

Φυσική και Τεχνολογία Υλικών και Διατάξεων Στερεάς Κατάστασης

Δρ Χρήστος Τσάμης

Ινστιτούτο Νανοεπιστήμης και Νανοτεχνολογίας

ΕΚΕΦΕ «Δημόκριτος»

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Πάτρα, 2025

ΗΛΕΚΤΡΟΝΙΚΕΣ ΔΙΑΤΑΞΕΙΣ

Επαφή pn

Bipolar Junction Transistor

Επαφή MS

**MOSFET (Metal Oxide Semiconductor
Field Effect Transistor)**

(Ωμική, Schottky Junction)

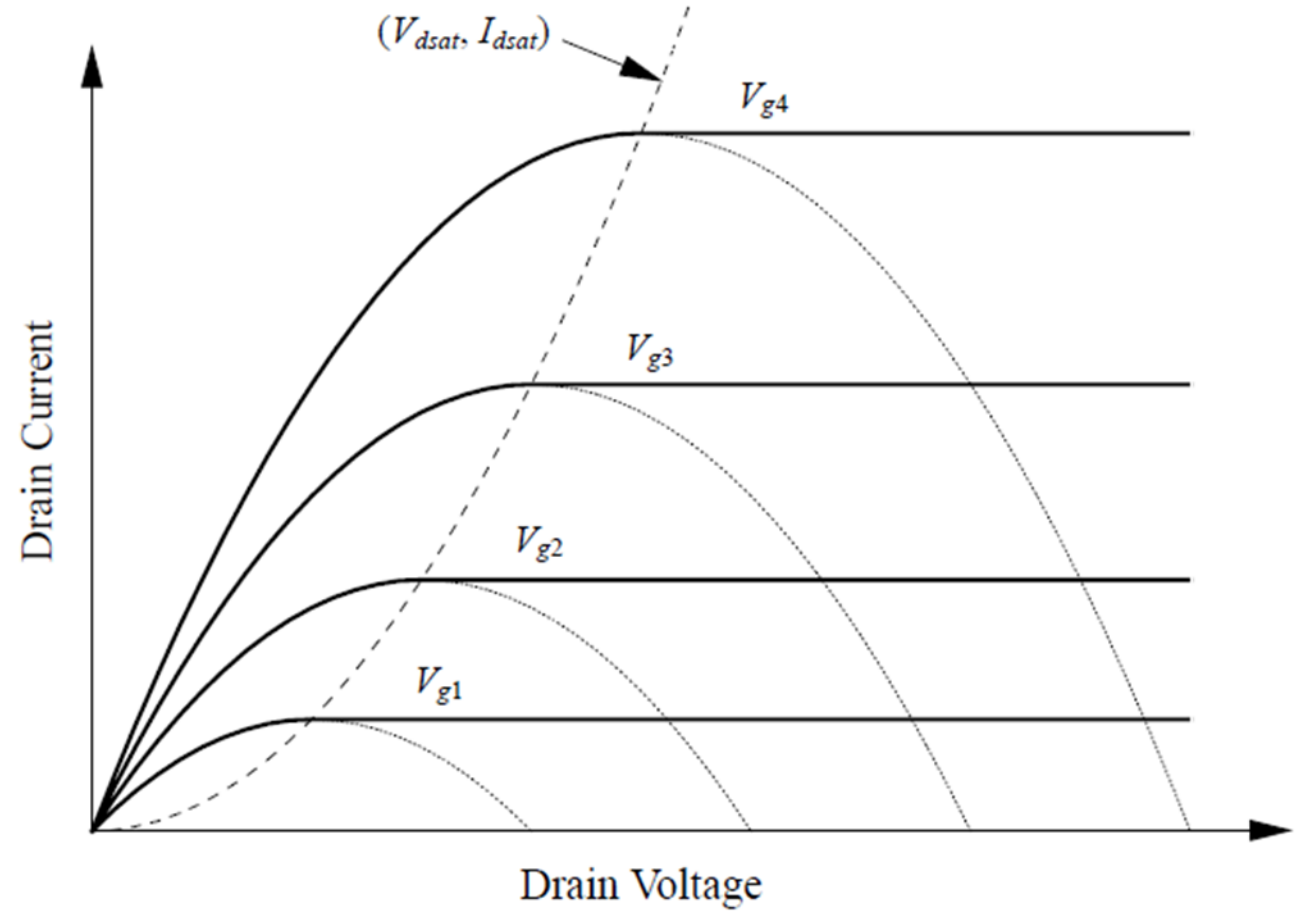
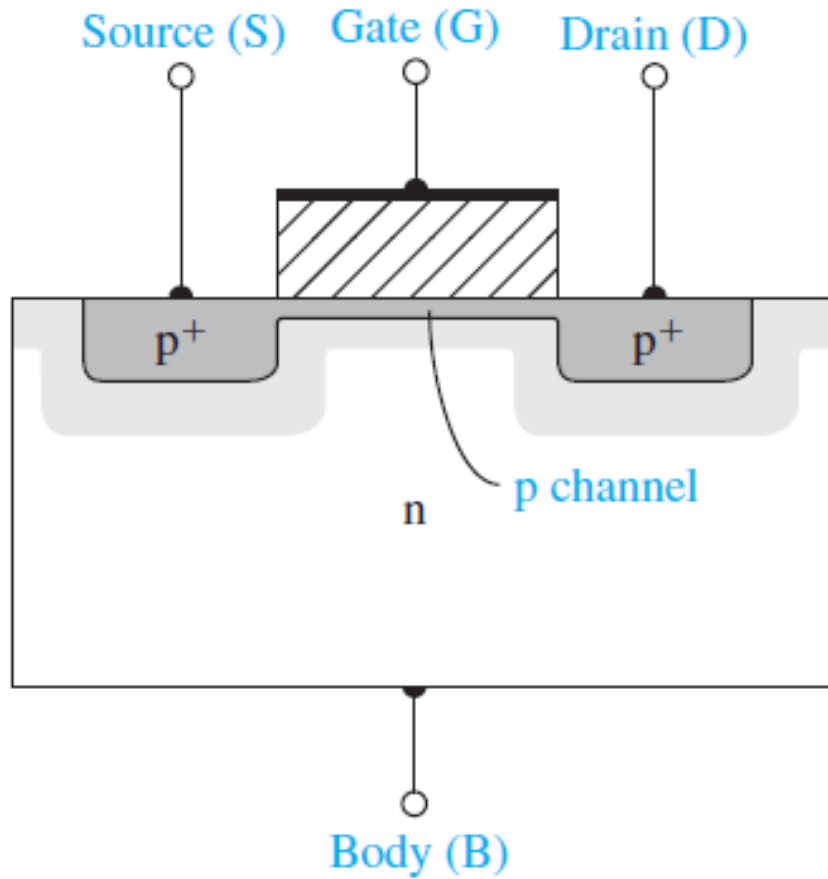
JFET (Junction Field Effect Transistor)

