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Electric Arc synthesis of Ti/TiO_2 powders

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In the presented work, using the methods of structural-phase, elemental analysis and electron microscopy, the processes of electric arc synthesis in the open atmosphere of nitrogen-containing Ti/TiO_2 powders are investigated. It is shown, short-term plasma treatment of metal titanium powders makes it possible to form nitrogen-containing structures of Ti/TiO_2. Proposed method can find wide application in technology of industrial synthesis of powder-type solid and composite photocatalysts with spectral photo-sensitivity in ultraviolet and visible regions of radiation spectrum.

Keywords: electric arc synthesis, powder, titanium, titanium dioxide, photocatalyst.

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