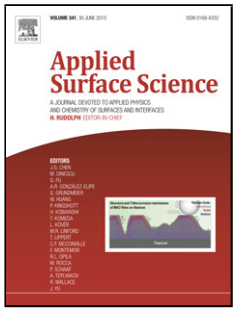


Title: Surface chemistry and microstructure of metallic biomaterials for hip and knee endoprostheses

Authors: Monika Jenko, Matevž Gorenšek, Matjaž Godec, Maxinne Hodnik, Barbara Šetina Batič, Črtomir Donik, John T. Grant, Drago Dolinar

PII: S0169-4332(17)32320-6
DOI: http://dx.doi.org/doi:10.1016/j.apsusc.2017.08.007
Reference: APSUSC 36844

To appear in: *APSUSC*

Received date: 8-3-2017
Revised date: 20-7-2017
Accepted date: 1-8-2017

Please cite this article as: Monika Jenko, Matevž Gorenšek, Matjaž Godec, Maxinne Hodnik, Barbara Šetina Batič, Črtomir Donik, John T.Grant, Drago Dolinar, Surface chemistry and microstructure of metallic biomaterials for hip and knee endoprostheses, Applied Surface Sciencehttp://dx.doi.org/10.1016/j.apsusc.2017.08.007

Applied Surface Science Manuscript Draft Manuscript Number: APSUSC-D-17-XXXXX

Article Type: Full Length Article

# Surface chemistry and microstructure of metallic biomaterials for hip and knee endoprostheses

Monika Jenko[1,*], Matevž Gorenšek[2], Matjaž Godec[1], Maxinne Hodnik[3], Barbara Šetina Batič[1], Črtomir Donik[1], John T.Grant[4], Drago Dolinar[5]

[1]*Institute of Metals and Technology, Lepi pot 11, 1000 Ljubljana, Slovenia,* [2] *MD Medicina, Bohoričeva 5, 1000 Ljubljana, Slovenia,* [3] *FTPO Ozare 19, 2380 Slovenj Gradec, Slovenia,* [4]*University of Dayton, Dayton, Ohio, USA,* [5]*Orthopedic Clinic of University Medical Center Ljubljana, Zaloška cesta 7, 1000 Ljubljana, Slovenia*

[*]Corresponding author monika.jenko@imt.si

## Highlights :

- Titanium and CoCrMo alloys that were subjected to thermomechanical and physicochemical processes during the implant production were investigated.
- The AES and XPS results of the thin oxide films on highly polished surfaces of Ti alloys that were subjected to severe thermomechanical and physicochemical processes are in