BONDING E ANTIBONDING

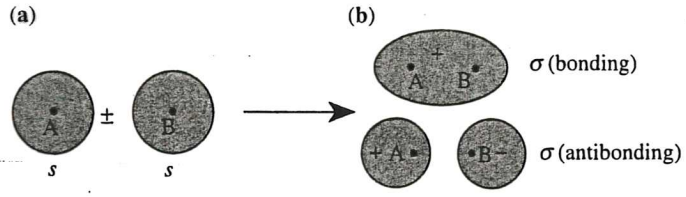


Fig. 2.17a,b. Overlap of two s orbitals to form bonding and antibonding σ orbitals

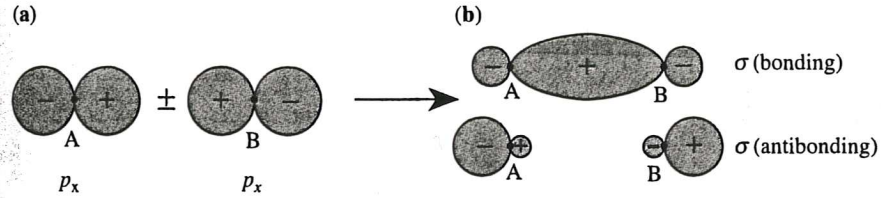


Fig. 2.18a,b. Overlap of two p_x orbitals along the x axis to form bonding and antibonding σ orbitals

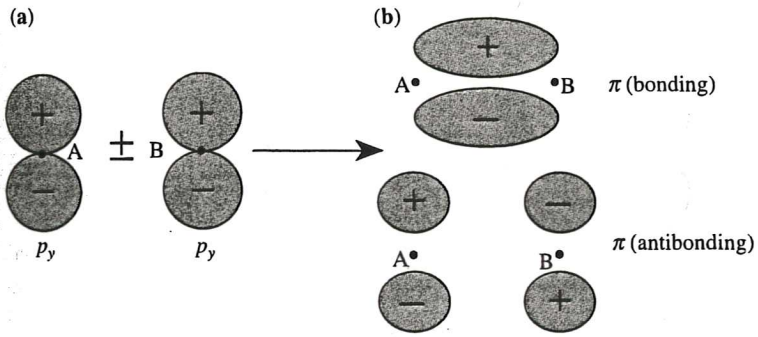
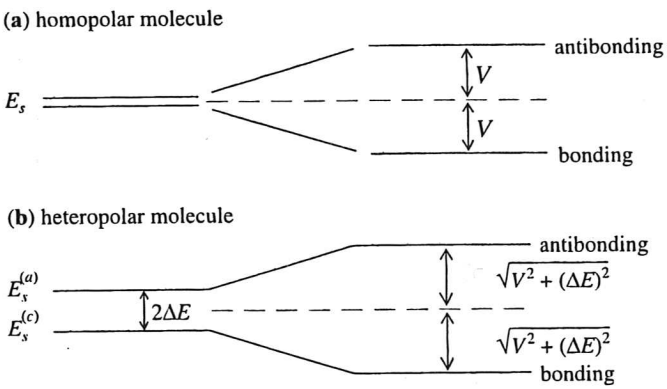


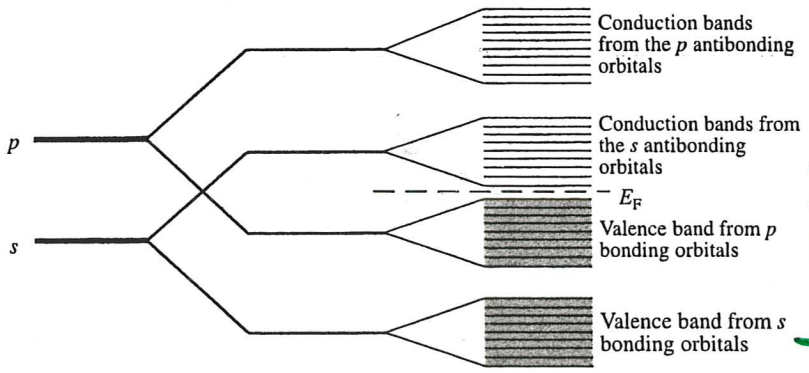
Fig. 2.19a,b. Overlap of two p_y orbitals to form bonding and antibonding π orbitals



Molecole

Fig. 2.20. Effect of orbital overlap on the energy levels in (**a**) a diatomic homopolar molecule and (**b**) a diatomic heteropolar molecule. V represents the matrix element of the interaction Hamiltonian

Cristallo



Conduzione

Valenza

Fig. 2.22. Evolution of the atomic s and p orbitals into valence and conduction bands in a semiconductor. E_F is the Fermi energy