

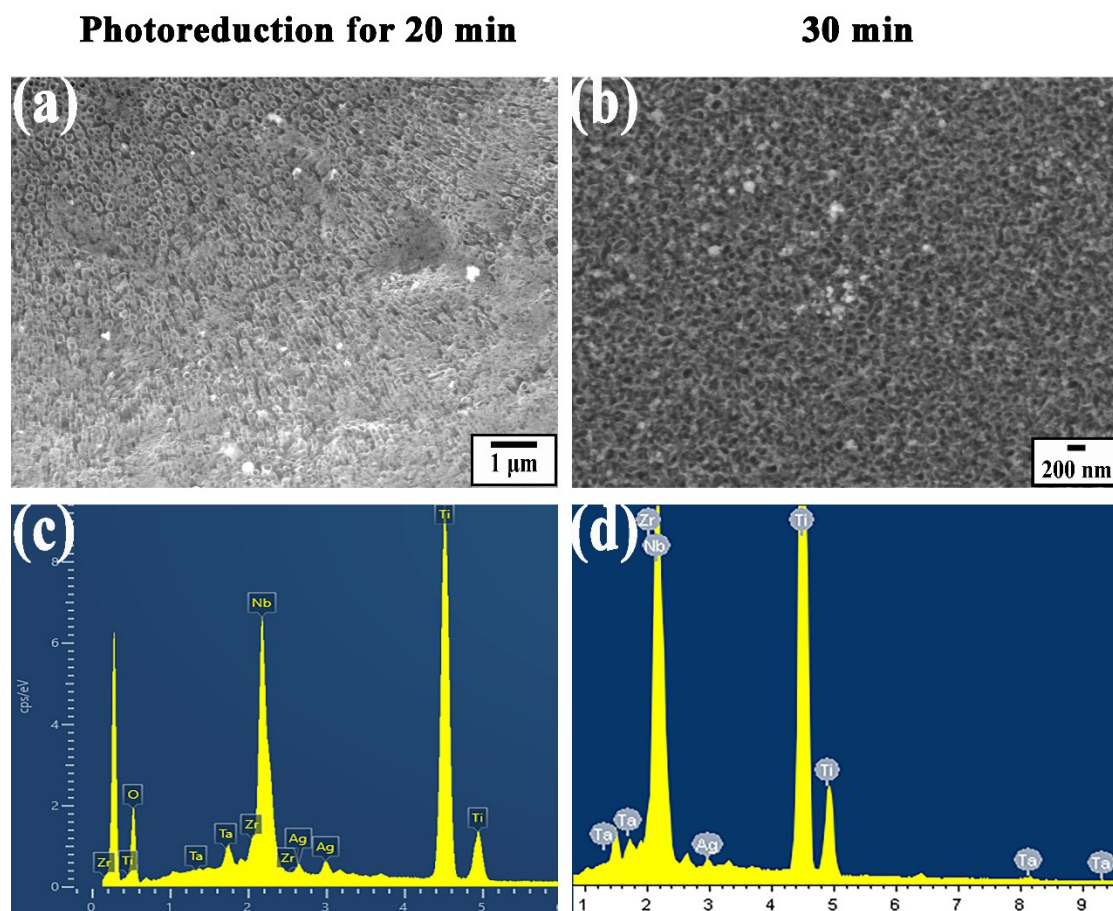


Fig. S1 a-b Photoreduction for 20 min, 30 min; **c-d** EDS analysis of Ag NPs in panels a-b.

