Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Solvothermally derived nanoglass as a highly bioactive material

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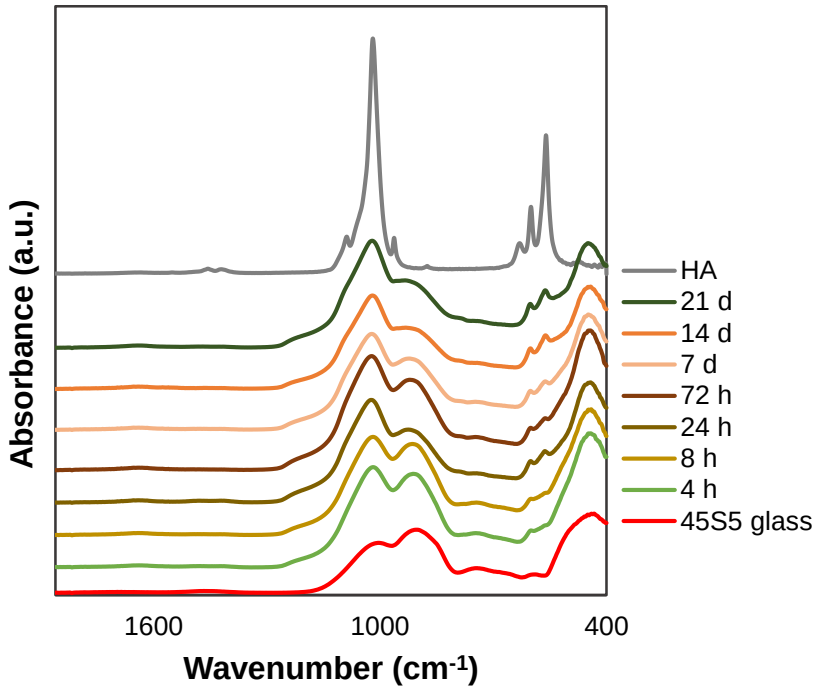

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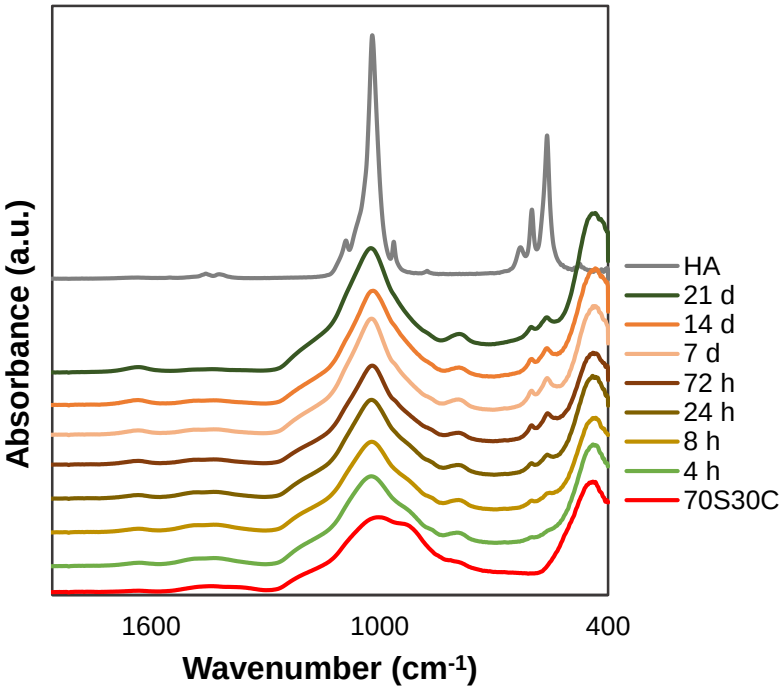
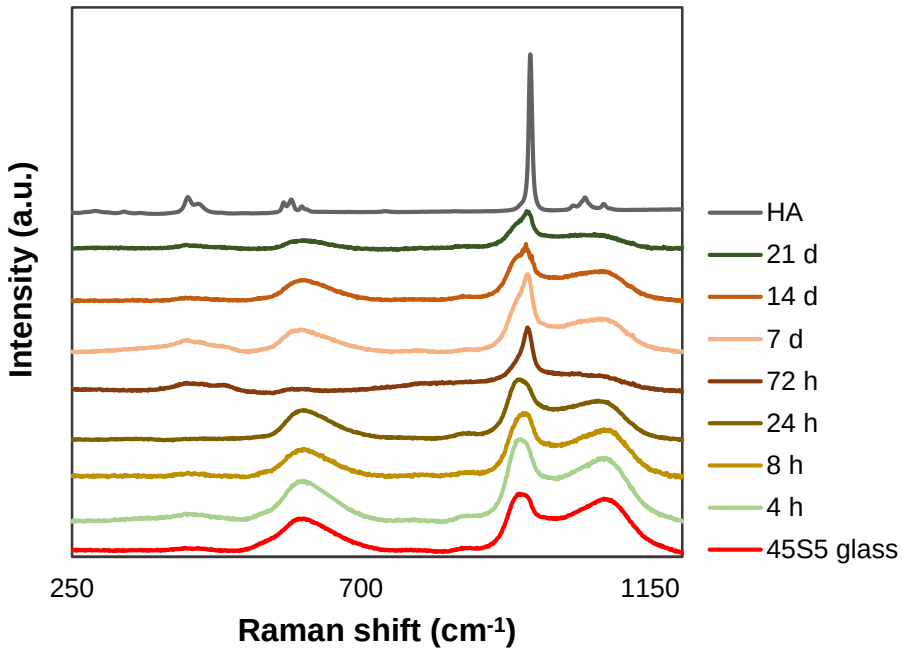


