Electronic Supplementary Material (ESI) for Materials Advances.

Supporting Information

Zinc oxide nanoparticles embedded photo-crosslinkable PLA-block-PEG toward effective antibacterial coatings

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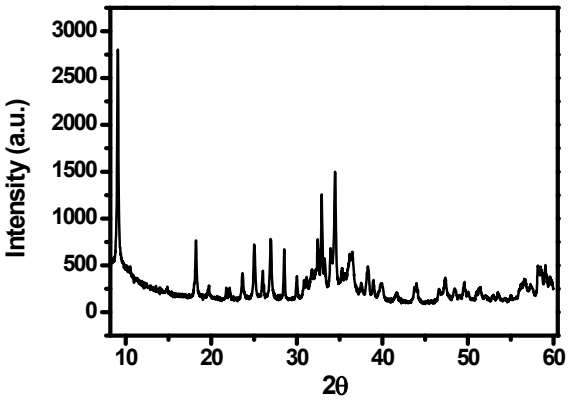

Fig. S1 XRD pattern of zinc nitrate hexahydrate, the precursor of ZnO NPs.

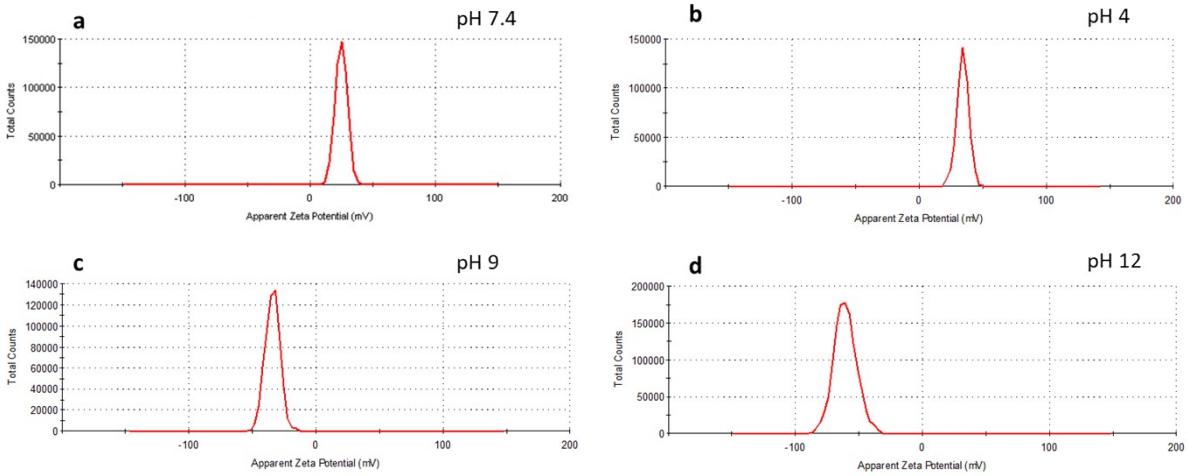

Fig. S2 (a-d) Zeta potential values of as synthesized ZnO NPs at different pH of the solutions.

