

Supplementary Materials

A Simple Cerium Coating Strategy for Titanium Oxide Nanotubes' Bioactivity Enhancement

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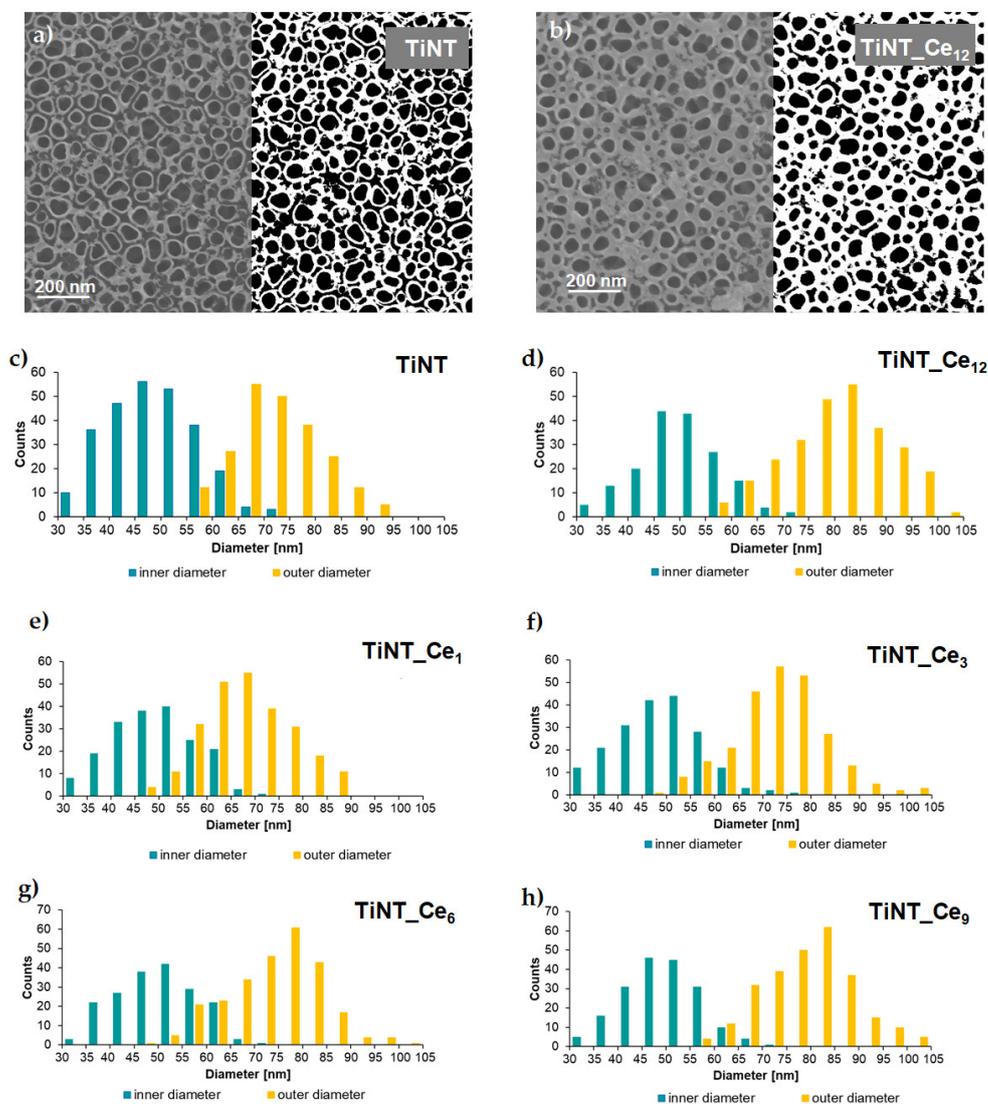


Figure S1. Image analysis of the FE-SEM micrographies for TiNT and TiNT_Ce_n. Panels (a) and (b) show the original SEM output (in gray) partially superimposed to the binarized image generate for the calculation. Panel (c–h) report the inner and outer diameter distribution for each sample.