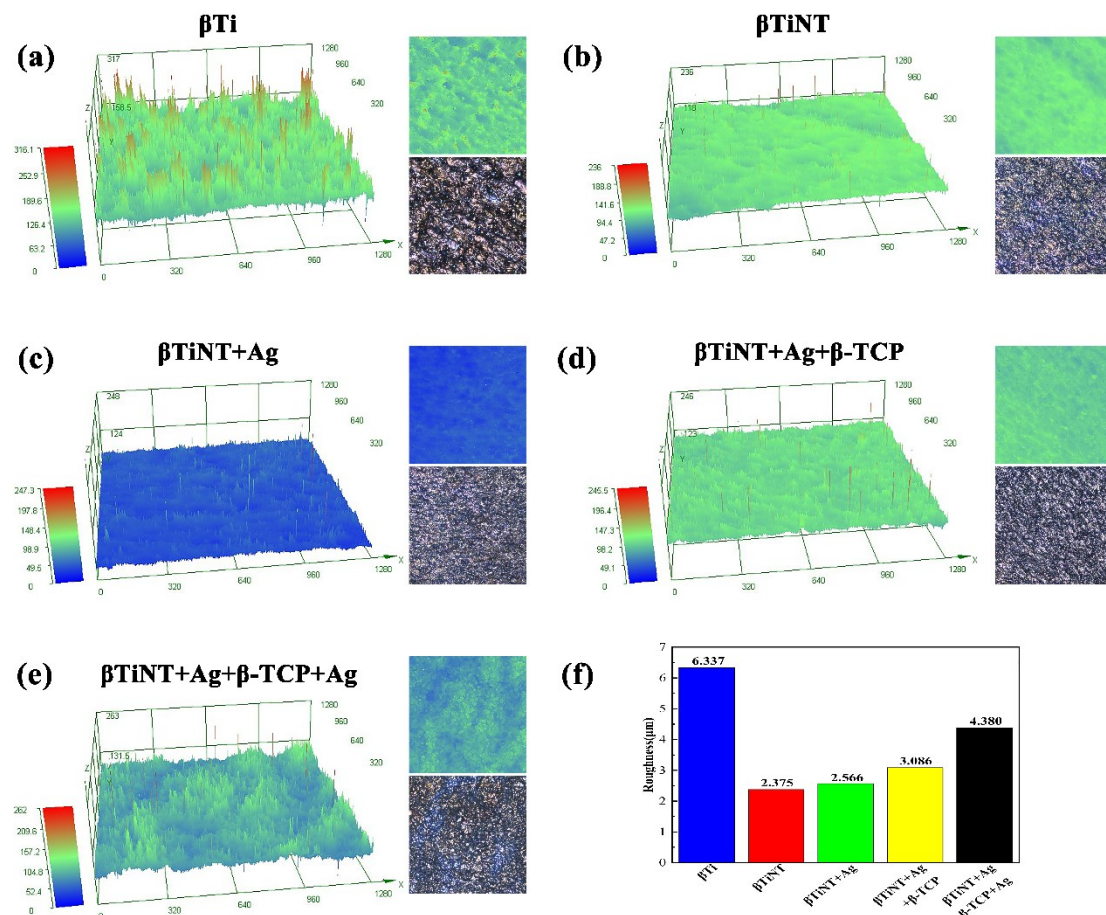


Fig. S2 LSCM micrographs for the **a** β Ti, **b** β TiNT, **c** β TiNT+Ag, **d** β TiNT+Ag+ β -TCP, **e** β TiNT+Ag+ β -TCP+Ag, **f** Comparison of the surface roughness for specimens.

