

current density

The current density j_B of a species B in a given point of the solution is obtained by multiplying the flux density of that species at the given point by the Faraday constant F and by the *charge number* z_B of the species:

$$j_B = z_B F N_B$$

where j_B is a vector which indicates the direction in which the charges transported by the species B flow and which gives the number of these charges going through a plane oriented perpendicular to the vector, divided by time and by area, and N_B is the flux density of a minor constituent of the solution with respect to a fixed frame of reference.

See also *electric current density*.

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