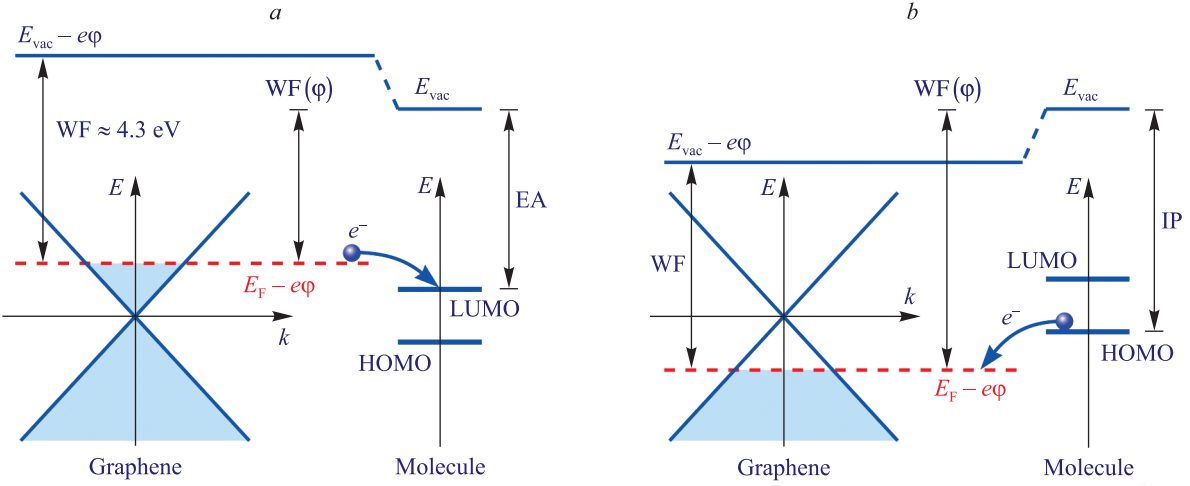

Fig. 2. Schemes of the transition of an electron (e^-) from the Fermi level of graphene ($E_F - e\varphi$) to the lowest unoccupied molecular orbital (LUMO) with the formation of a negative molecular ion (*a*) and the transition of an electron from the highest occupied molecular orbital (HOMO) to the Fermi level of graphene with the formation of a positive molecular ion (*b*). The dependences of the single-electron energy of graphene in one of the six equivalent points of the 1st Brillouin zone on the wave number k of π-electrons when an electric potential $\varphi < 0$ (*a*) or $\varphi > 0$ (*b*) is applied to the graphene are shown; EA is the electron affinity of the molecule, IP is the ionisation energy (potential) of the molecule