

peak current

In linear-sweep voltammetry, triangular-wave voltammetry, cyclic triangular-wave voltammetry, and similar techniques, the maximum value of the faradaic current due to the reduction or oxidation of a substance B during a single sweep. This maximum value is attained after an interval during which the concentration of B at the electrode-solution interface decreases monotonically, while the faradaic current due to the reduction or oxidation of B increases monotonically, with time. It is attained before an interval during which this current decreases monotonically with time because the rate of transport of B toward the electrode-solution interface is smaller than the rate at which it is removed from the interface by electrolysis. The term has also been used to denote the maximum value of the faradaic current attributable to the reduction or oxidation of an electroactive substance in techniques such as ac polarography, differential pulse polarography, and derivative polarography. However, these techniques give curves that arise in ways different from that cited above, and the terms summit, summit current, and summit potential are therefore recommended for use in connection with such techniques.

See also: apex current

Source:

PAC, 1985, 57, 1491 (*Recommended terms, symbols, and definitions for electroanalytical chemistry (Recommendations 1985)*) on page 1498

Orange Book, p. 56