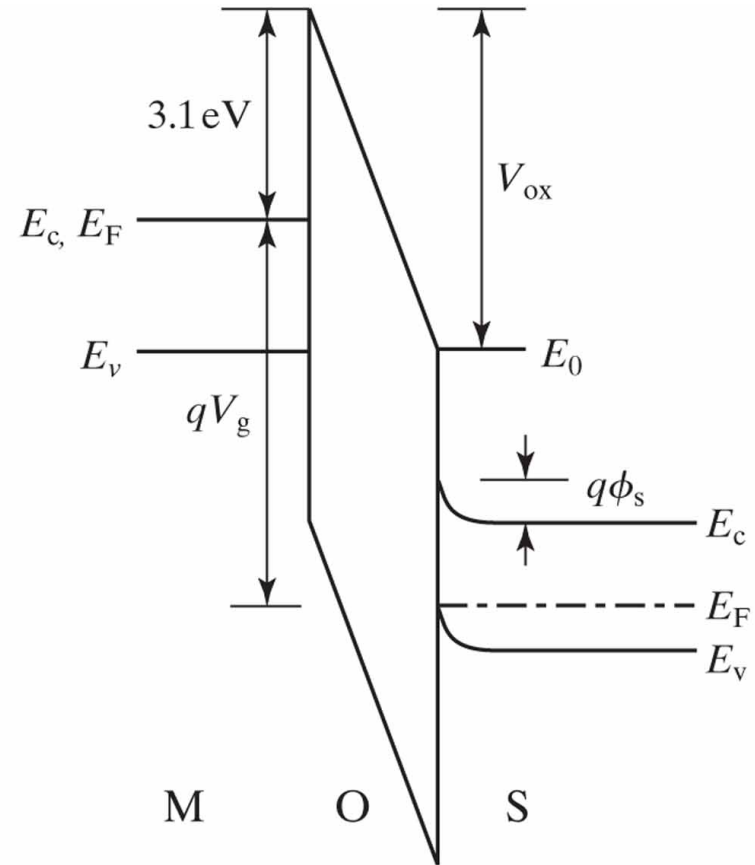
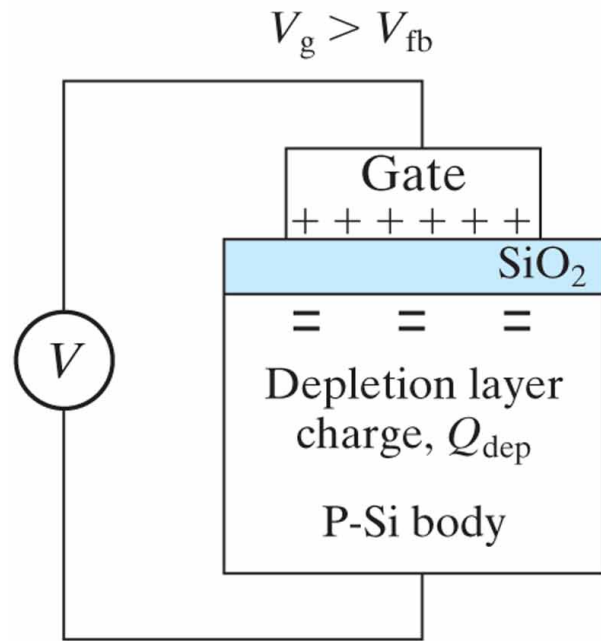


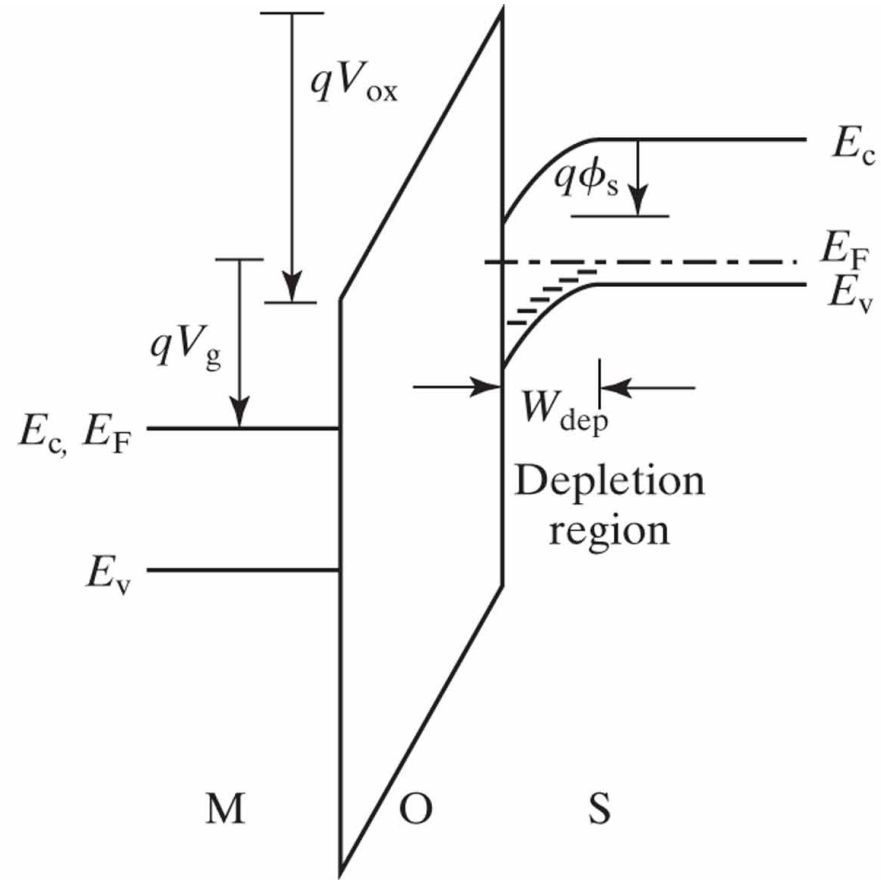
(a)



(b)



