

Study of the oxygen partial pressure effect on the melting point of ultrafine copper powder

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Abstract

Dimensional characteristics of the copper powder produced by the method of electric conductor were studied. The content of oxygen was established in it. The melting temperatures of the powder at various oxygen partial pressures were studied. It has been established that with decreasing the oxygen partial pressure the melting point of copper nanopowder increases, and at the value of $\lg P_{O_2} = -19.5$ within the experimental error equals the melting point of monolithic copper (1083.6 °C).