Δομή MIS/ MOS

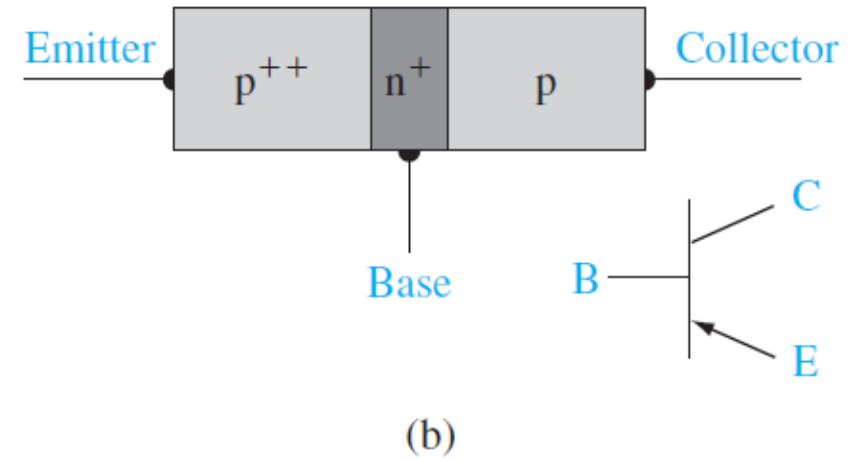
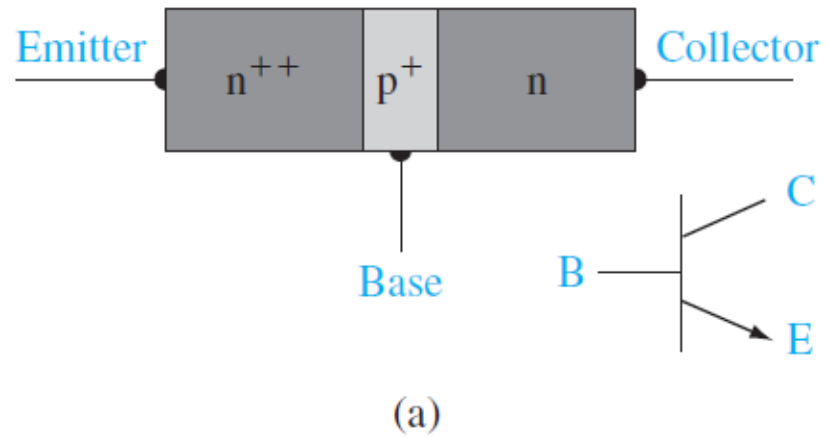
Photodiode

Light Emitting Diode (LED)