(a)



(b)

Figure 5.7 The threshold condition is reached when $n_s = N_a$, or equivalently, $A = B$, or $\phi_s = \phi_{st} = 2\phi_B$. Note that positive ϕ_{st} corresponds to downward band bending.

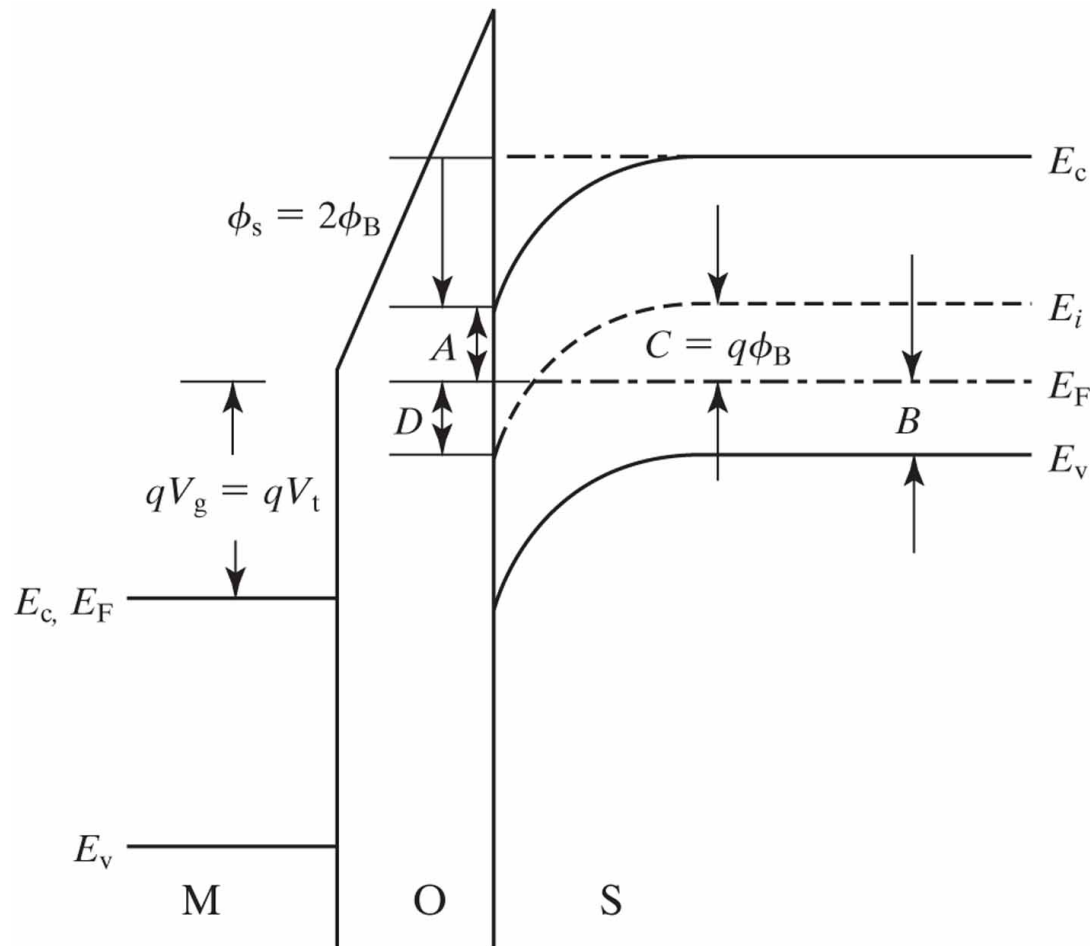
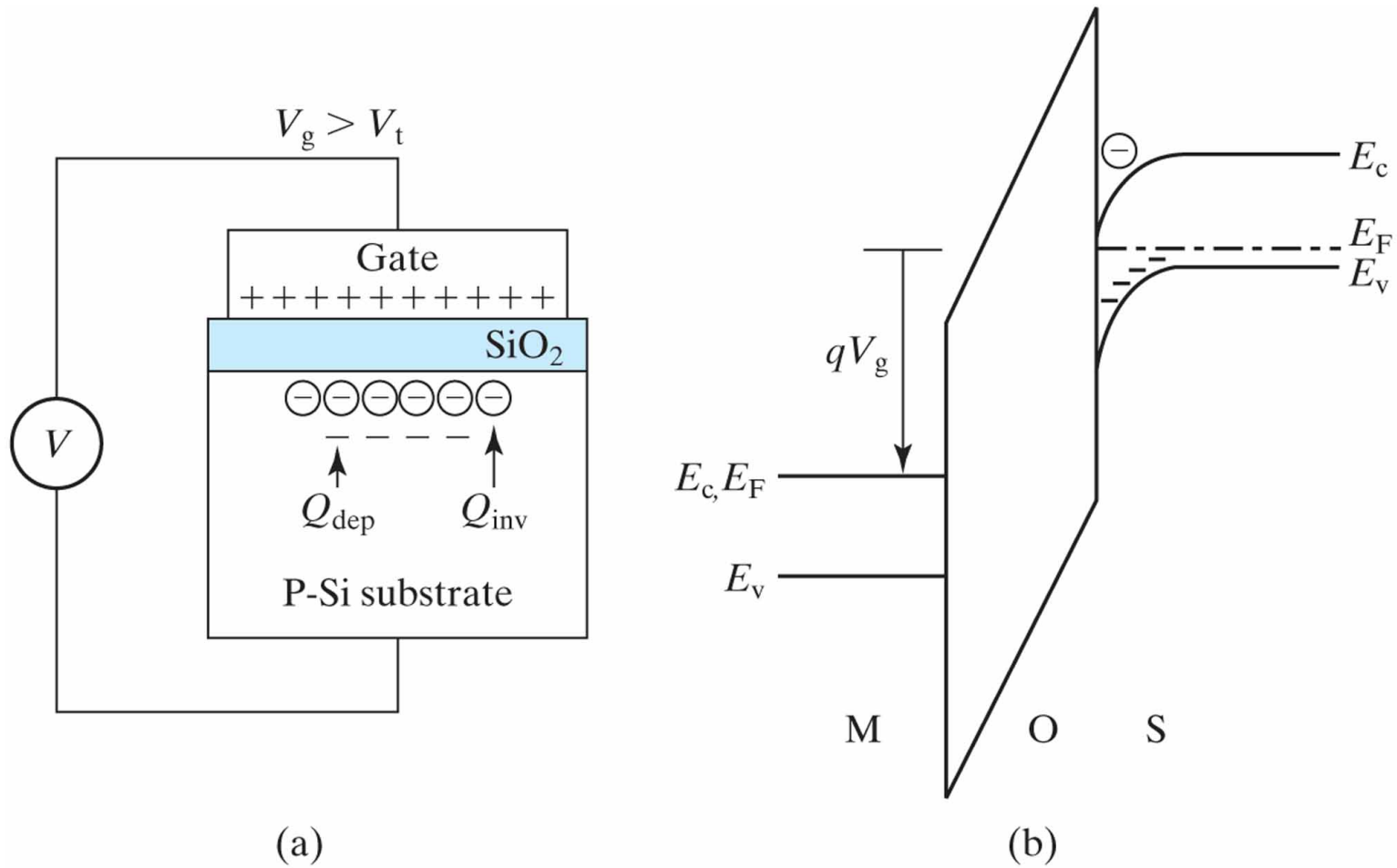
