

Electronic Supplementary Information (ESI)

of

**Formation and osteoblast behavior of HA nano-rods/fibers patterned
coatings on tantalum in porous and compact forms**

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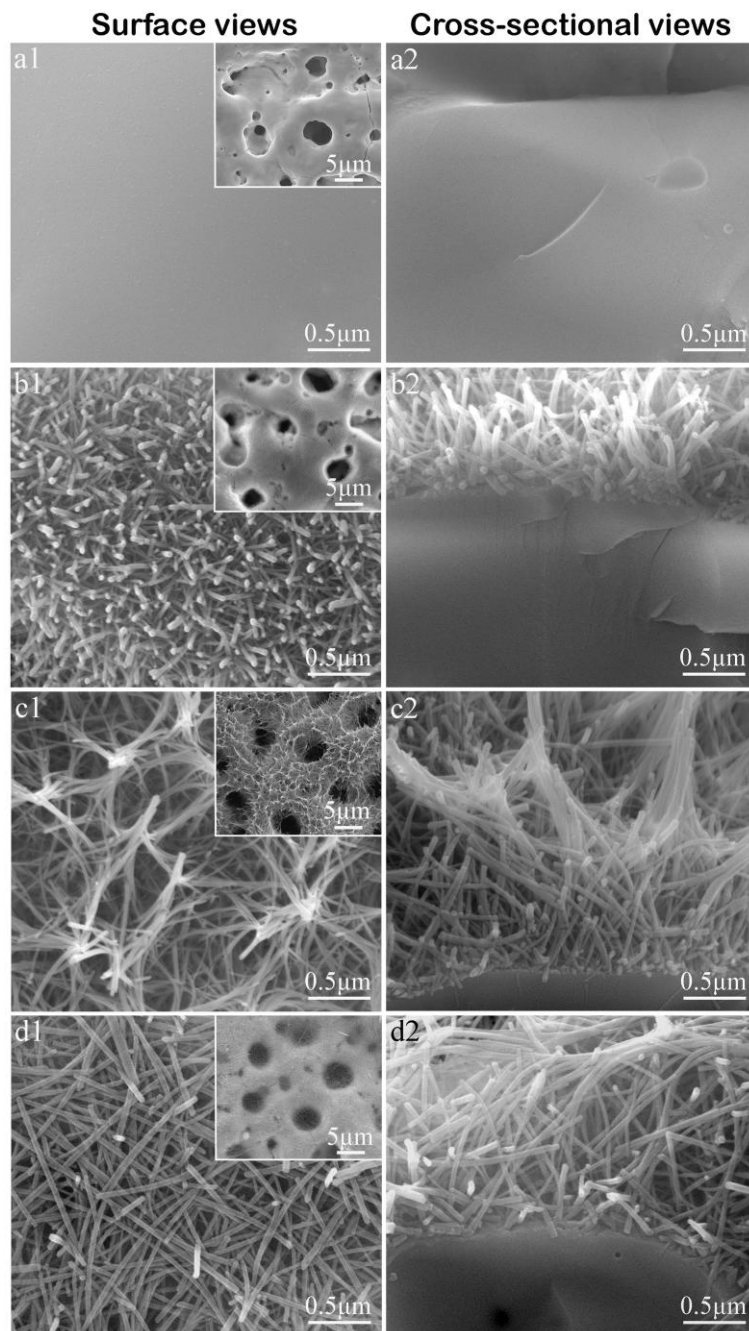


Figure S1. Surface and cross-sectional morphologies of the MAOed compact Ta discs (a1, a2) before and after HT for (b1, b2) 3, (c1, c2) 6 and (d1, d2) 24 h, respectively.

