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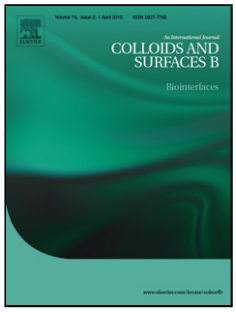

Title: Construction of Ag-incorporated coating on Ti substrates for inhibited bacterial growth and enhanced osteoblast response

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PII: S0927-7765(18)30512-5
DOI: https://doi.org/10.1016/j.colsurfb.2018.07.064
Reference: COLSUB 9520

To appear in: *Colloids and Surfaces B: Biointerfaces*

Received date: 19-3-2018
Revised date: 3-7-2018
Accepted date: 27-7-2018

Please cite this article as: Yuan Z, Liu P, Hao Y, Ding Y, Cai K, Construction of Ag-incorporated coating on Ti substrates for inhibited bacterial growth and enhanced osteoblast response, *Colloids and Surfaces B: Biointerfaces* (2018), https://doi.org/10.1016/j.colsurfb.2018.07.064

Construction of Ag-incorporated coating on Ti substrates for inhibited bacterial growth and enhanced osteoblast response

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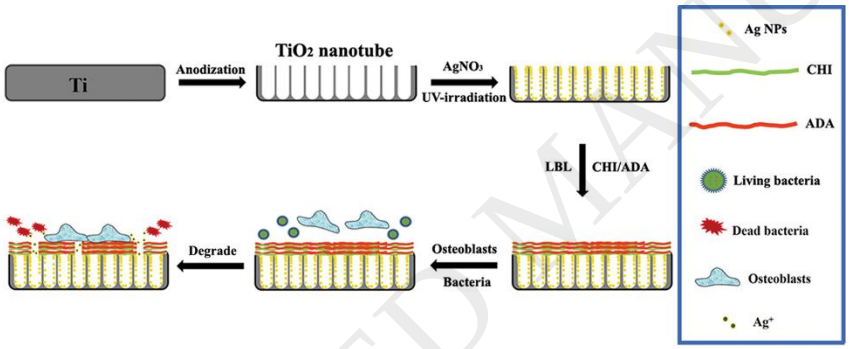
Graphical Abstract



Research Highlights

- ➢ Ag nanoparticles loaded TiO_2 nanotubes array was fabricated on Ti substrates.
- ➢ Multilayered film coating was fabricated to seal TiO_2 nanotubes array.
- ➢ The present system achieved the controlled release of Ag ions.
- ➢ The modified Ti substrates favored the growth of osteoblasts.
- ➢ Antibacterial property of Ti substrates was significantly improved.

Abstract:

In orthopedic fields, effective anti-infection property and promotive biocompatibility on surface of titanium implants are two crucial factors for long-term successful implants. Herein, Ag nanoparticles (NPs) loaded TiO_2 nanotubes (TNT) arrays were