Fig. S1 IR-ATR spectra of 45S5 glass (a) and 70S30C (b) after different incubation times (DPBS, 37 °C, 4 h – 21 d).

(a)



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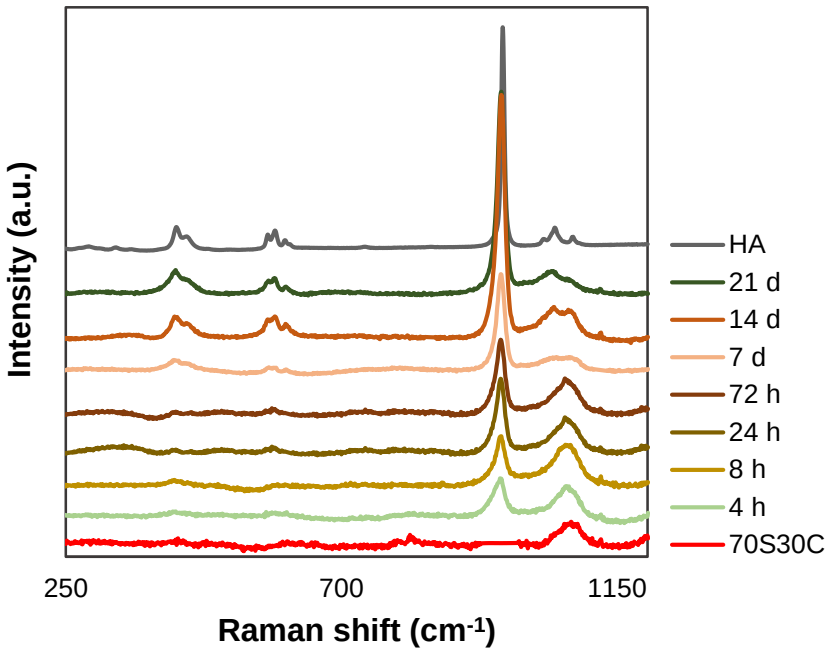


Fig. S2 Raman spectra of 45S5 glass (a) and 70S30C (b) after different incubation times (DPBS, 37 °C, 4 h – 21 d).

