THE THEORY OF REDOXO-KINETIC EFFECT

A CORRECTION

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IN getting equation (18), the term

$$\text{“}\, nFAkC(2\alpha - 1) \cdot \frac{v^2n^2F^2}{2R^2T^2}\text{”}$$

was neglected as it was a second order term. A more careful examination has shown that this has to be taken into account. On doing this, equation (27) becomes

$$\psi = -(\alpha - \cdot 5)\frac{V^2nF}{2RT}\,\frac{1}{k}\sqrt{\frac{\omega D}{2}}\;\frac{\frac{1}{k}\sqrt{\frac{\omega D}{2}} + 1}{2 + \frac{1}{k^2}\cdot\frac{\omega D}{2} + \frac{2}{k}\sqrt{\frac{\omega D}{2}}}$$

Equation (28) becomes

$$\psi = -(\alpha - \cdot 5)\frac{V^2nF}{2RT}\cdot\frac{1}{2k}\sqrt{\frac{\omega D}{2}}$$

and equation (29) becomes

$$\psi = -(\alpha - \cdot 5)\cdot\frac{V^2nF}{2RT}\cdot$$

The general conclusions given on p. 267 below equation (29) are accordingly to be written as follows:—

(*a*) ψ is proportional to V^2 when ω is constant,

(*b*) At sufficiently *high* frequencies ψ is independent of frequency,

(*c*) At low frequencies,

ψ is *directly* proportional to $\sqrt{\omega}$,

(*d*) At zero frequency

ψ becomes zero.

It is interesting to note, that the fact that α can be determined remains unaltered. The values of α given in the paper would have to be recalculated by applying equation (29) as given in this correction note. This calculation has been postponed, since the values given in the paper are only tentative.