

## differential capacitance

Differential capacitance (per unit area of interphase or electrode; SI unit  $\text{F m}^{-2}$ ) is given by

$$C = \left( \frac{\partial Q}{\partial E} \right)_{T,p,\mu_i,\dots}$$

where  $E$  is the potential of the electrode with respect to a reference electrode,  $\mu_i$  is a set of chemical potentials which are held constant,  $T$  is the thermodynamic temperature,  $Q$  is the electric charge (per unit area of interphase or electrode), and  $p$  is the pressure.

**Source:**

PAC, 1974, 37, 499 (*Electrochemical nomenclature*) on page 509

PAC, 1983, 55, 1251 (*Interphases in systems of conducting phases (Provisional)*) on page 1261