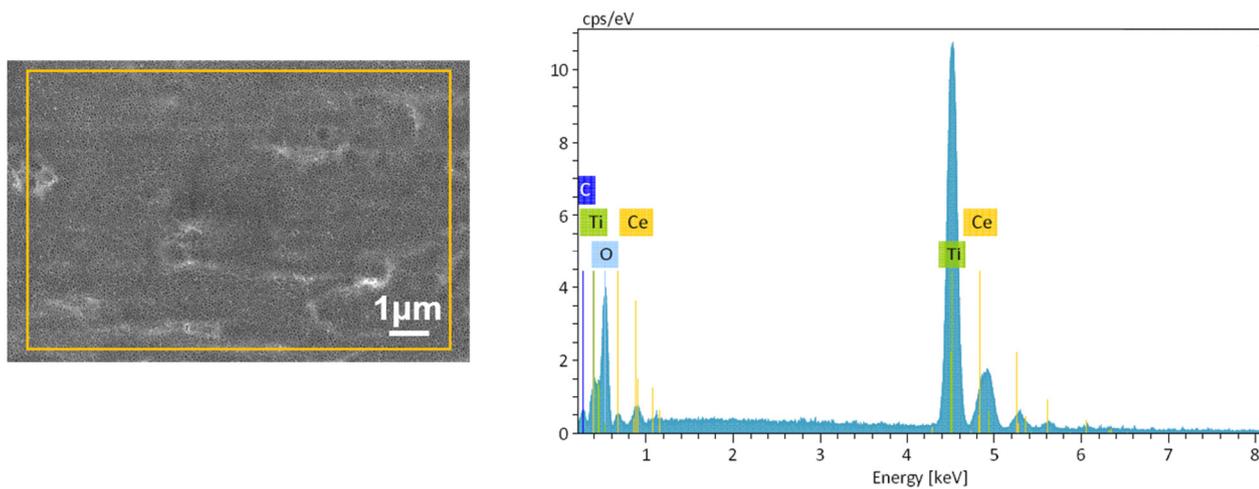


Figure S2. FE-SEM micrograph and EDS spectrum relative to the selected area. EDS were performed at 15 kV at the same magnification and corresponding total area for every sample.

Table S1. Elemental composition (in atomic %) of TiNT and TiNT_Ce_n samples.

	Ti	O	Ce	C
TiNT	71.52	26.76	-	1.72
TiNT_Ce ₁	70.76	25.34	0.8	3.10
TiNT_Ce ₃	68.59	27.21	2.37	1.83
TiNT_Ce ₆	66.39	28.73	4.06	0.82
TiNT_Ce ₉	64.67	26.97	6.95	1.41
TiNT_Ce ₁₂	61.49	29.22	8.11	1.18

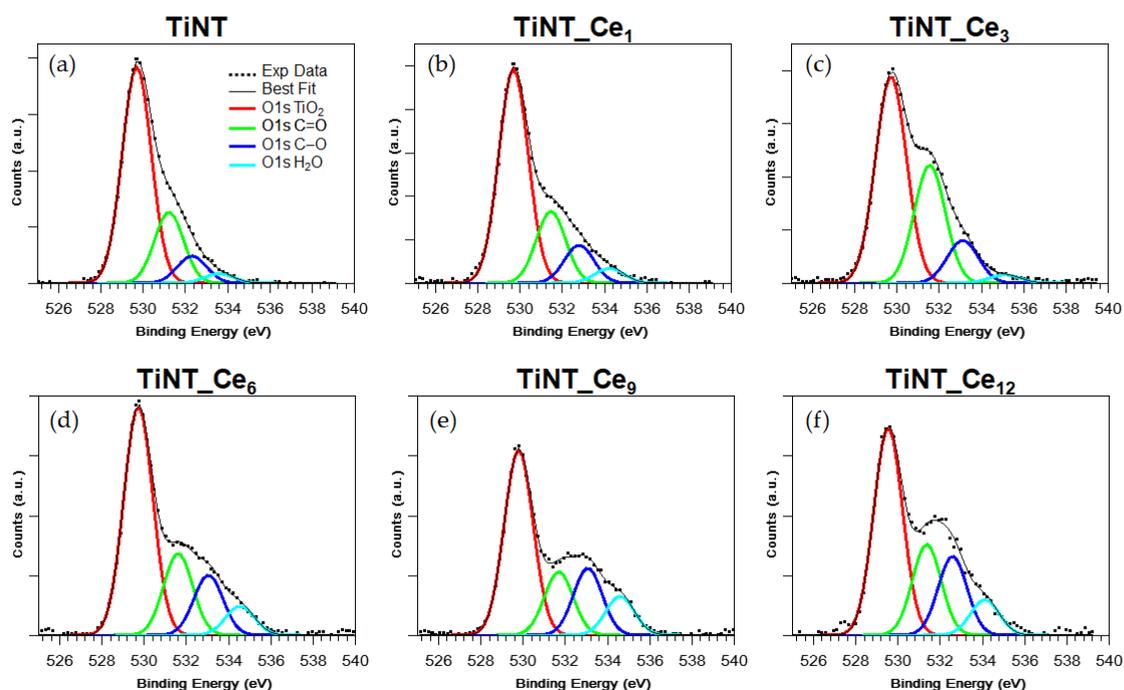


Figure S3. XPS O1s fitted spectra for (a) TiNT and (b–f) TiNT_Ce_n samples. Data were fitted with four components of about 530, 531.5, 533 and 534 eV that correspond to O²⁻ of metal oxides, carbonyl oxygens, always present in samples prepared in air, hydroxyl groups (or chemisorbed water) and physisorbed water, respectively.