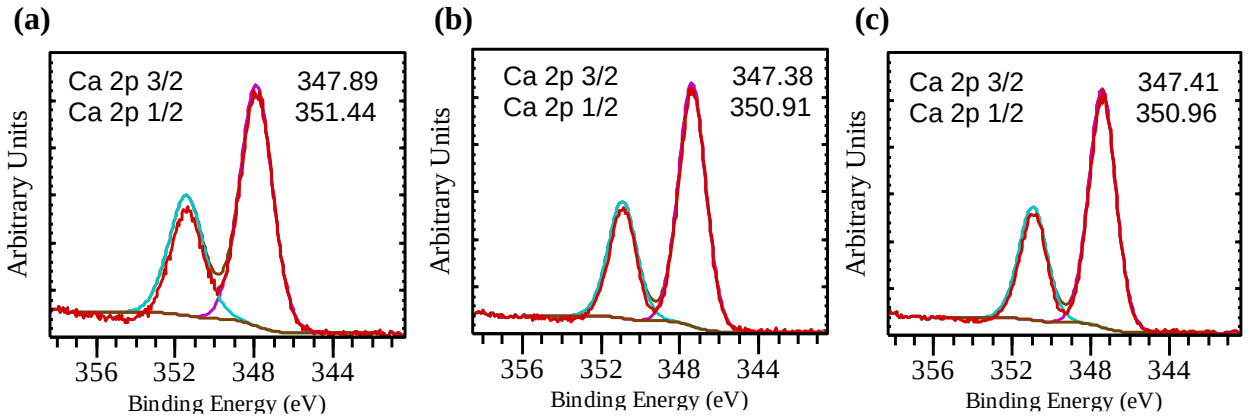


Fig. S3 The high-resolution XPS spectra for Ca 2p of solvBG76 (a) and after 4 h (b) or 21 d (c) of incubation in DPBS.

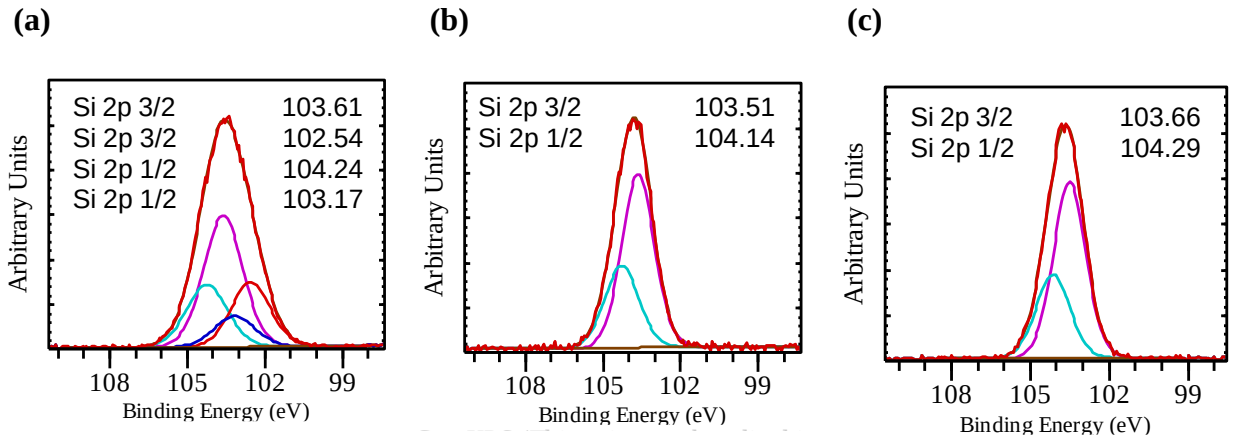


Fig. S4 The high-resolution XPS spectra for Si 2p of solvBG76 (a) and after 4 h (b) or 21 d (c) of incubation in DPBS.

