## Accepted Manuscript

Title: Femtosecond laser surface texturing of titanium as a method to reduce the adhesion of *Staphylococcus aureus* and biofilm formation

Author: Alexandre Cunha Anne-Marie-Elie Laurent Plawinski Ana Paula Serro Ana Maria Botelho do Rego Amélia Almeida Maria C. Urdaci Marie-Christine Durrieu Rui Vilar



PII:	S0169-4332(15)02521-0
DOI:	http://dx.doi.org/doi:10.1016/j.apsusc.2015.10.102
Reference:	APSUSC 31583
To appear in:	APSUSC
Received date:	30-7-2015
Revised date:	13-10-2015
Accepted date:	16-10-2015

Please cite this article as: <doi>http://dx.doi.org/10.1016/j.apsusc.2015.10.102</doi>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## ACCEPTED MANUSCRIPT

## Highlights

- The short-term adhesion of *Staphylococcus aureus* onto femtosecond laser textured surfaces of titanium was investigated
- The laser textured surfaces consist of Laser-Induced Periodic Surface Structures (LIPSS) and nanopillars
- The laser treatment enhances the hydrophilicity and the surface free energy of the material
- The laser treatment reduces significantly the adhesion of *Staphylococcus aureus* and biofilm formation
- Femtosecond laser surface texturing of titanium is a simple and promising method for endowing dental and orthopedic implants with antibacterial properties

Download English Version:

## https://daneshyari.com/en/article/5357181

Download Persian Version:

https://daneshyari.com/article/5357181

Daneshyari.com