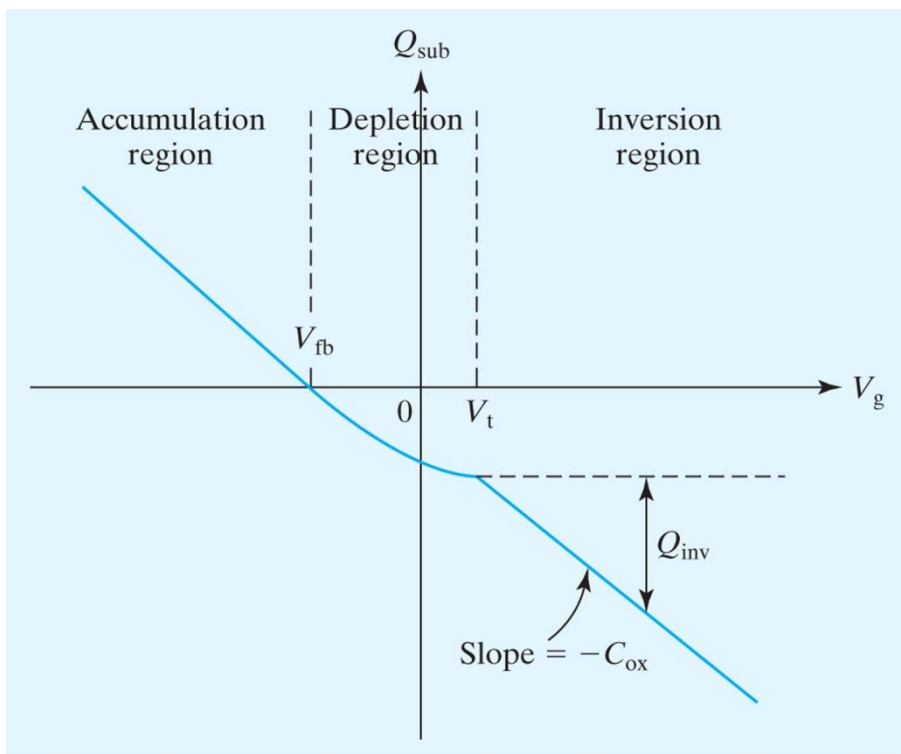
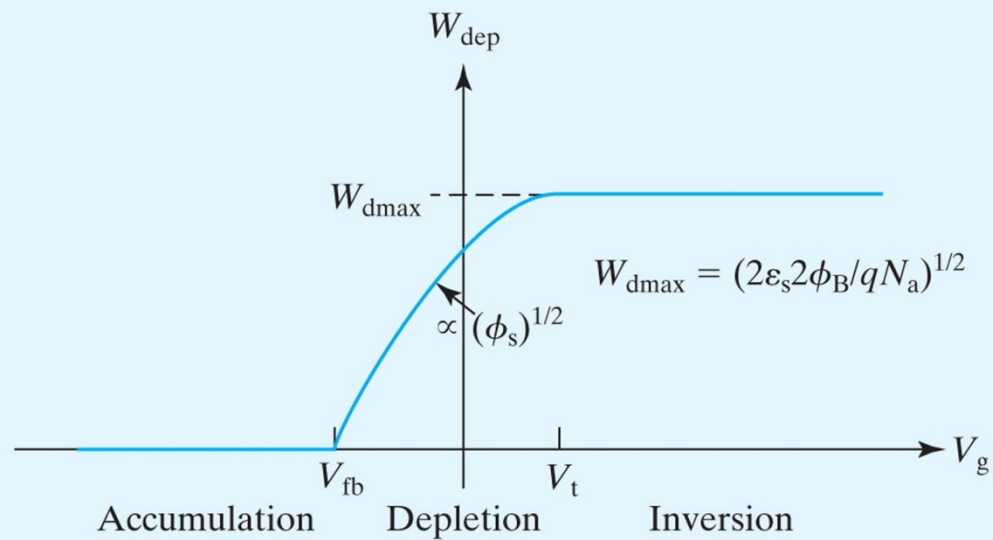
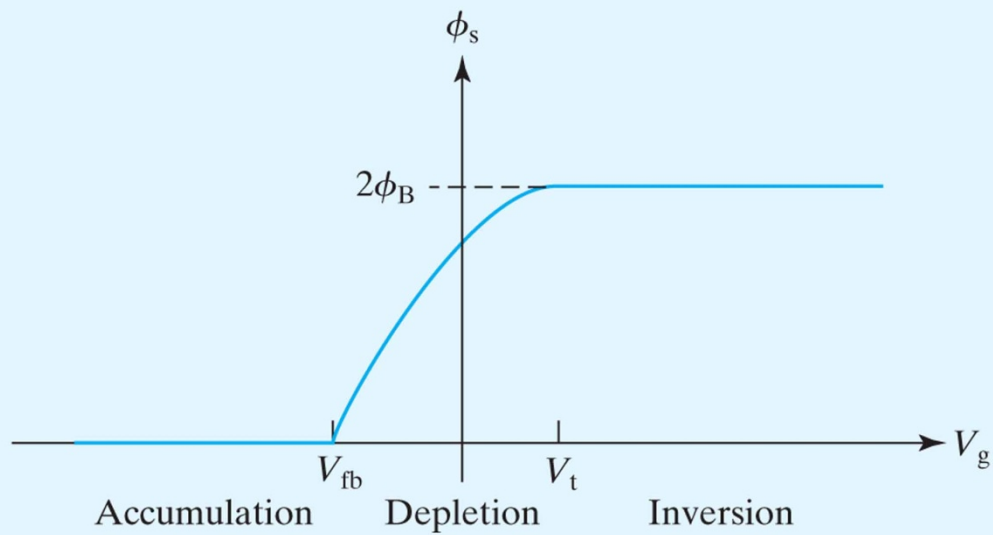


Figure 5.9 An MOS capacitor biased into inversion. (a) Types of charge present; (b) energy band diagram with arrow indicating the sense of positive V_g .