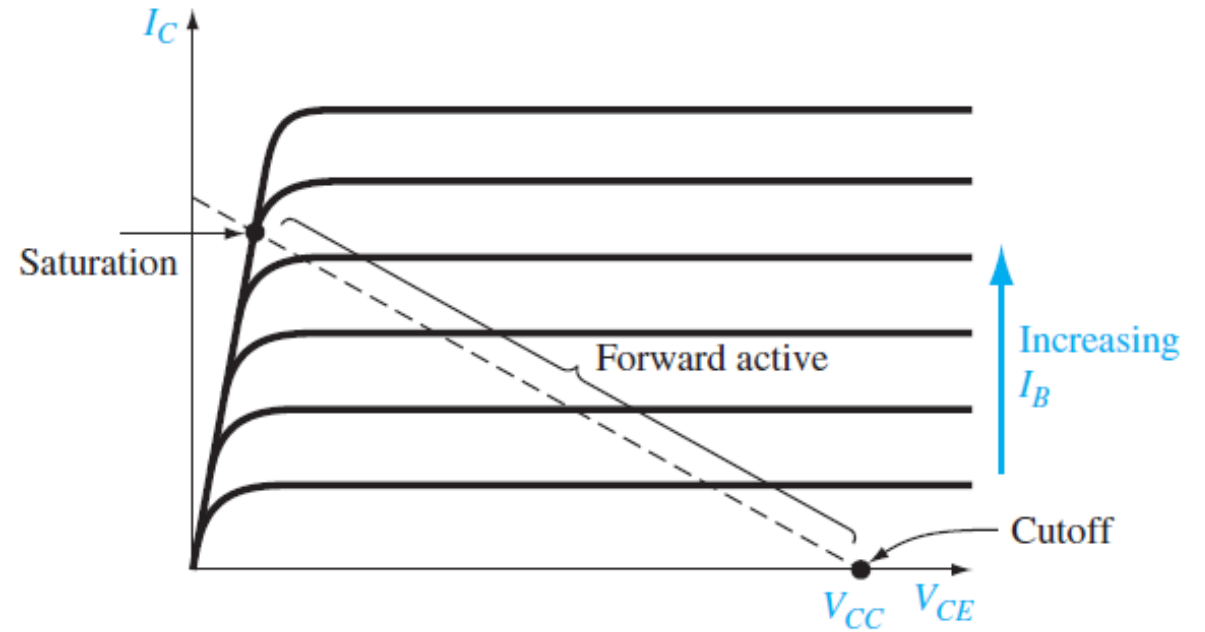
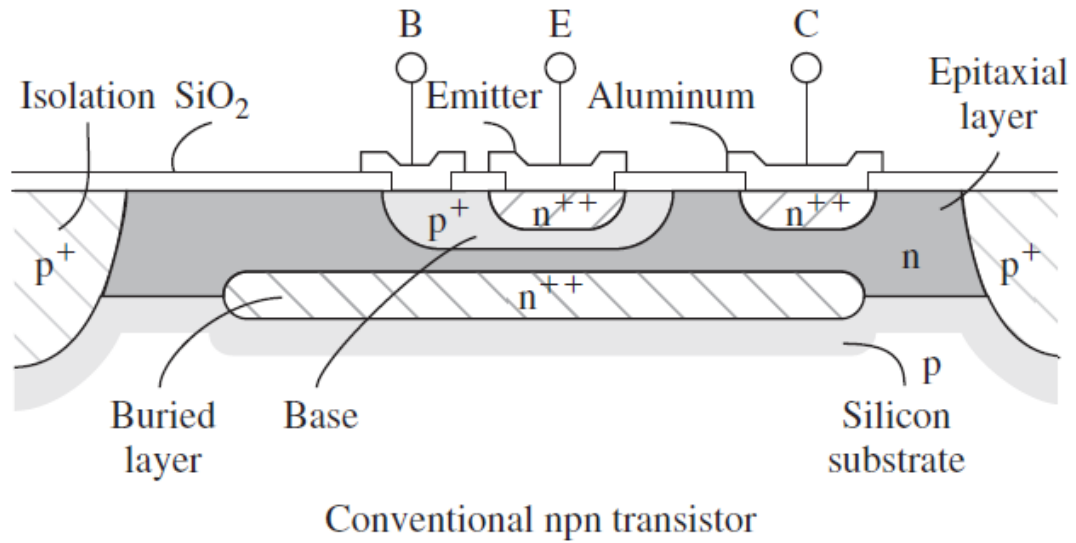
MOSFET (Metal Oxide Semiconductor Field Effect Transistor)



