

## Research of plasma-electrolyte discharge in the processes of obtaining metallic powders

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### Abstract

© Published under licence by IOP Publishing Ltd. The use of the plasma electrolyte process has never been considered as a simple, cheap and fast method of obtaining powders used in selective laser melting processes. Therefore, the adaptation of the plasma-electrolyte process to the production of metal powders used in additive production is an urgent task. The paper presents the results of studies of gas discharge parameters between a metal and liquid electrode in the processes of obtaining metallic iron powders. The discharge combustion conditions necessary for the formation of metal powders of micron size are determined. A possible mechanism for the formation of powder particles in a discharge plasma is proposed.

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