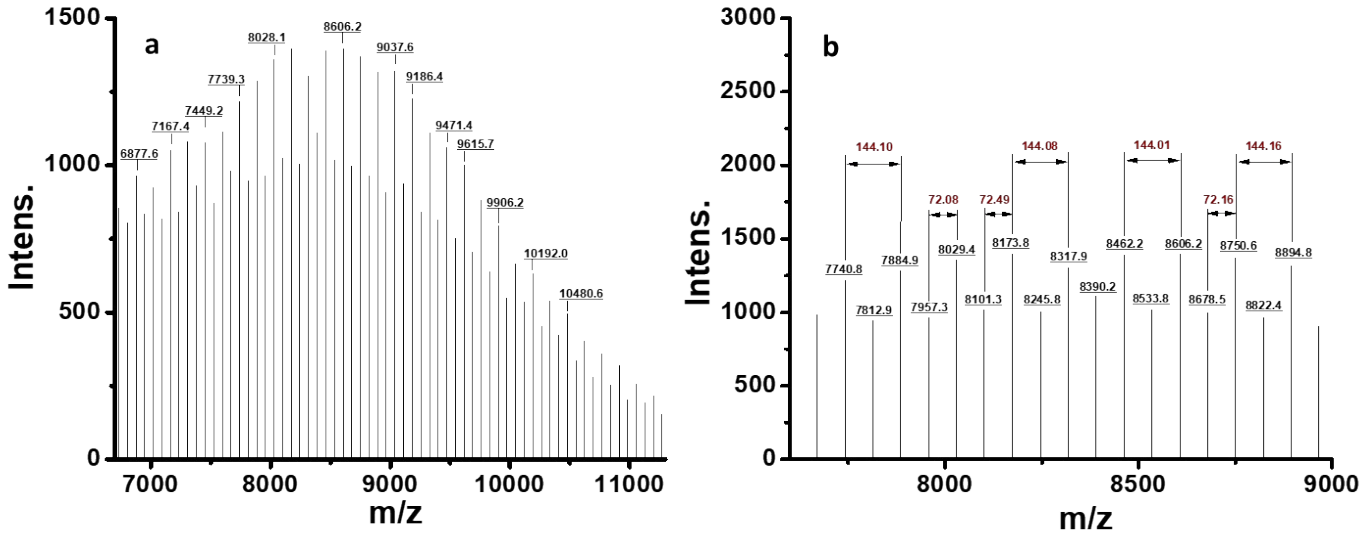

Fig. S3 (a,b) MALDI-TOF MS spectra of as synthesized PLA-diol.

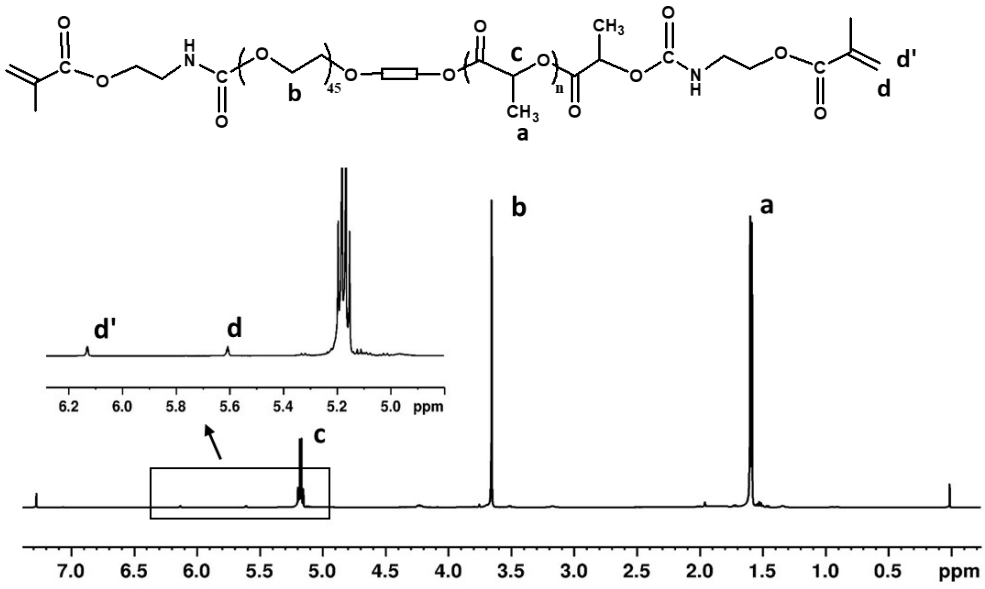

Fig. S4 ^{1}H NMR spectrum of PLA-b-PEG dimethacrylate (PLEGDA) in $CDCl_3$.

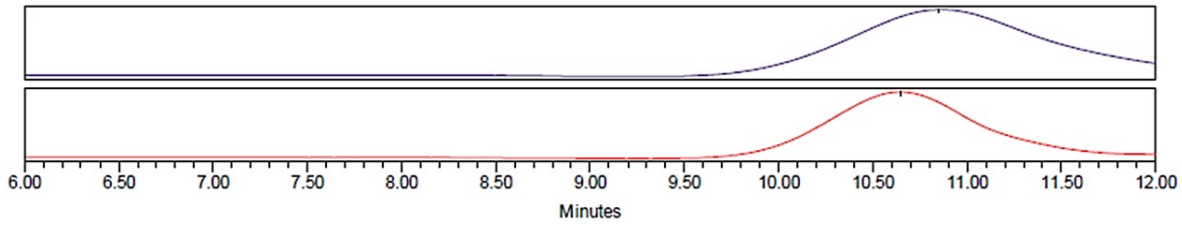

Fig. S5 GPC traces of PLA-diol and PLA-b-PEG dimethacrylate (PLEGDA) in $CHCl_3$.