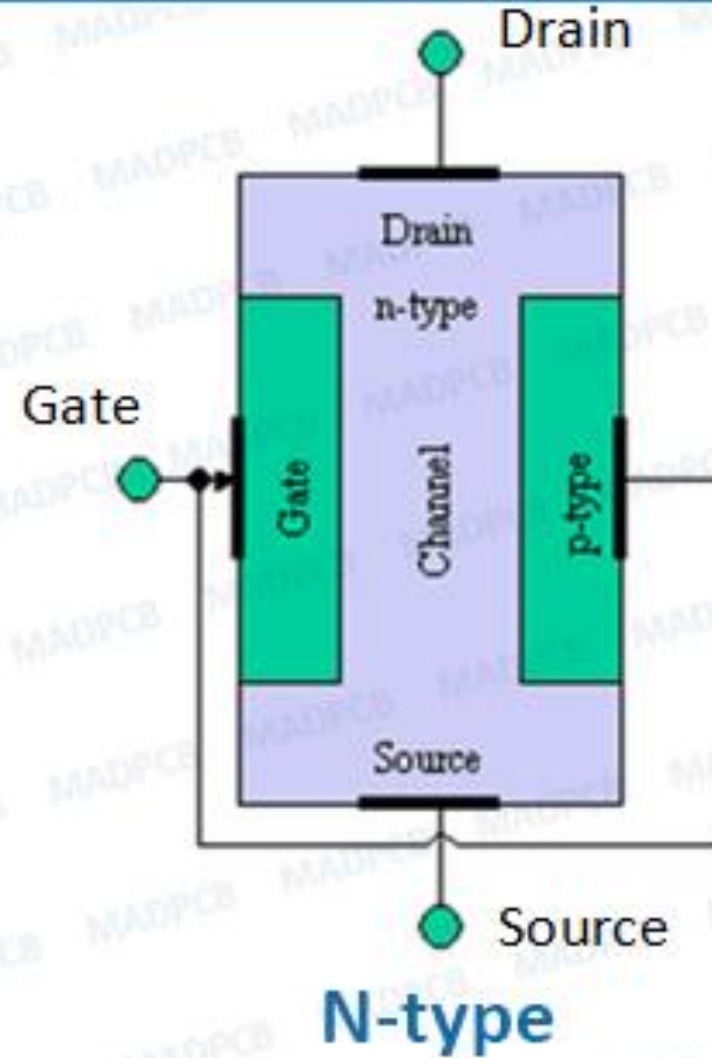
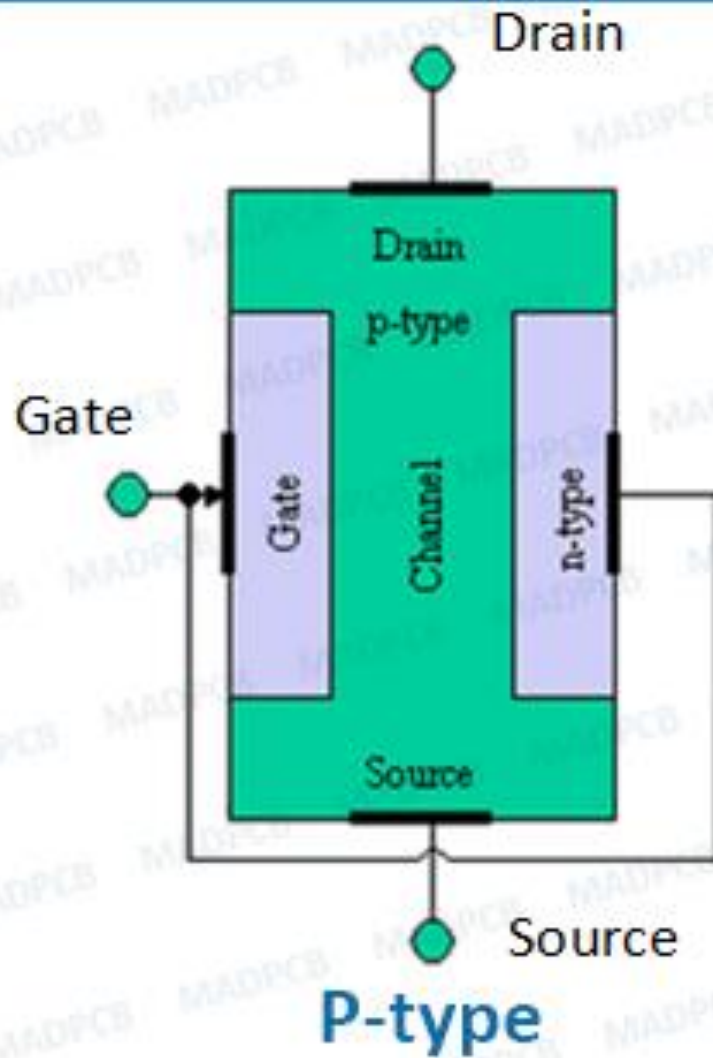
Bipolar Junction Transistor



