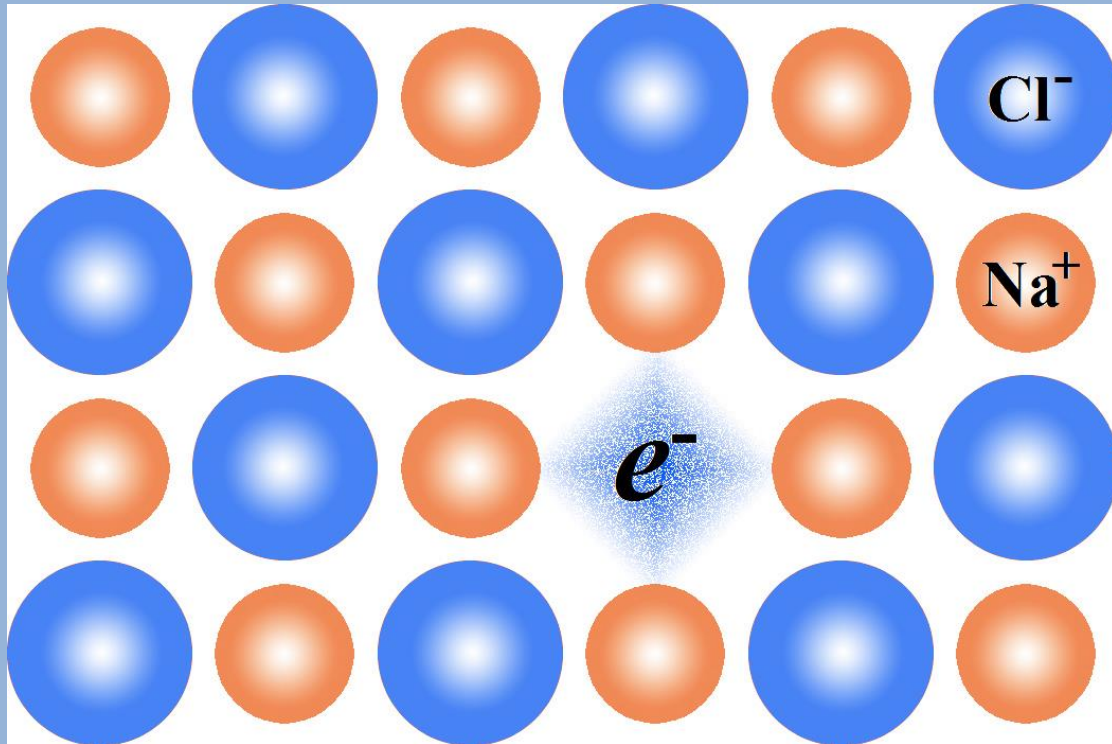


F-centre in a crystal



An F-centre, is a type of crystallographic defect in which an anionic vacancy in a crystal is filled by one or more unpaired electrons. It has been observed that if a crystal of NaCl is heated in sodium vapour, it acquires a yellow colour. This yellow colour is due to the formation of a non-stoichiometric compound of sodium chloride in which there is a slight excess of sodium ions. some sodium metal gets doped into sodium chloride crystal which, due to the crystal energy, gets ionised into Na⁺ and e⁻. This electron occupies a site that would otherwise be filled by a chloride ion.