

PULSED LASER DEPOSITION OF BIOACTIVE GLASSES FOR BIOMEDICAL APPLICATIONS

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Abstract

In this work thin films of glasses belonging to the $\text{SiO}_2 - \text{Na}_2\text{O} - \text{K}_2\text{O} - \text{CaO} - \text{MgO} - \text{P}_2\text{O}_5$ system on medical grade Ti substrates were obtained by pulsed laser deposition technique. It was evaluated in vitro response (bioactivity) for these films by their characterisation CLSM and FTIR before and after their immersion into simulated body fluid. The study focuses on the ability of the glass coatings to precipitate apatite and on the effects of long-term immersion into SBF on the coatings.

2000 *Mathematics Subject Classification*: 79.20.Ds, 87.85.jj.

Key words: bioactive glass, pulsed laser deposition, confocal scanning laser microscopy

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