Porous titanium substrates coated with a bilayer of bioactive glasses

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Figure 1: Scheme of a porous Ti substrate fabricated by space-holder technique, coated by the bilayer coating.

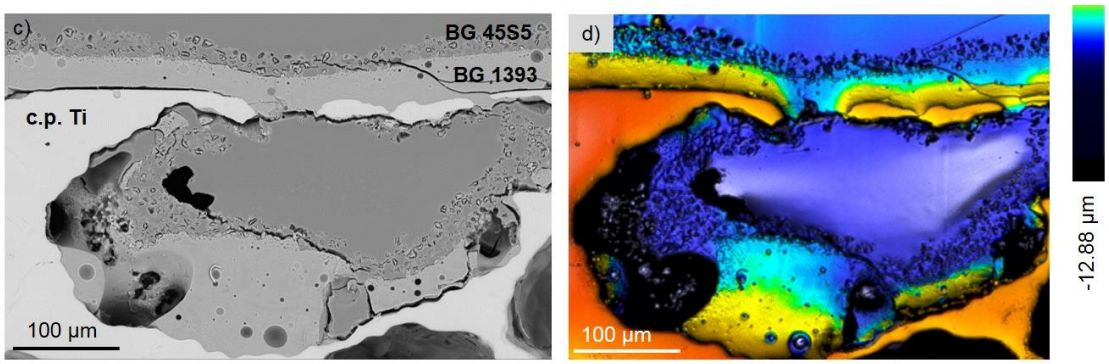

Figure 4: SEM images of the cross-section of the porous c.p. Ti substrates (a,c) and their corresponding confocal images (c,d). (a,b) 30 vol. %, 100 – 200 µm and (c,d) 60 vol. % and 355 – 500 µm.

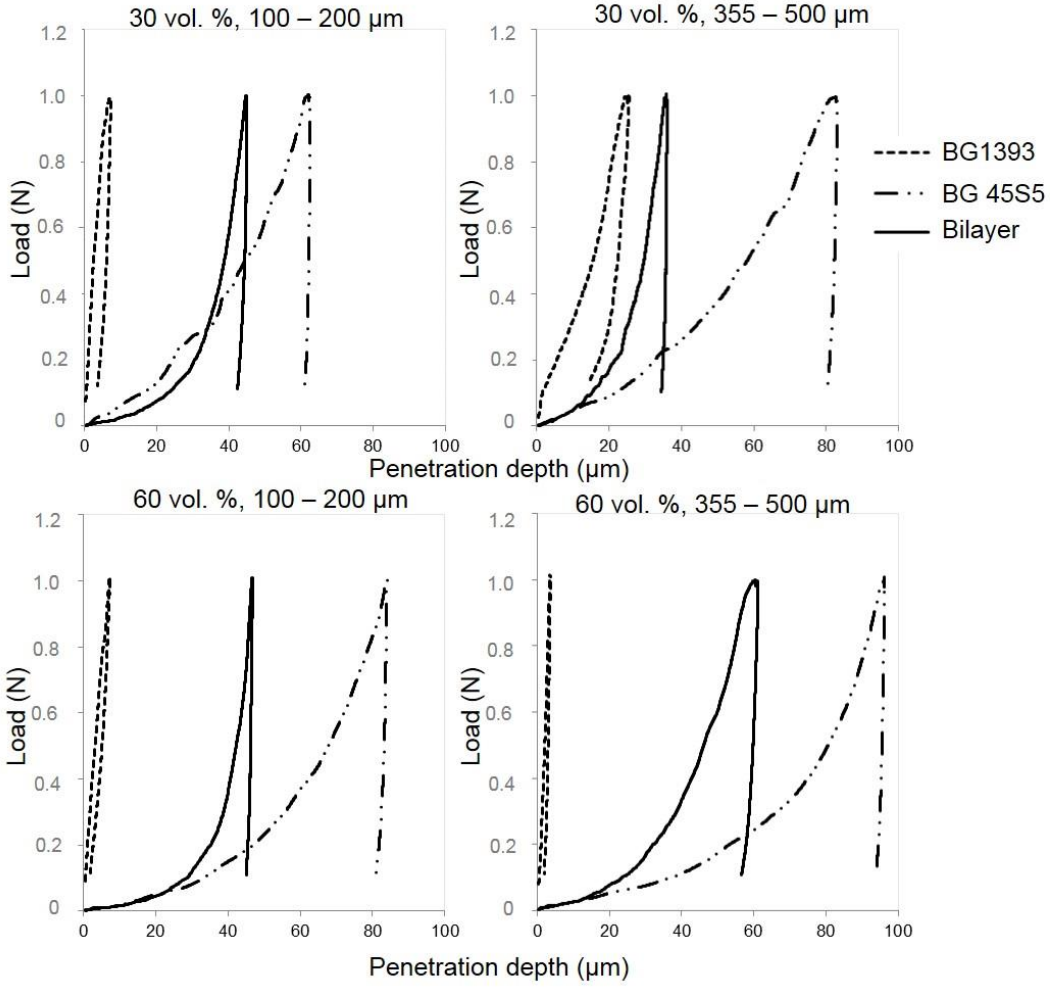

Figure 6. Loading-unloading curves (*P-h* curves) of coated (monolayer and bilayer) porous c.p. Ti substrates.

4. Conclusions

In summary, the results obtained in this research work related to the manufacture and characterization of c.p. Ti substrates coated with a novel bilayer BG 1393 – BG 45S5 allow confirming that the space-holder technique is a an effective technique to obtain porous substrates, with a content and pore size range guaranteeing not only the biomechanical (rigidity and mechanical resistance) but also the biofunctional (facilitate infiltration and adhesion of the coating) behavior. .....the titanium substrate and a greater bioactivity of the BG 45S5 with bone tissue.

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