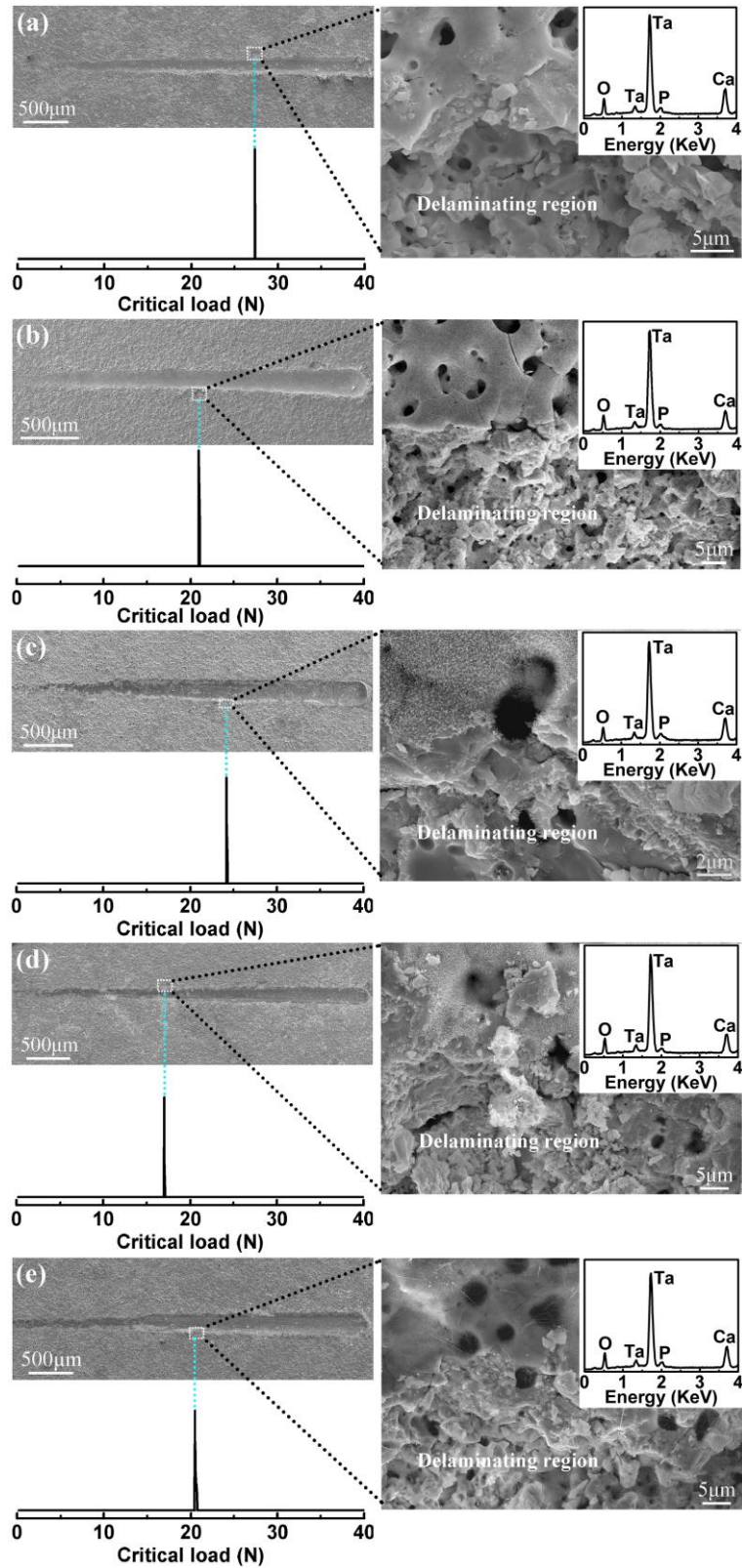


Figure S2. Curves of acoustic output versus load and scratch images of MAO₀ coating (a) without and (b) with immersion for 20 weeks, HT3h coating (c) without and (d) with immersion for 20 weeks, and (e) HT24h coating without immersion, together

with the amplified views of the *Lc*-caused failure areas, in which the EDX spectra detected on the delaminating regions of the coatings show the presence of Ca and P, indicating that the delaminations occurred in the interiors of the coatings.