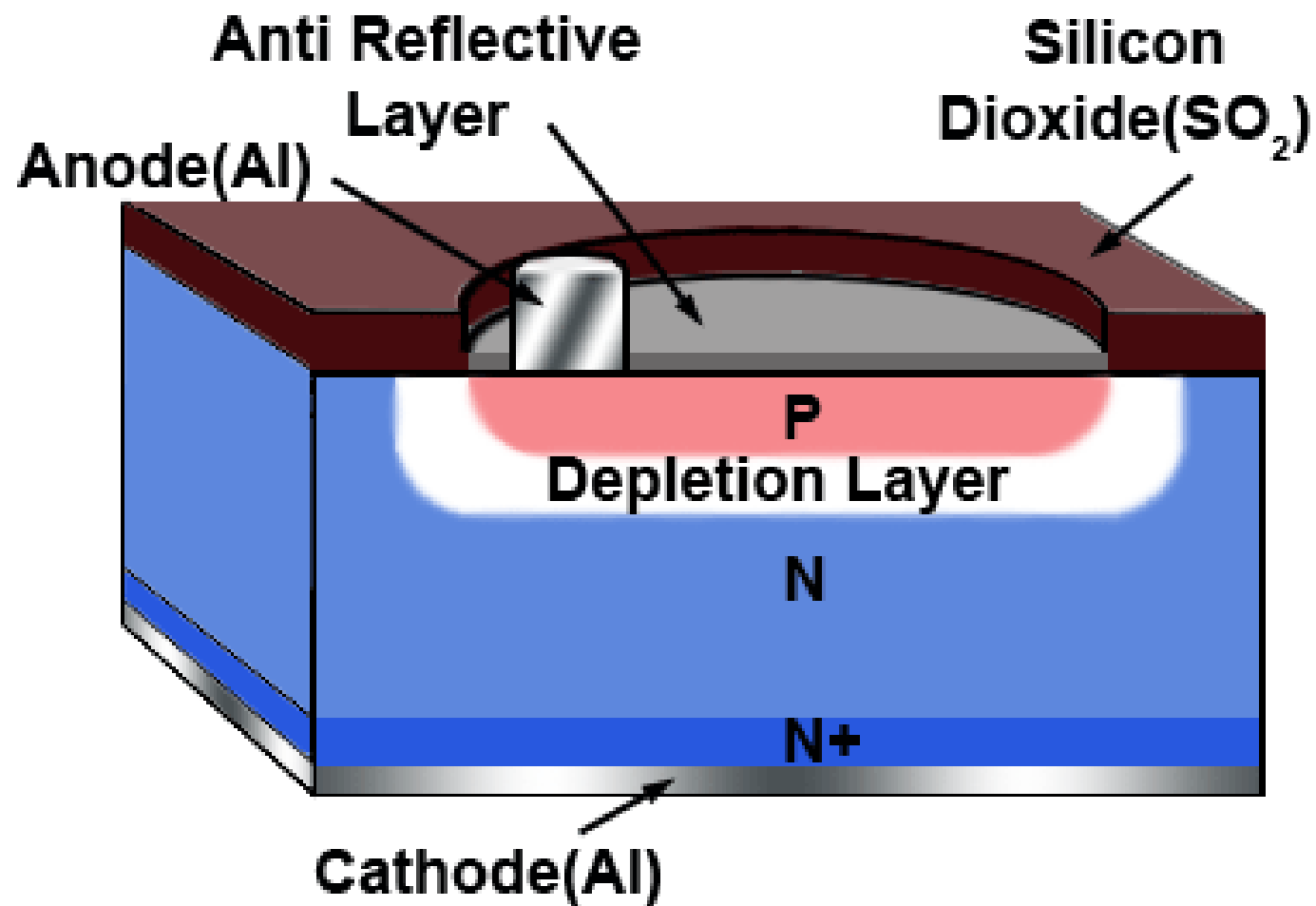
Bipolar Junction Transistor



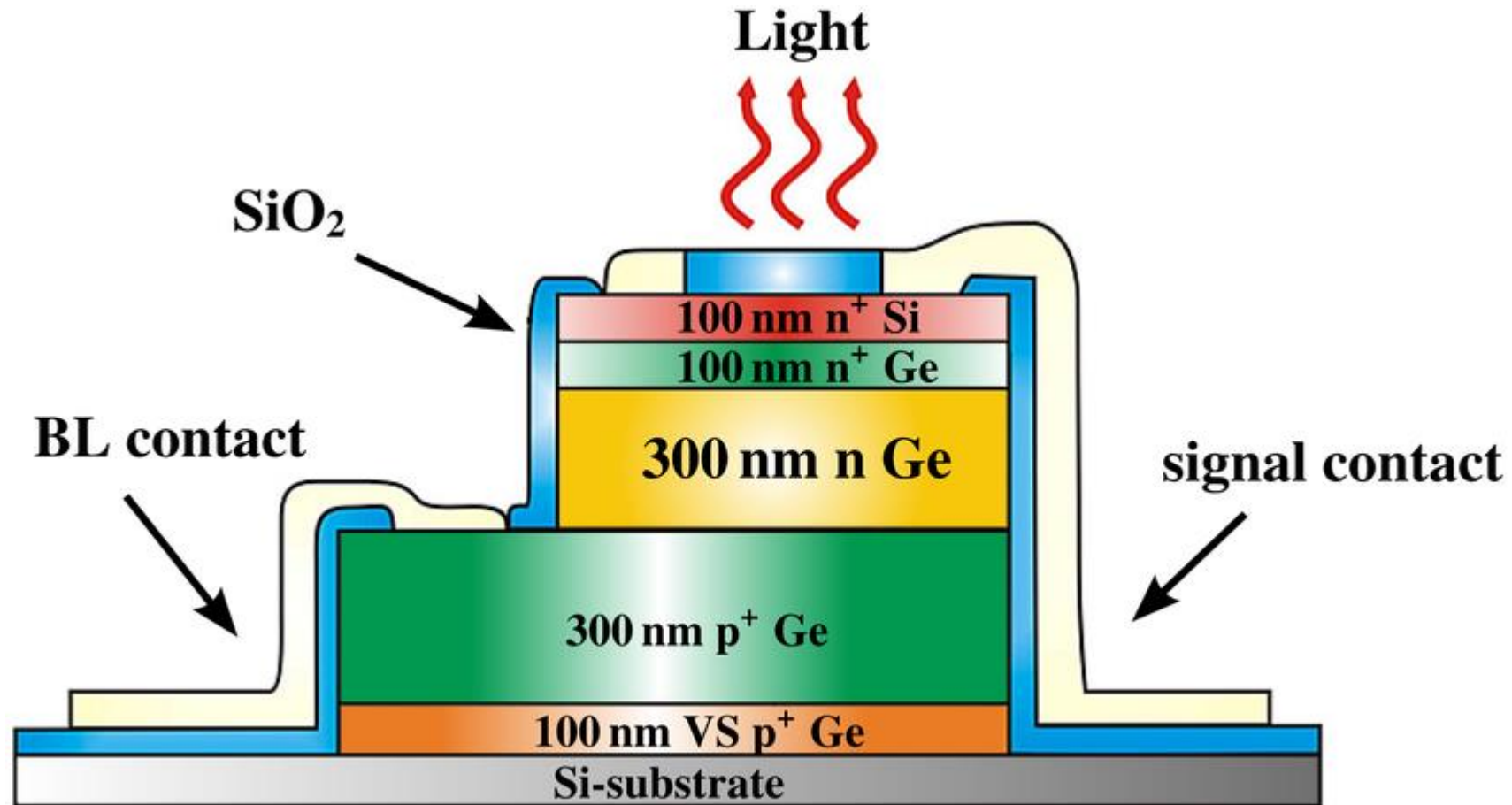
JFET (Junction Field Effect Transistor)



Photodiode



Light Emitting Diode (LED)



Schematic cross section of the LED. The structure consists of the Si substrate, a p⁺-Ge layer as virtual substrate (VS), a p⁺-Ge buried layer (BL) contact, the 300 nm thick n-Ge active layer with different doping concentrations and a n⁺-Ge/n⁺-Si top contact.