

electrified interphase

An interphase between phases containing free charged components which are usually accumulated or depleted in the surface region thus giving rise to net charges on the phase. This definition includes the special case when the net charge on each of the phases reduces to zero. Charged components may or may not cross the interface between two phases, so that interphases may be divided into the limiting types unpolarizable and polarizable, respectively. Ideally unpolarizable interphases are those for which the exchange of common charged particles between the phases proceeds unhindered. Ideally polarizable interphases are those for which there are no common components between the phases or the exchange of these is hindered. This condition may arise as a result of the equilibrium conditions or from the kinetics of charge transfer and leads to an interphase which is impermeable to electric charge. Real interphases may approach more or less well one of these idealized cases. Polarisability or non-polarisability is not an absolute property of an interphase but depends on a number of conditions, e.g. time scale of the experiment.

Source:

PAC, 1986, 58, 437 (*Interphases in systems of conducting phases (Recommendations 1985)*) on page 439