**double-layer current**

The non-faradaic current associated with the charging of the electrical double layer at an electrode-solution interface, given by:

\[ i_{DL} = \frac{d(\sigma A)}{dt} \]

where \( \sigma \) = surface charge density of the double layer, \( A \) = area of the electrode-solution interface and \( t \) = time. Capital letters should be used as subscripts to avoid the possibility of confusing this symbol with that for the limiting diffusion current.

*Source:*

PAC, 1985, 57, 1491 *(Recommended terms, symbols, and definitions for electroanalytical chemistry (Recommendations 1985))* on page 1496