# The titan alloy surface laser ablation treatment

**Mkrtychev O.V.**[1,2,@], **Kovaleva M.G.**[3], **Shemanin V.G.**[4] **and Turkin V.A.**[4]

[1] Moscow State University of Civil Engineering, Yaroslavskoye Shosse 26, Moscow, 129337, None
[2] National Research University Moscow Power Engineering Institute, Krasnokazarmennaya 14, Moscow, 111250, Russia
[3] National Research University "Belgorod State University, Pobedy Street 85, Belgorod, 308015, None
[4] Novorossiysk Polytechnic Institute of the Kuban State Technical University, Karl Marx 20, Novorossiysk, 353900, Russia

[@] oleg214@ya.ru

The fiber laser IPG YLM–QCW-100 type with a pulse duration of 0.1-50 ms and the pulse energy up to 15 J with a repetition rate of 20 kHz at the 1070 nm wavelength with a movable platform was used to treat the surface of three titanium alloy samples of dental implants for continuation of our works [1–4]. Laser surface treatment of all three titanium alloy samples were performed at the laser radiation power density of 869 MW/cm$^2$. As a result, areas of the sample surface appeared with a pronounced presence of titanium oxide on the surface (the appearance of a golden color) and an increased structurally of the laser-treated surface was observed.

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