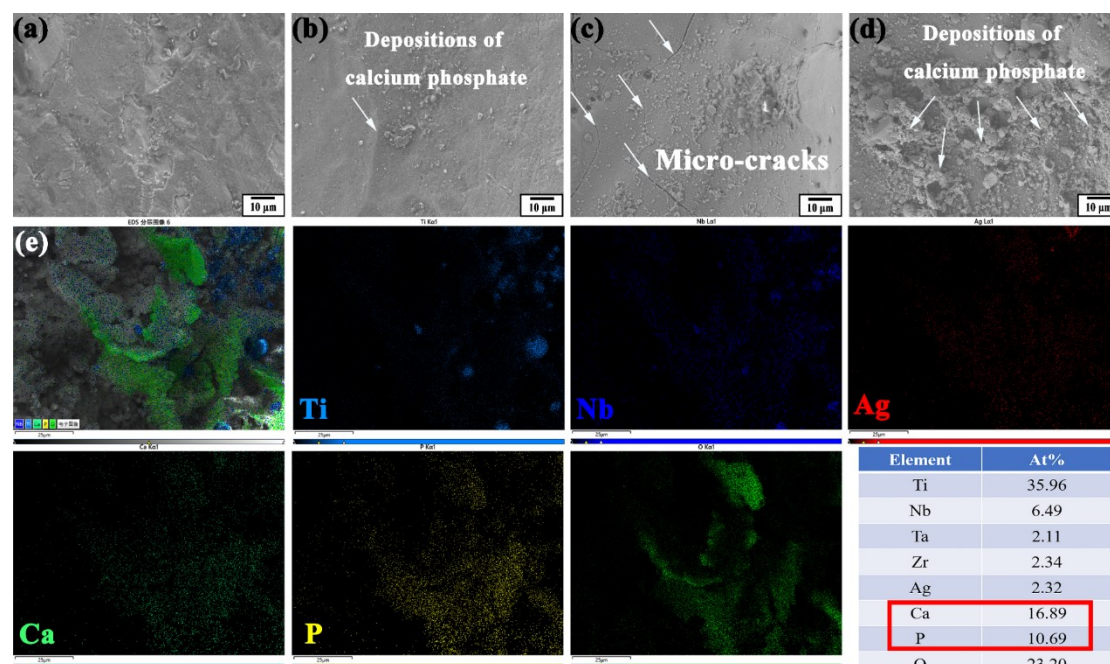


Fig. S3 SEM of the **a** β TiNT **b** β TiNT+Ag **c** β TiNT+Ag+ β -TCP and **d** β TiNT+Ag+ β -TCP+Ag specimens after incubation in SBF solution after 14 days **e** EDS analysis of d.

