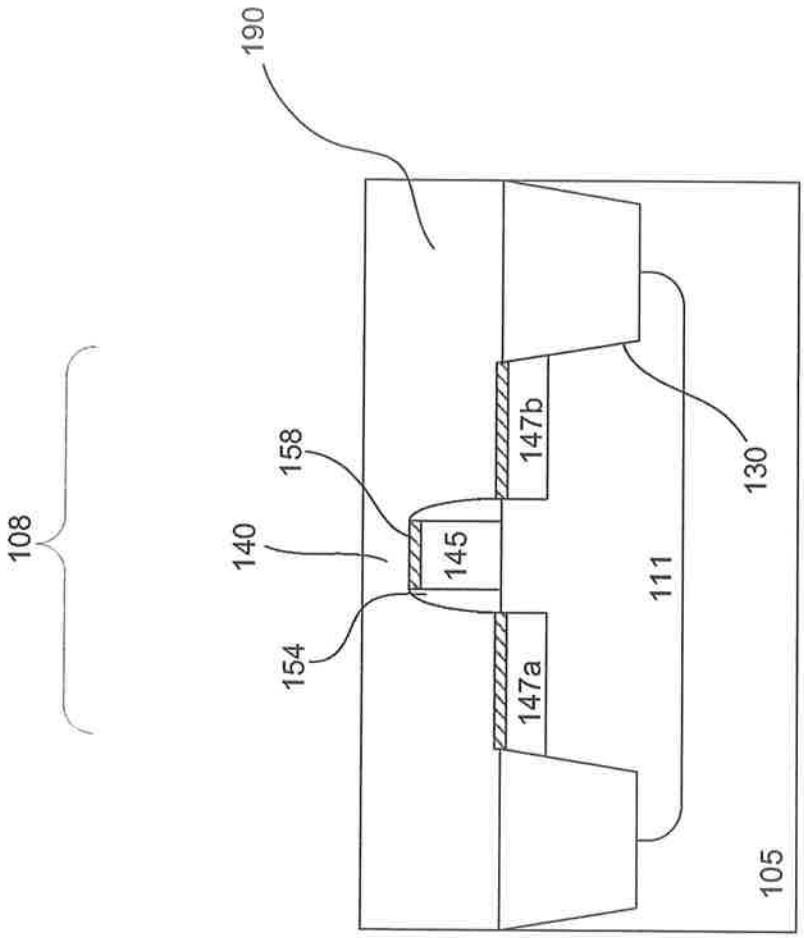


Fig. 1

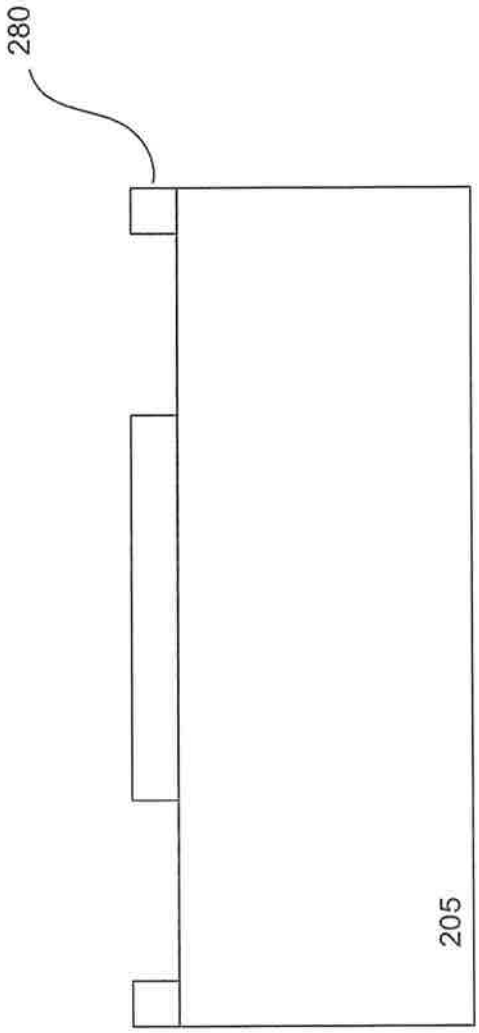


Fig. 2a

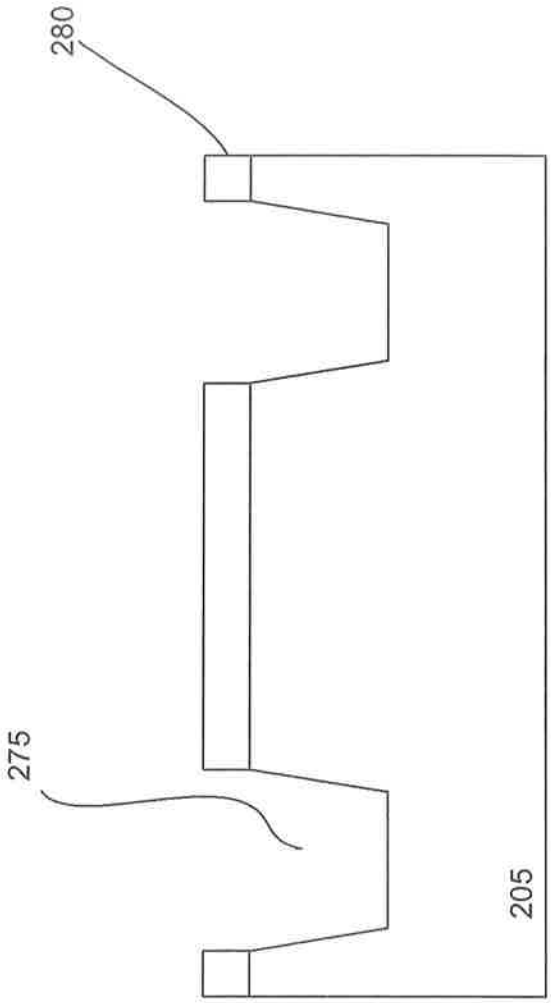


