

Electrochemical Behavior of Perrhenate Ions in Non-Aqueous Dimethylformamide Solutions of Electrolytes

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The electrochemical behavior of perrhenate ions on a steel electrode in a non-aqueous solution of dimethylformamide (DMF) has been studied by a voltammetric method. The influence of the cathode material, the sweep speed potential and the concentration of the electrolyte solutions on the process of rhenium separation has been determined. The reduction wave of perrhenate ions corresponds to -1.90 V. It has been shown that with the introduction of the background electrolyte containing lithium chloride into the solution, the catalytic activity of rhenium is significantly increased. Waves in the cathode potential range corresponding to the electroreduction process of perrhenate ions are fixed. Using the methods of electron microscopy and X-ray spectral analysis of the products of electrolysis, the presence of rhenium in them has been proved.

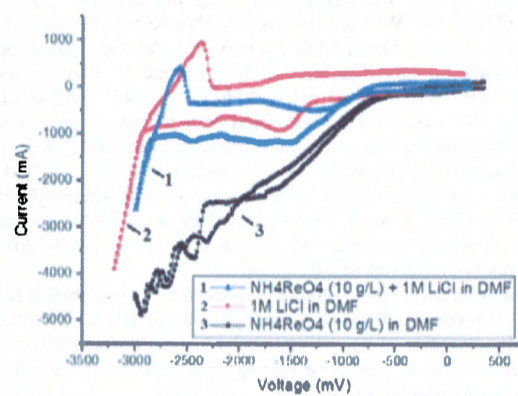


Fig. 1. Cyclic polarization curves of the rhenium discharge-ionization at various concentrations

References

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