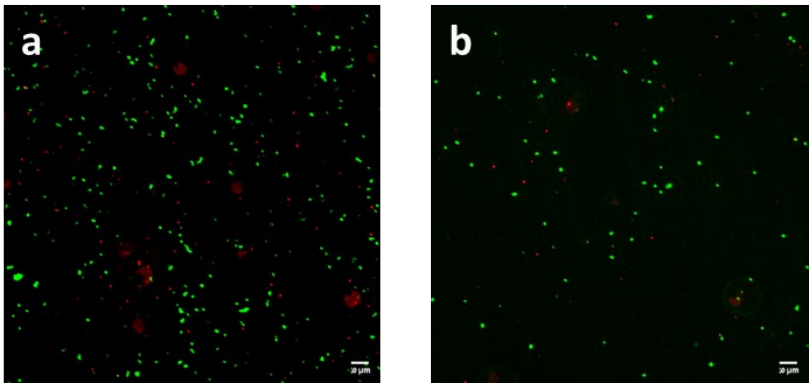

Fig. S6 Confocal images of (a) *S. aureus* and (b) *E. coli* in *the* solution after 4 hours of bacterial culture in contact with PLEGDA coatings, followed by 18 hours of incubation in growth medium. The green and red regions are representative of live (Syto9 stain) and dead (Propidium iodide stain) bacteria, respectively. Scale bar: 20 µm.

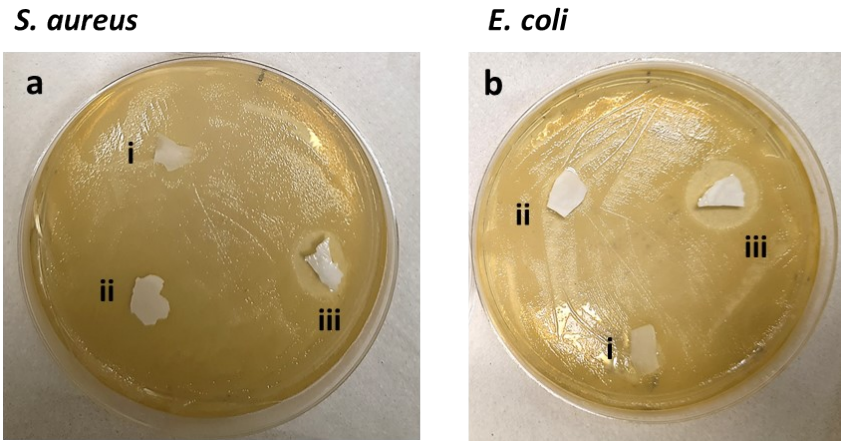

Fig. S7 (a-b) Bacteriostatic circle test on crosslinked films of (i) PLADA, (ii) PLEGDA and (iii) PLEGDA/ZnO NPs (1 %) incubated in (a) *S. aureus* and (b) *E. coli* agar plates, respectively for 24 hours at 37 °C.

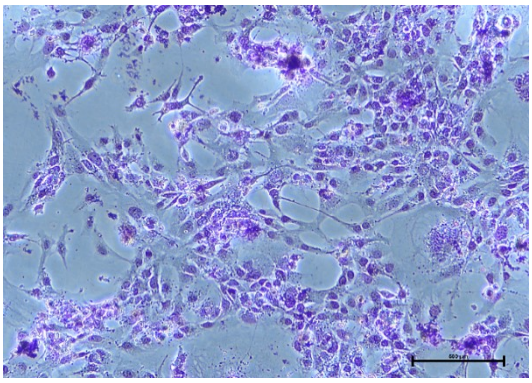

Fig. S8 Phase microscopic image of hFOB cells cultured, stained with giemsa for nucleus staining (purple).

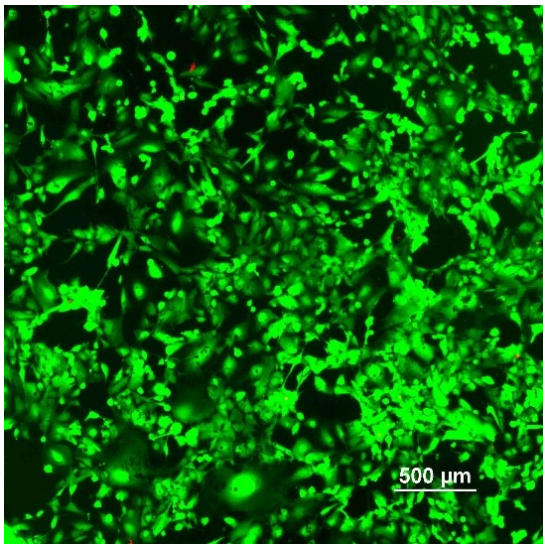

Fig. S9 Representative Live/Dead staining from the control condition, showing hFOB cells after 24 hours incubation.