

Annual Conference and Expo on **Biomaterials**

March 14-16, 2016 London, UK

Hybrid calcium phosphate coatings for titanium implants

E Kharapudchenko¹, N Bogomolova¹, V Ignatov², S Jakimov³ and S Tverdokhlebov

¹National Research Tomsk Polytechnic University, Russian Federation

²National Research Tomsk Polytechnic University, Russian Federation

³LLC "Koatum", 63/7-26 Slokas st., Jurmala, Latvia

Hybrid multilayer coatings were obtained on titanium substrates by the combination of two methods: the micro-arc oxidation in phosphoric acid solution with the addition of calcium compounds to high supersaturated state and RF magnetron sputtering (13.56 MHz) of the target made of synthetic hydroxyapatite. 16 different types of coatings were formed and in vitro studies were conducted in accordance with ISO 23317. The studies of the coatings roughness, SEM, XRF of the samples before and after exposure to SBF were performed. The features of morphology, chemical and phase composition of the studied coatings were shown.

Biography

Elena Kharapudchenko has completed her Bachelor course at the age of 22 years from National Research Tomsk State University and is taking her Master course from National Research Tomsk Polytechnic University Physical Technical Institute. She is a young researcher, taking part in some projects realized by the university.

kleine_harey92@mail.ru

Notes: