task_4pla882qt21jfyc9_with_calculation

Student Group

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Exercise E3 Charges in Electroplating

To get a different metal coating onto a surface, often Electroplating is used. In this process, the surface is located in a liquid, which contains metal ions of the coating.
In the following, a copper coating (e.g. for corrosion resistance) shall be looked on. The charge of one copper ion is around $1.6022 \cdot 10^{-19}~{\rm C}$, what is the charge on the surface if there are $8 \cdot 10^{22}~{\rm ions}$ added?

Result:

\begin{align*} 12'818~{\rm C} \end{align*}

Solution

\begin{align*} 8 * 10^{22} \cdot 1.6022 *10^{-19}~{\rm C} = 12'817.6~{\rm C} \end{align*}