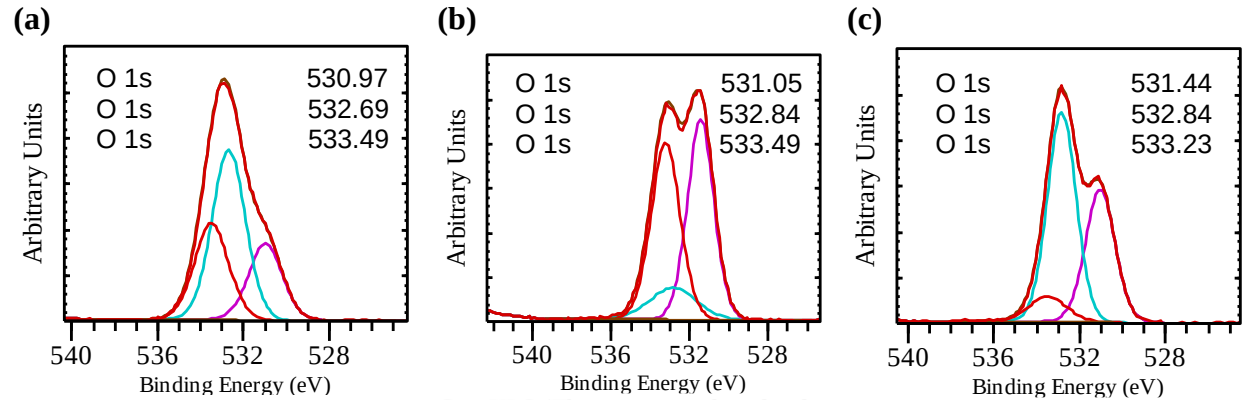


Fig. S5 The high-resolution XPS spectra for O 1s of solvBG76 (a) and after 4 h (b) or 21 d (c) of incubation in DPBS.

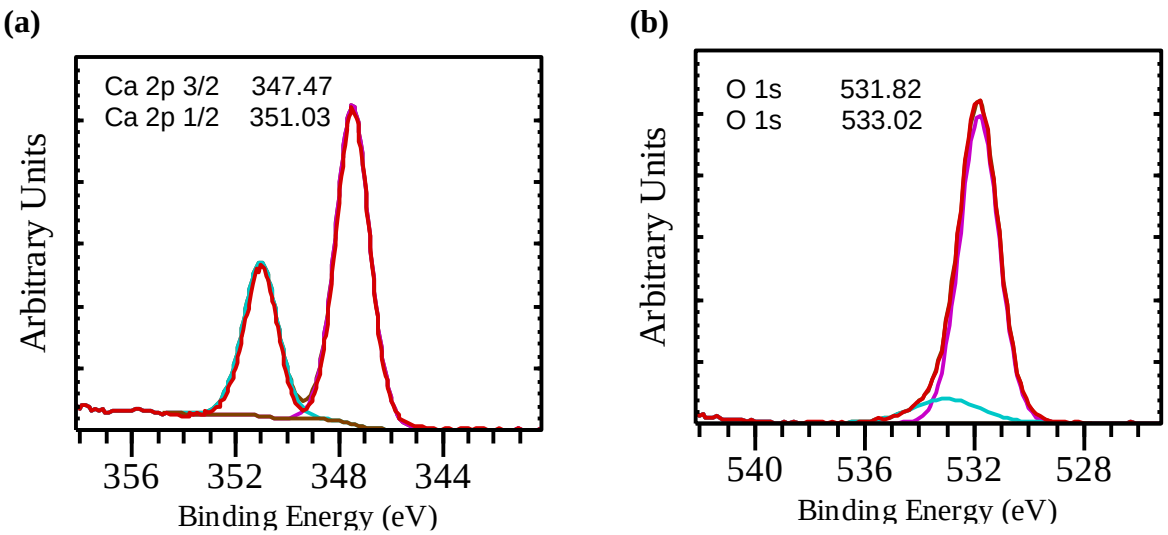


Fig. S6 The high-resolution XPS spectra for Ca 2p (a) and O 1s (b) of hydroxyapatite.