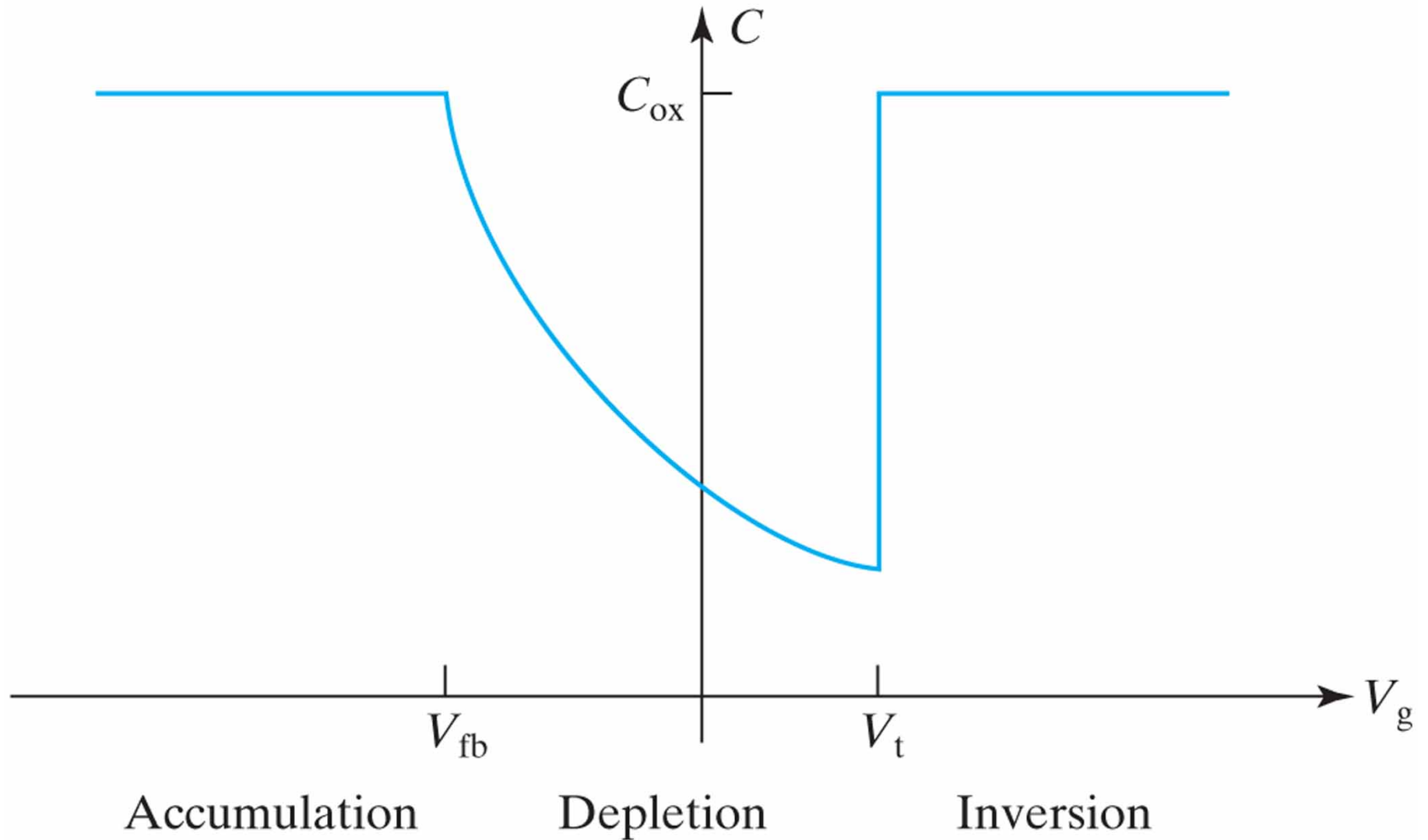
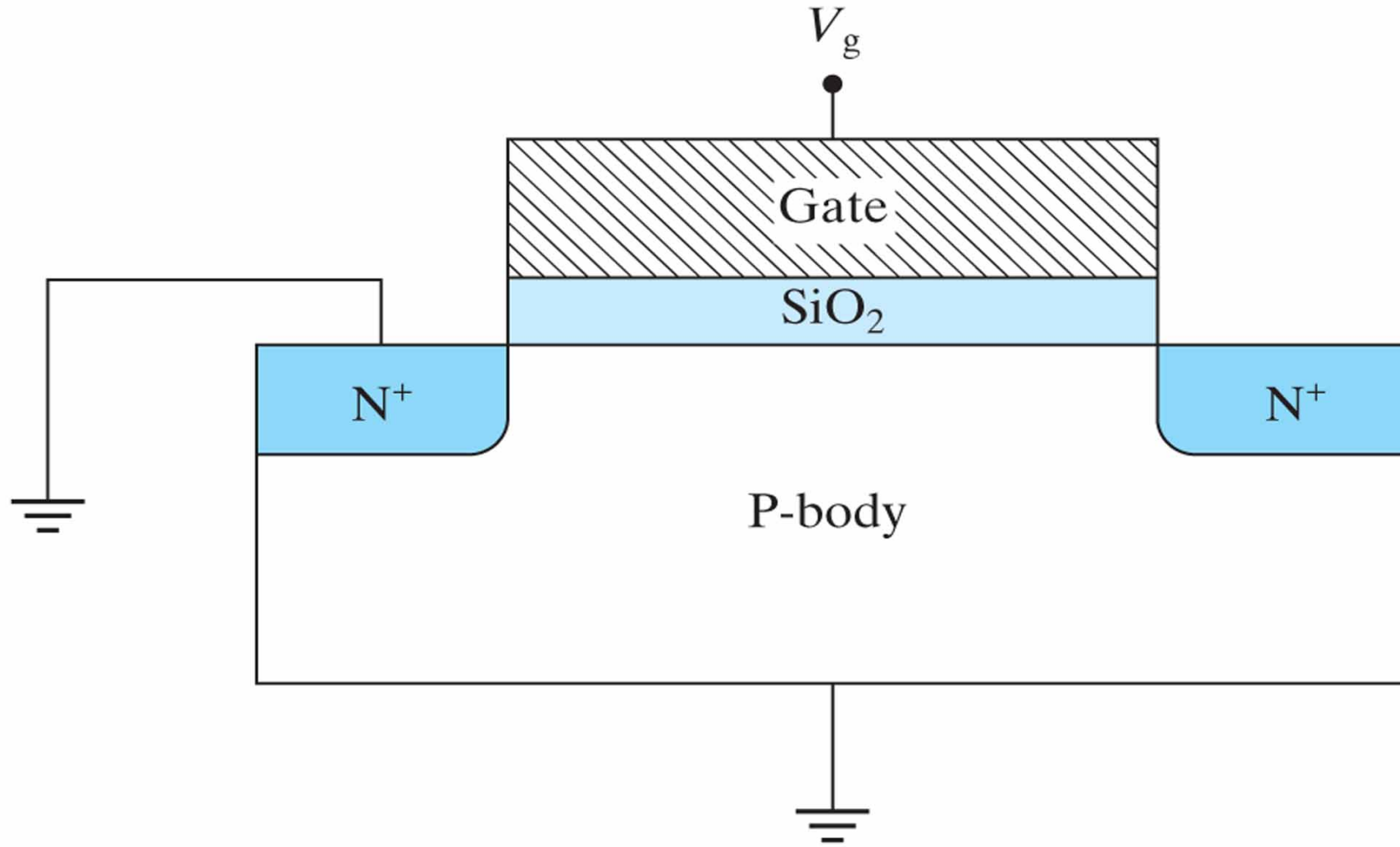


Figure 5.2 An MOS transistor is an MOS capacitor with PN junctions at two ends.