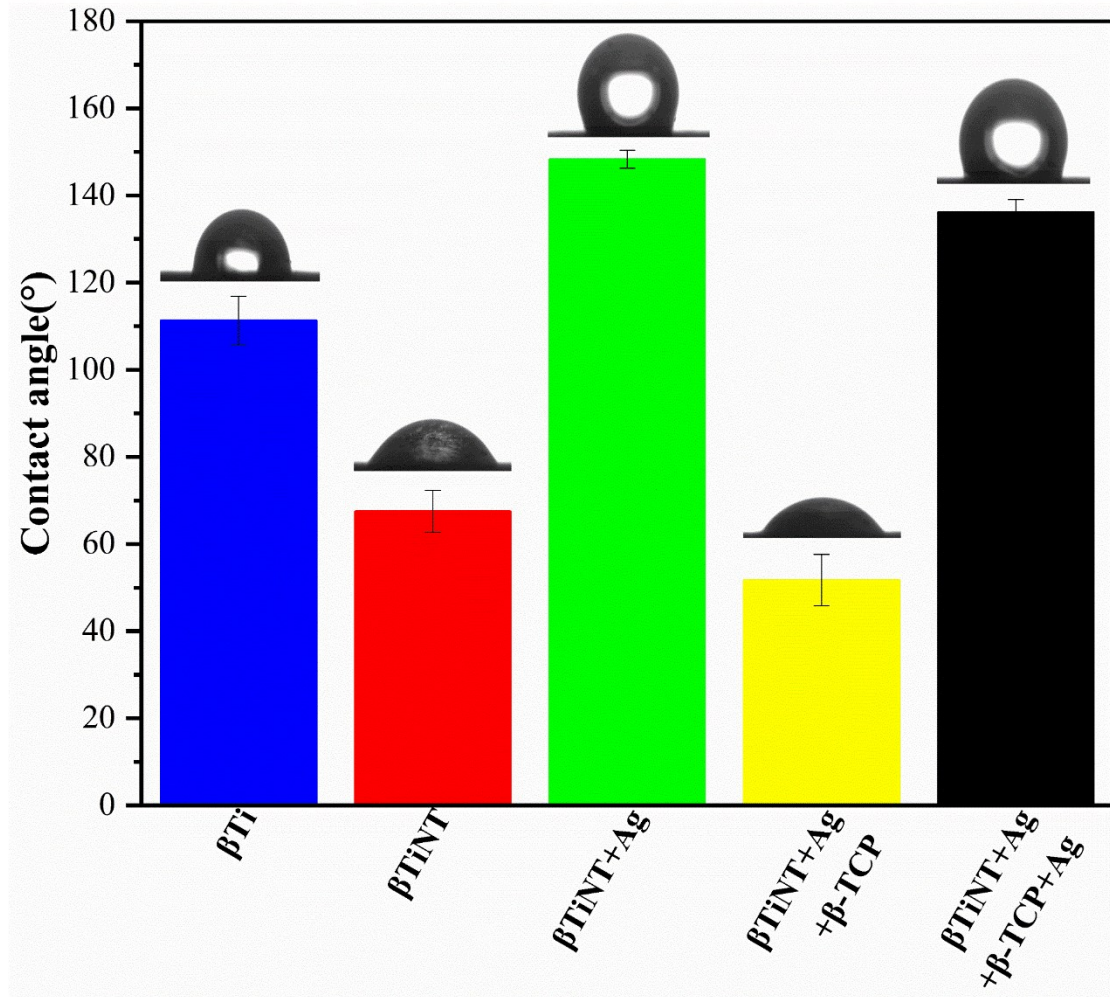


Fig. S4 Water contact angle on the different substrate surfaces

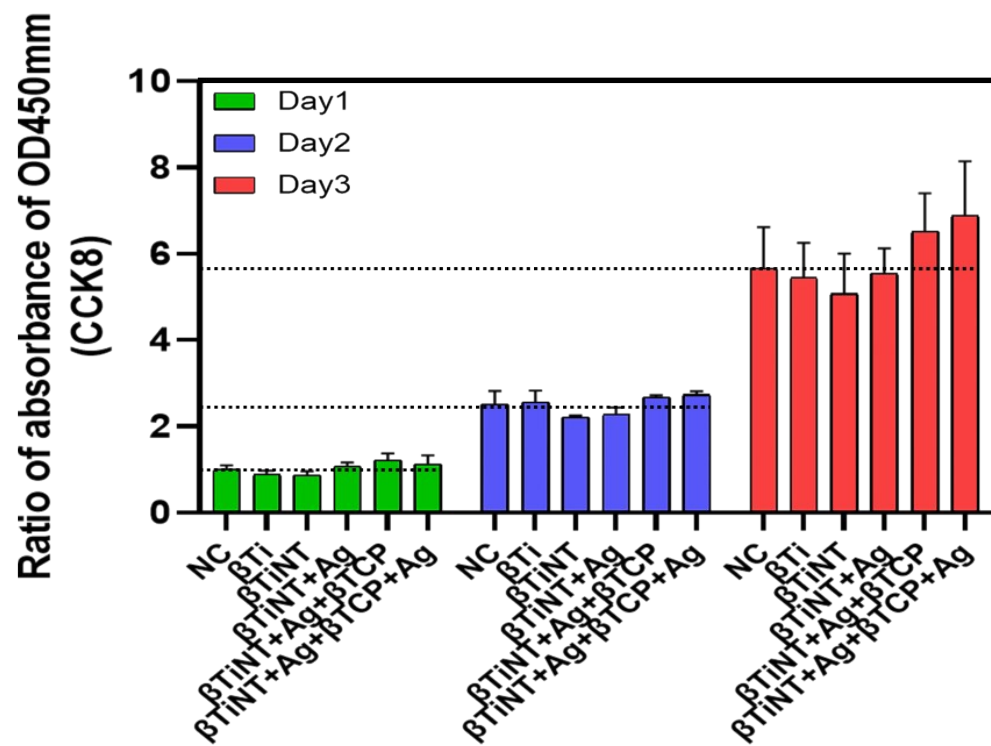


Fig. S5 The ratio of absorbance in CCK-8 assay (after cultivation in leaching solution).