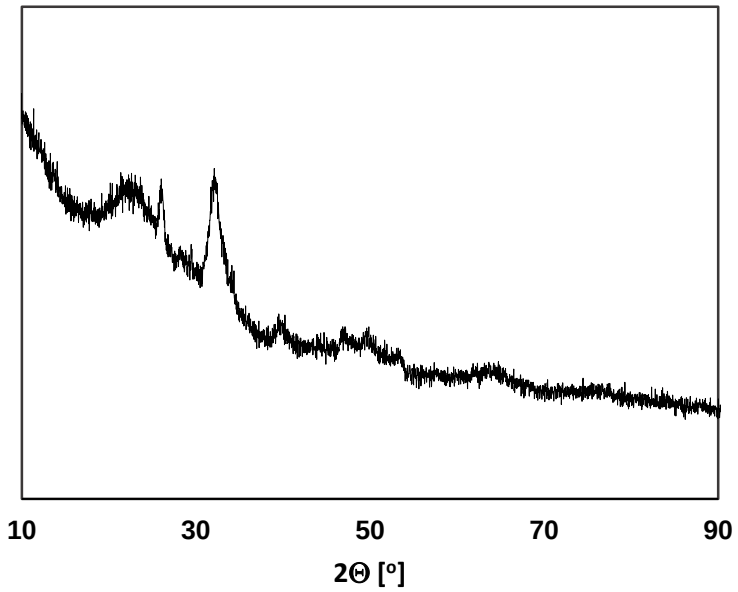


Fig. S7 XRD pattern of solvBG76 after 30 min of incubation in DPBS.

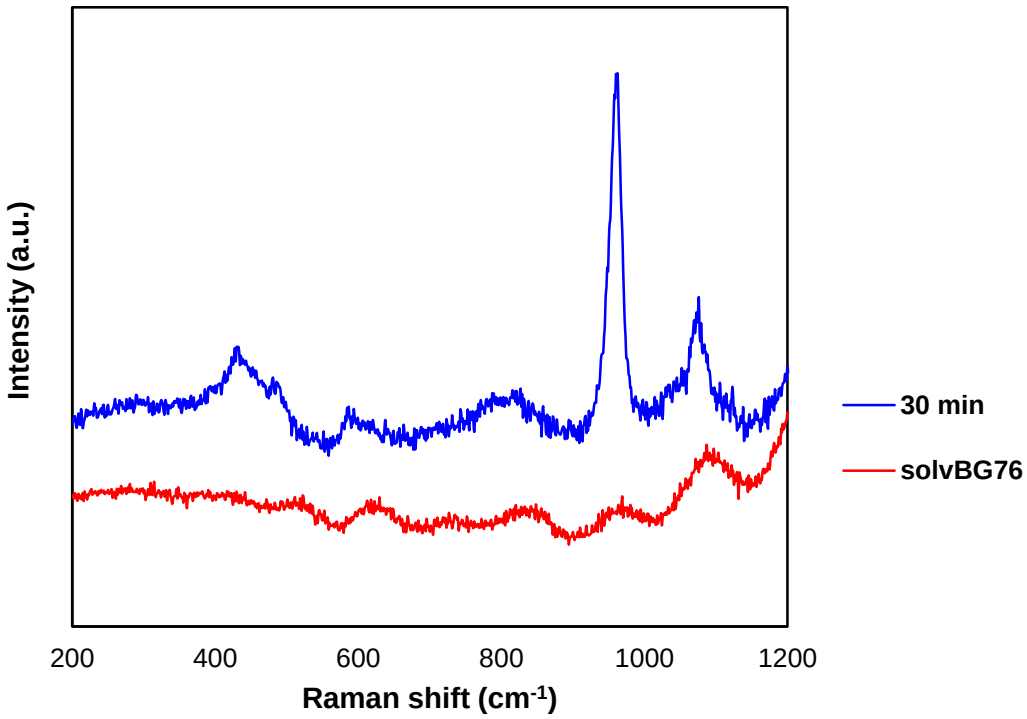
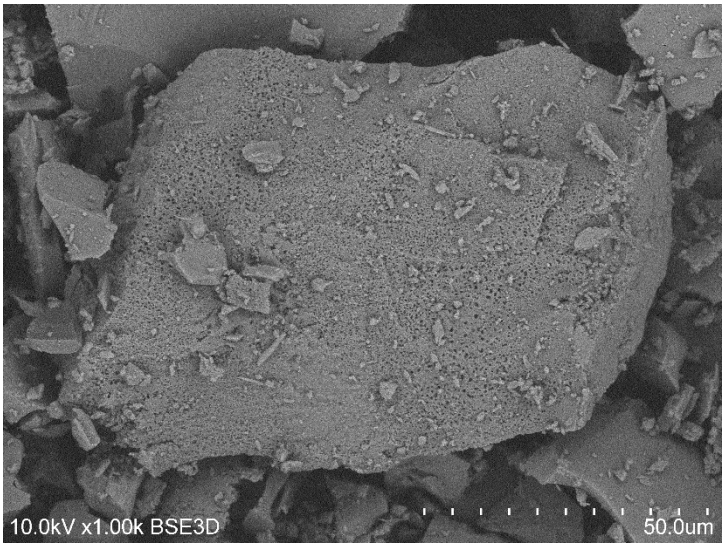


