Full Paper _____ *Thematic Section:* Technological Research.
Registration Code of Publication: 14-37-1-68 *Subsection:* Electrochemistry.
Publication is available for discussion in the framework of the on-line Internet conference "*Butlerov readings*".
http://butlerov.com/readings/
Contributed: December 30, 2014.

Electrochemical metal plating on superdispersed and nanosized carbides of tantalum and tungsten

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Keywords*: titanium carbide, tungsten carbide, plating, nanopowder, superdispersed powder, chemical transport reactions.*

Abstract

In the work, investigations of metal plating (by iron, chromium, nickel, and titanium) on the nanosized and superdispersed powders of titanium and tungsten carbides obtained by electro-chemical reduction were carried out. Plating was made by the method of chemical transport reactions in the salt melt. It is shown that the surface of the conglomerates, composed of 2-3 tungsten carbide particles, is covered by impacted continuous Ni and Cr layers. The surface of titanium carbide particles is covered by Fe_2Ti-FeTi intermetallic layers, 100 nm in thickness.