

Supplementary Information S1

Interactions of polyvinyl acetate dispersions with nanostructured superhydrophilic and superhydrophobic Ti6Al4V alloy surfaces

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S1: Focused Ion Beam (FIB) analysis of the nanostructured TiO₂ film

For further analysis of the surface a FIB cut was conducted at one position on the TiO₂ nanostructured surface. The FE-SEM image of the removed area was measured with an InLens detector and magnification factor of 15000x.

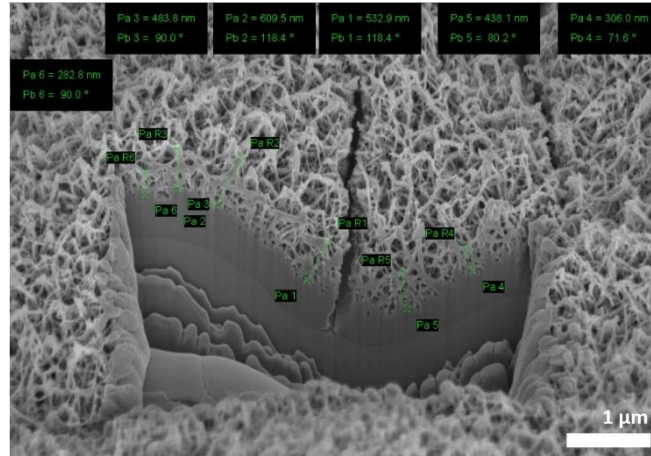


Fig.S1 FIB SEM image of the ns-TiO₂/Ti6Al4V surface after 30 min of etching in the autoclave and calcination with elevation profile details as measured at different points on the surface by using an InLens detector and a magnification of 15000x

The removal of the surface revealed the thickness of the nanostructure as well as a second area below the net-like structure, which formed on the Ti6Al4V surface after an etching time of 30 min and subsequent calcination (compare section 2.2, main manuscript). Depending on the measured position, the nanostructure itself exhibits a thickness between 282.8 nm and 609.5 nm. It is obvious that the nanostructure grows directly out of the layer formed on the alloy surface. Furthermore, the FIB cut provided information about the depth of the formed cracks. It is concluded that they reach from the surface down to the surface of the metal alloy.