Fig. S8 Raman spectra of solvBG76 glass obtained before and after 30 min of incubation in DPBS.

(a)



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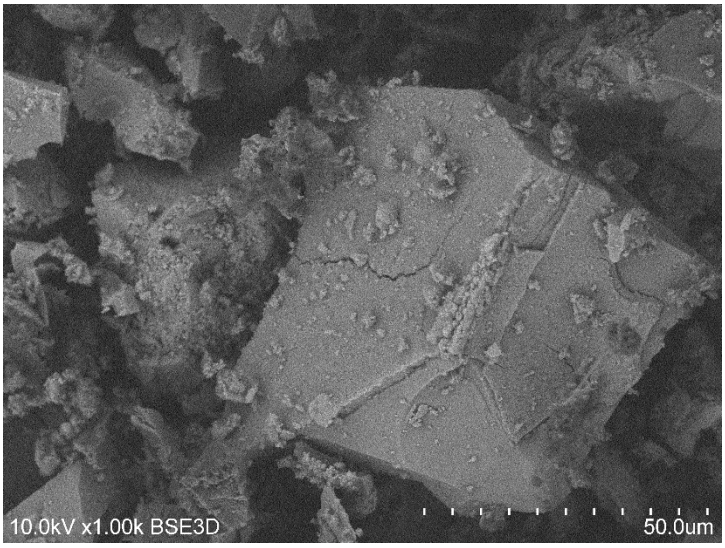

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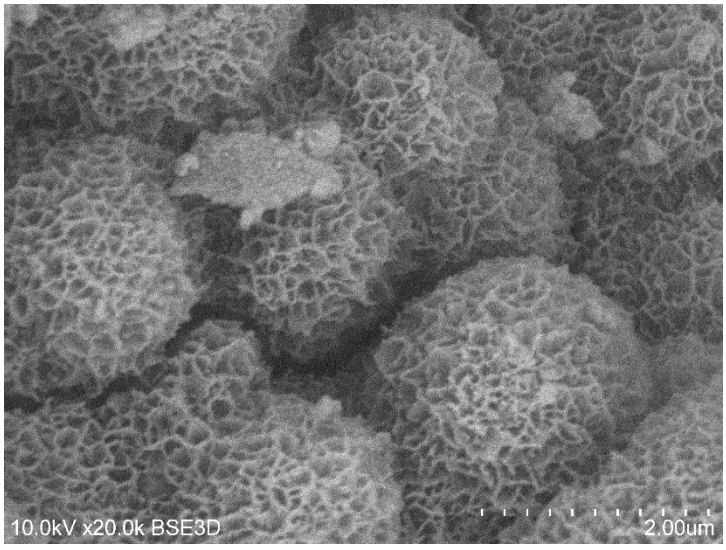

Fig. S9 SEM images of 70S30C before (a) and after 21 d of incubation in DPBS (b-c).