Fig. 2b

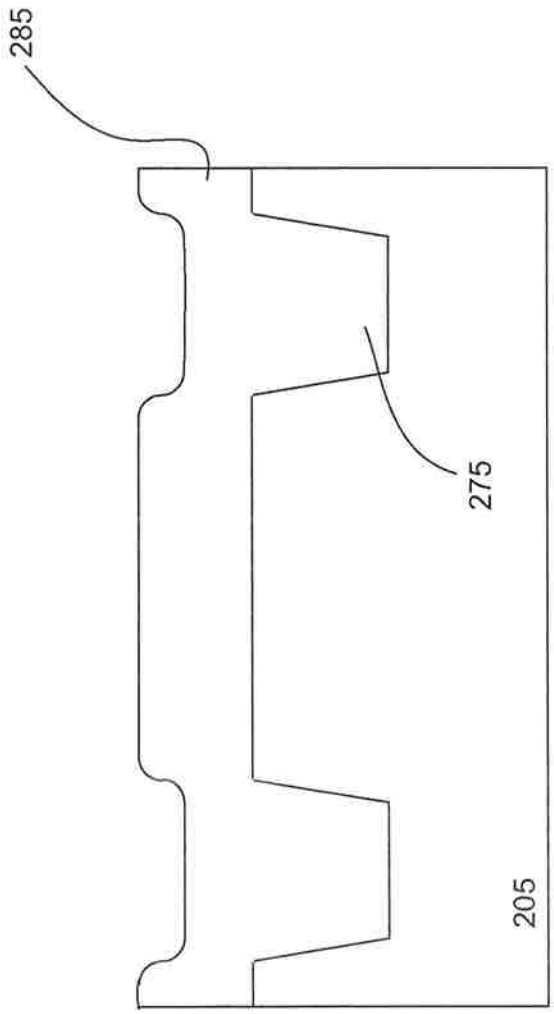


Fig. 2c

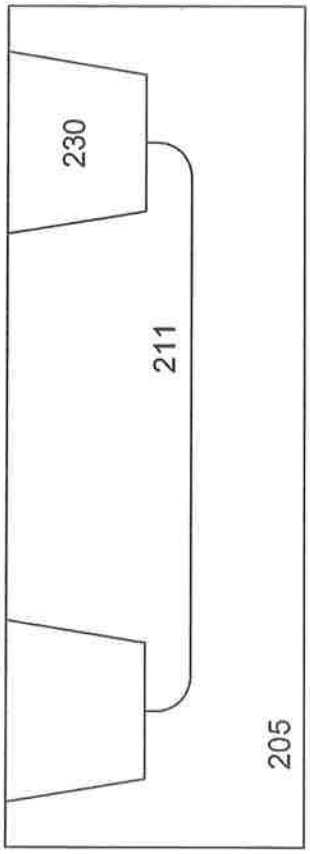


Fig. 2d

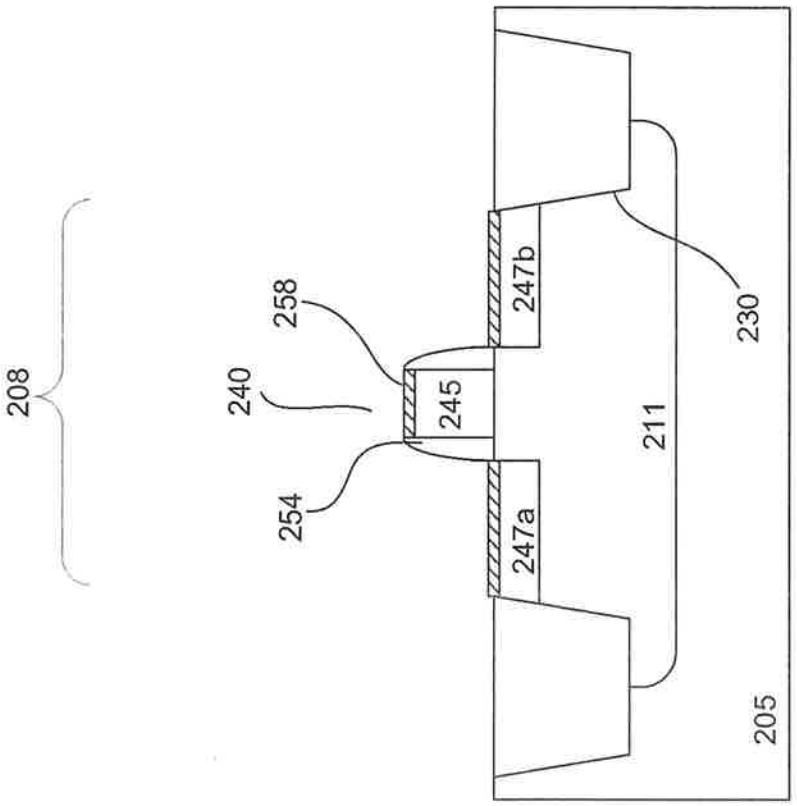