voltage equal to V_{fb} is applied between the N^+ -poly-Si gate and the P-silicon body to achieve this condition. ψ_g is the gate-

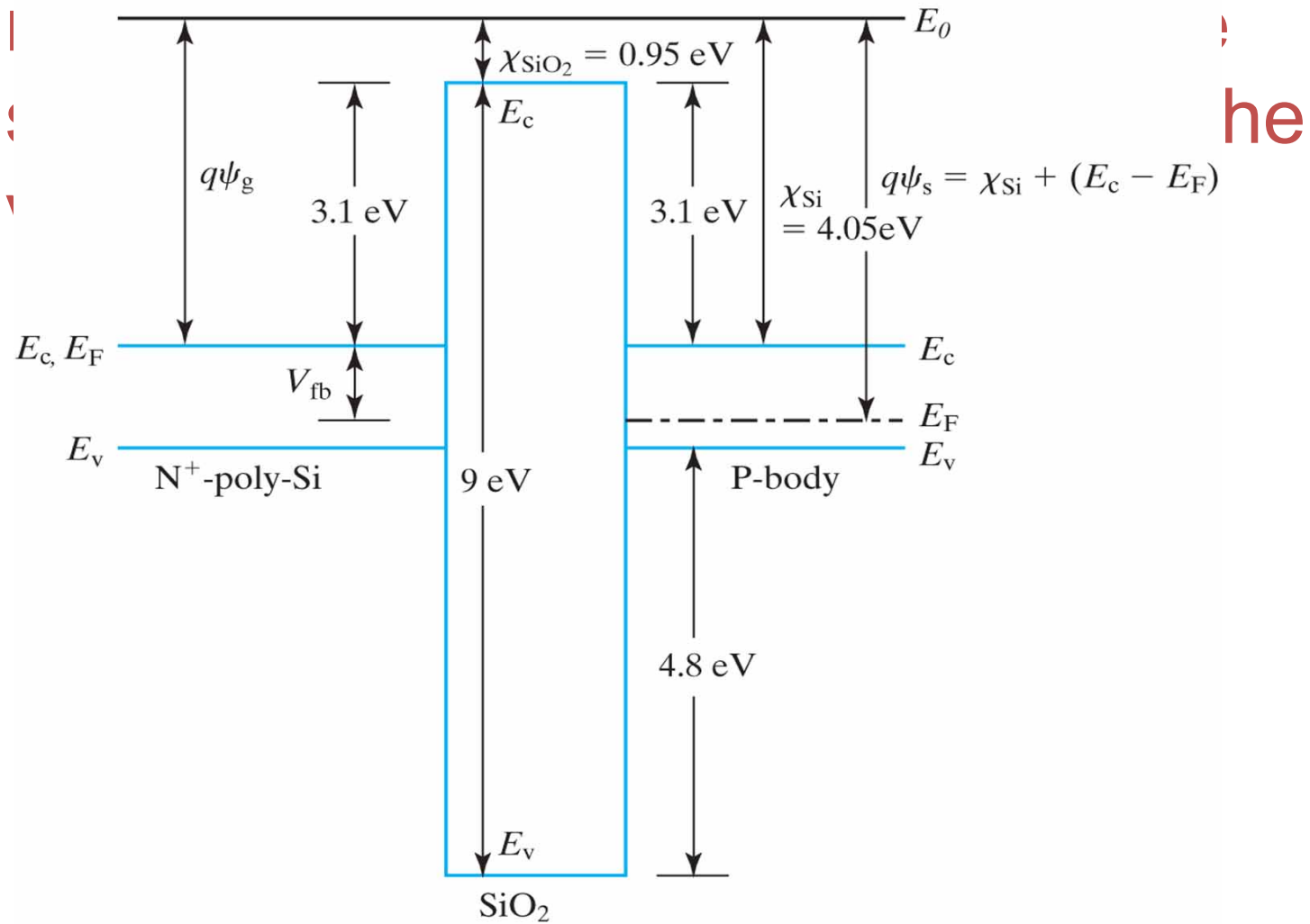


Figure 5.8 Theoretical threshold voltage vs. body doping concentration using Eq. (5.1.3). See Section 5.5.1 for a discussion