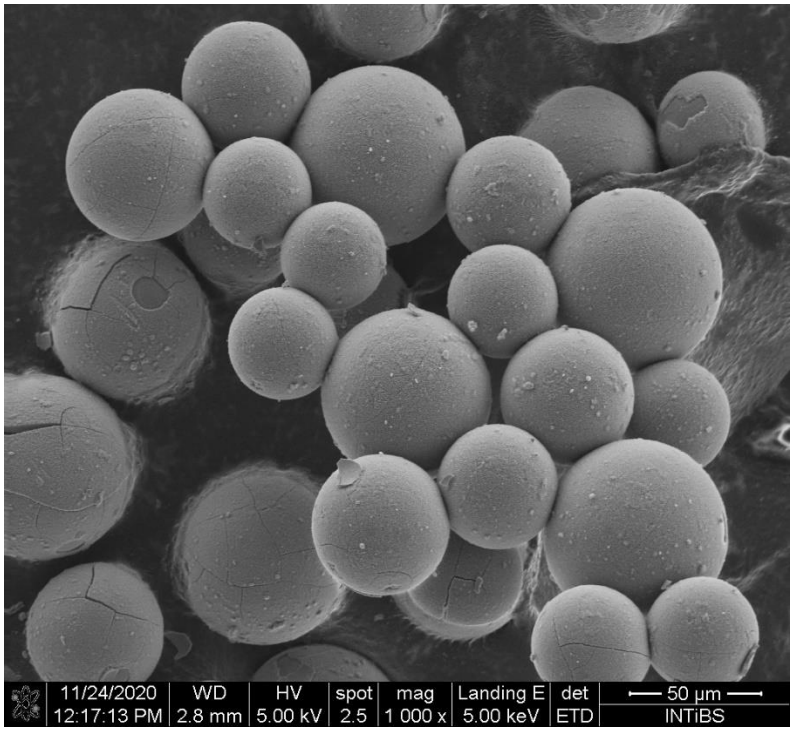

Fig. S10 SEM images of 45S5 glass after 72 h of incubation in DPBS.

