

conditional (formal) potential

Conditional (formal) potential, $E^{0'}$, is related to the potential of a cell reaction, E_{cell} , by an equation analogous to that relating E_{cell} to the standard potential E_0 , with the activity, a_i , replaced by any composition variable, c_i (to be indicated by a subscript).

For example:

$$E_{\text{cell}} = E_c^{0'} - \frac{RT}{nF} \sum_i \nu_i \ln c_i$$

Source:

PAC, 1974, 37, 499 (*Electrochemical nomenclature*) on page 505