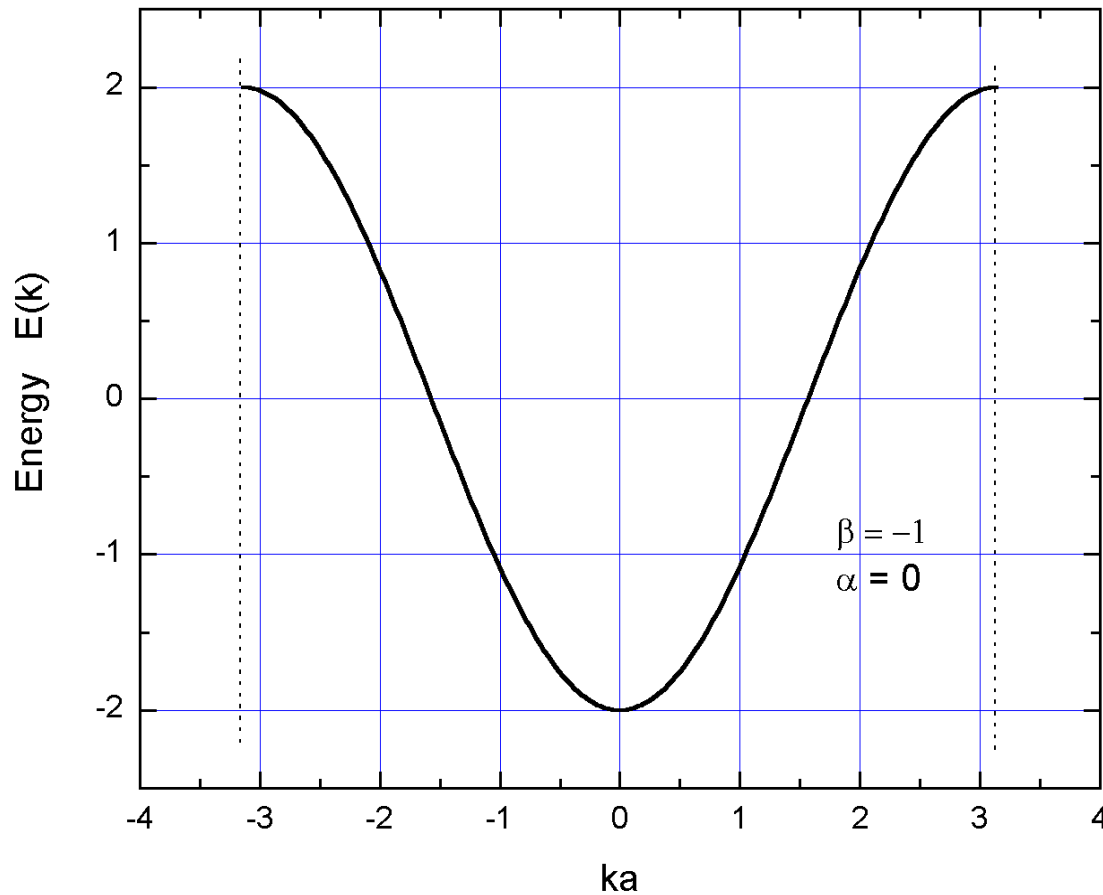


$$E(k) = \alpha + 2\beta \cos(ka) \quad (\beta < 0)$$

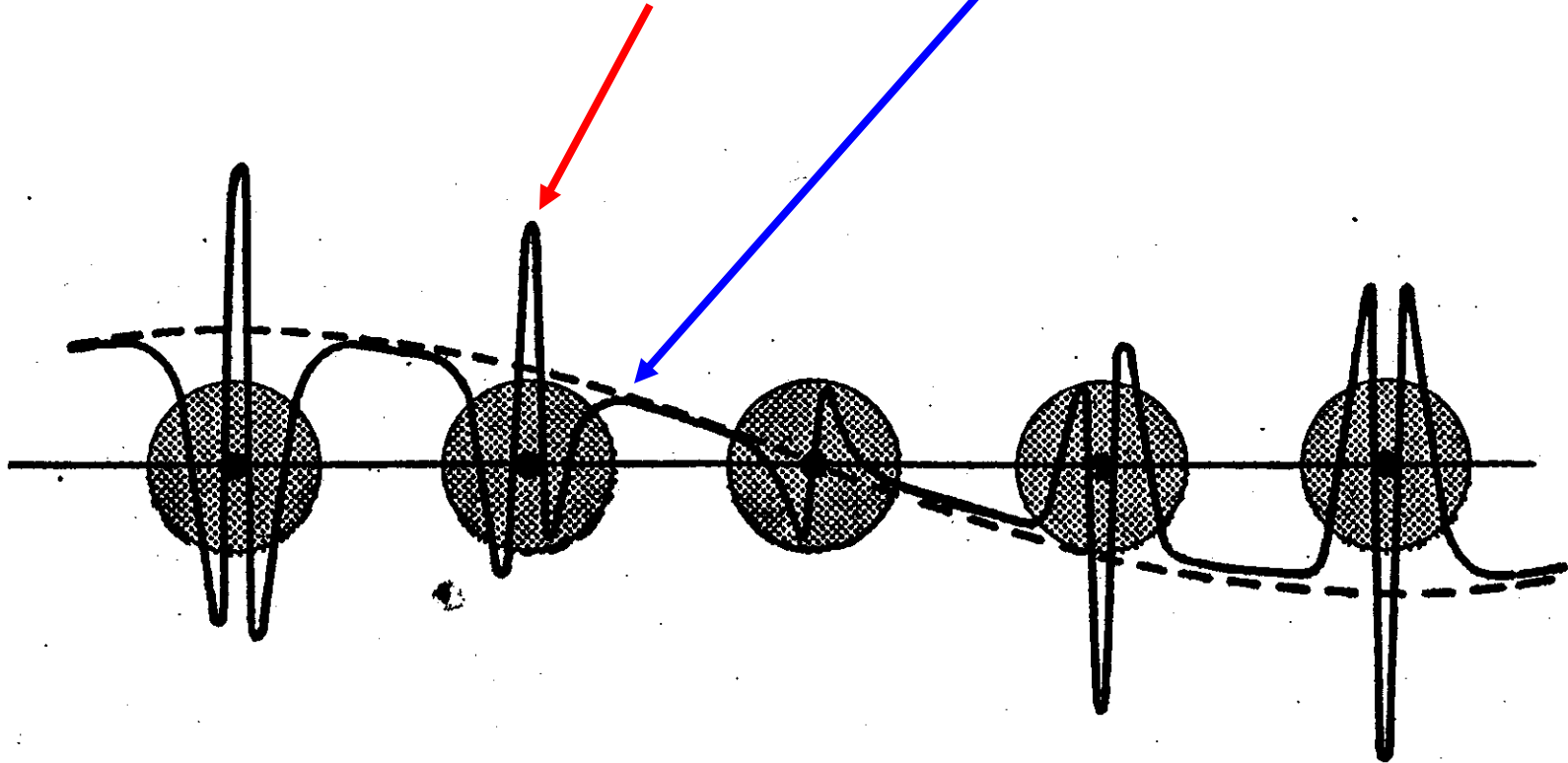


ground state energy
level of isolated atom:



$$E_1 = \alpha \equiv 0$$

$$\psi(x) = \phi_{atom}(x) e^{ikx}$$



(Ziman, Principles of the Theory of Solids, Fig. 52(c))