

# Preliminary Studies of the Obtaining of Solid Metallic Cerium from Fluoride Melts

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The present study deals with the obtaining of solid cerium by molten salt electrolysis of a 46.74 - 48.26 - 5wt% LiF-NaF-NaCeF<sub>4</sub> mixture, in the temperature range 700 - 730°C and with a current efficiency of ~75%.

For this purpose NaCeF<sub>4</sub> was obtained, characterized and it's cubic form was identified. The solubility and decomposition potential of this compound in the molten electrolyte 49.2 - 50.8% LiF-NaF was also studied.

*Key words:* Cerium; Electrolysis; NaCeF<sub>4</sub> Decomposition Potential; Molten Salts.