Fig. 2e

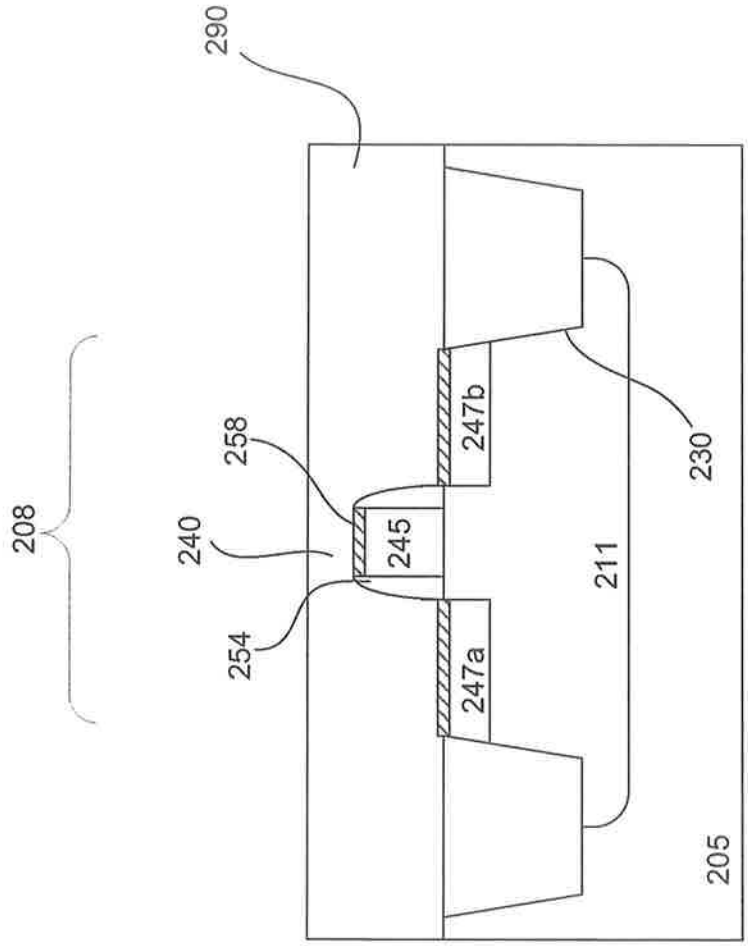


Fig. 2f

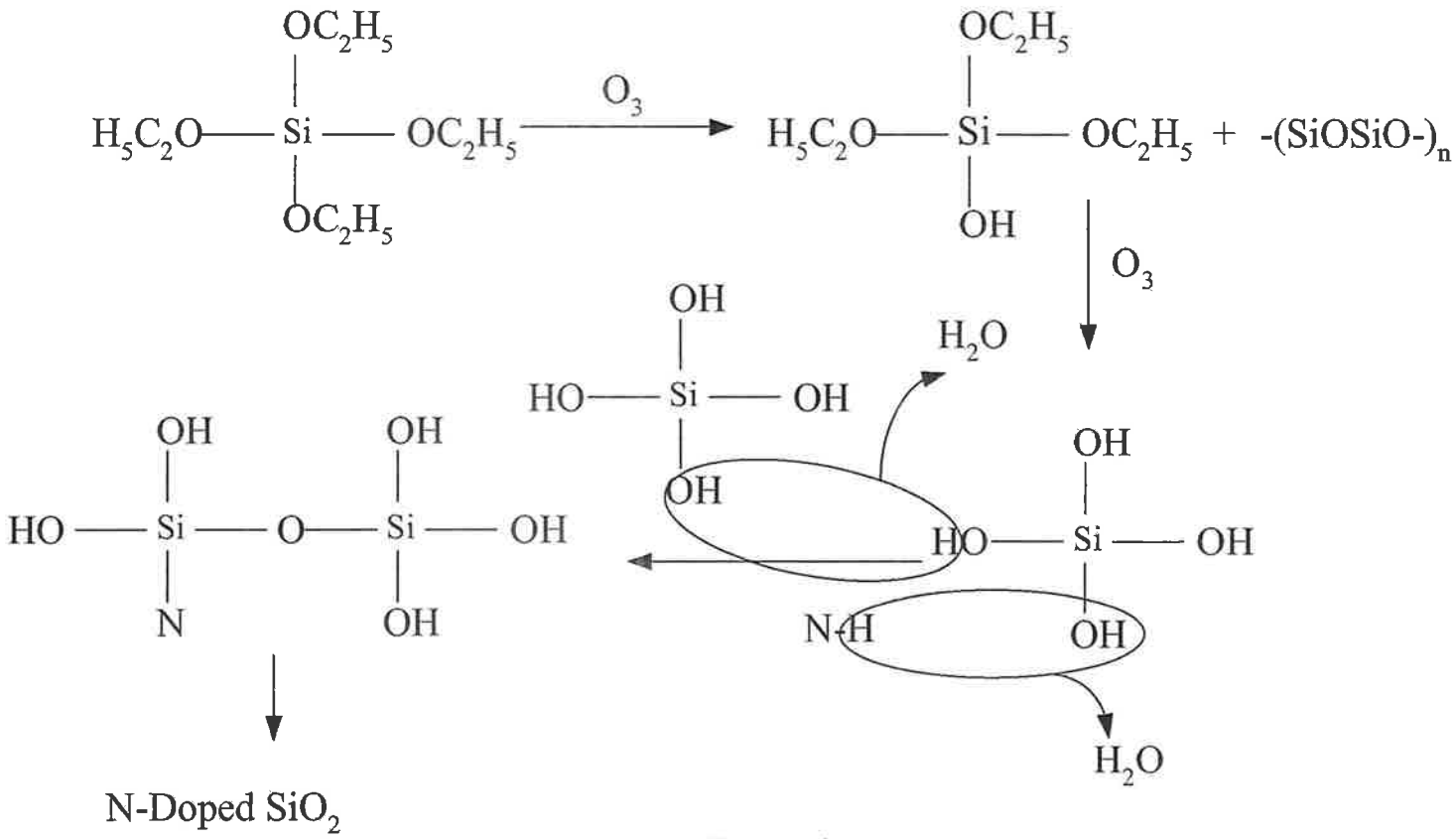

OC2H5
H5C2O — Si — OC2H5
OC2H5
O3
H5C2O — Si — OC2H5 + -(SiOSiO-)n
OH
O3
OH
HO — Si — OH
OH
H2O
OH
HO — Si — OH
N-H
OH
H2O
OH
OH
HO — Si — O — Si — OH
N
OH
N-Doped SiO2

Fig. 3