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LOW-TEMPERATURE TECHNOLOGY OF RECEIVING TRANSITION METAL OXIDES AND RESEARCH OF ITS STRUCTURAL FEATURES

Abstract:

In this work is given low-temperature technology of receiving transition metal oxides and electro-physical and optical parameters of received structures. Low-temperature technology is based on stimulated plasma anodizing method, stimulation of which is realized using UV light exposure on the wafer during anodizing process. Is considered characteristics of technological process, during which was selected optimal technological route. Separately considered titanium (TiO_2), hafnium (HfO_2) and zirconium (ZrO_2) dioxides structural features, as an interesting materials for receiving nanodevices, like field effect transistor. On the received structures was measured C-V characteristics, thickness, surface roughness, optical launch spectrums and x-ray structure analysis was realized.

Keywords:

nanodevice, plasma anodizing, UV light, dioxide

JEL Classification: L63