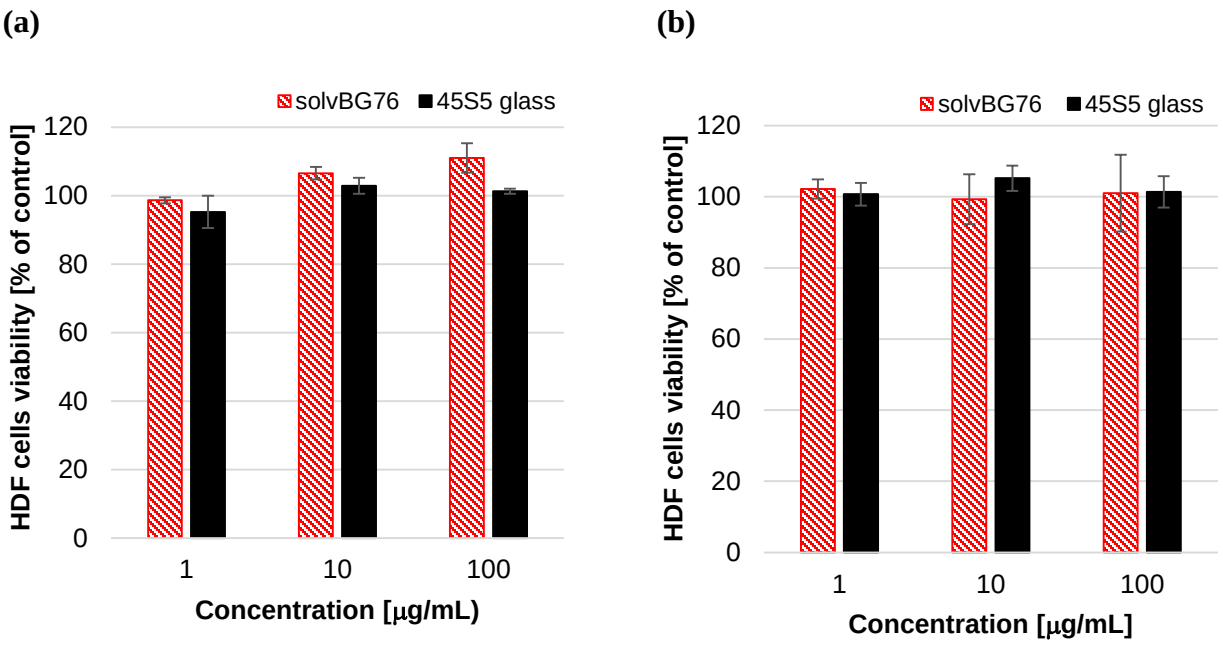

Fig. S11 Viability of human dermal fibroblasts growing in the presence of solvBG76 and reference 45S5 glass for 24 h (a) and 48 h (b).

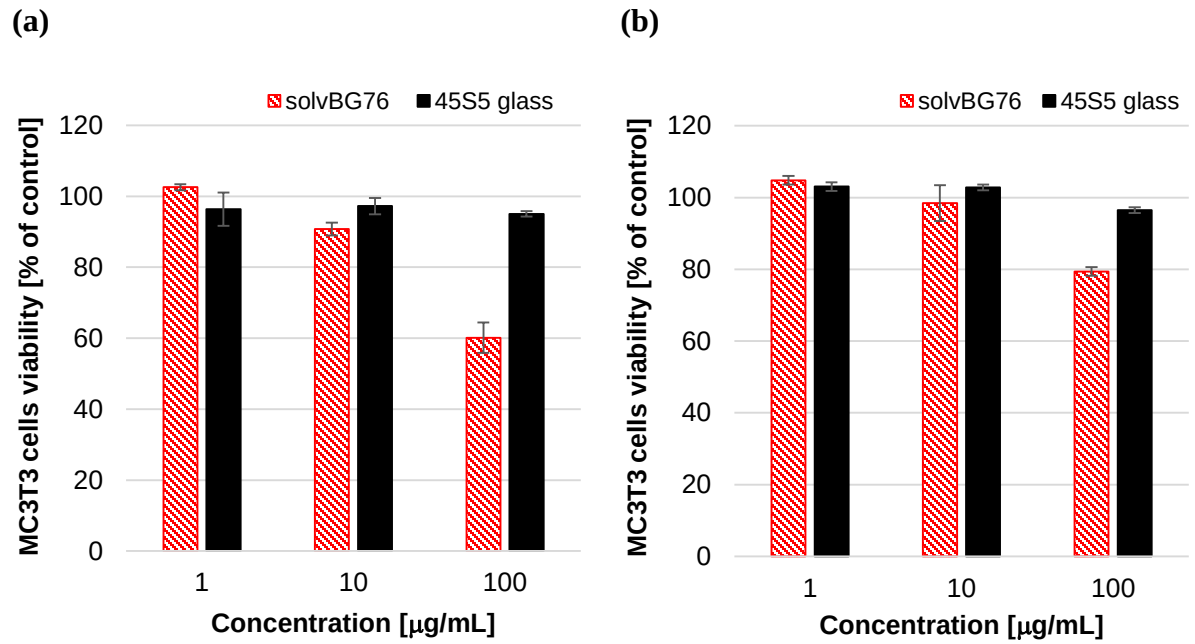

Fig. S12 Viability of mouse osteoblasts growing in the presence of solvBG76 and reference 45S5 glass for 24 h (a) and 48 h (b).