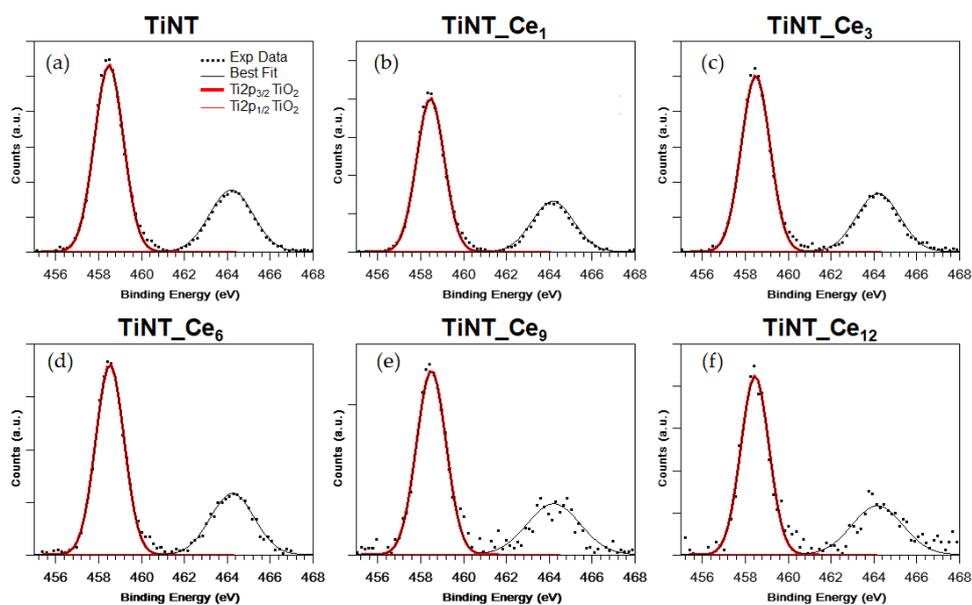


Figure S4. XPS Ti2p fitted spectra for (a) TiNT and (b–f) TiNT_Ce_n samples.

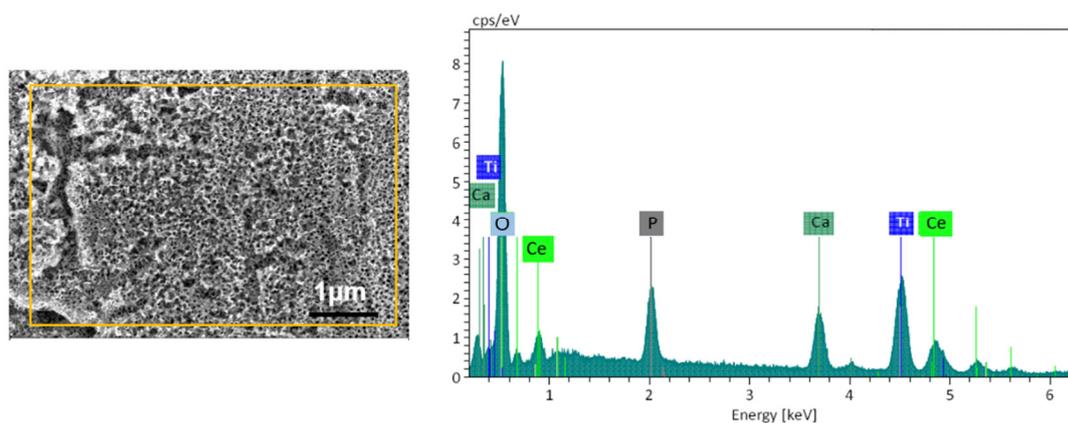


Figure S5. FE-SEM micrograph and EDS spectrum relative to the selected area. EDS were performed at 15 kV at the same magnification and corresponding total area for every sample.

Table S2. Elemental composition (in atomic %) of TiNT and TiNT_Ce_n samples after 8 days soaking in SBF at 37 °C.

	Ca	P	Ca/P
TiNT	-	-	-
TiNT_Ce ₁	0.60	0.42	1.42
TiNT_Ce ₃	1.36	0.91	1.49
TiNT_Ce ₆	2.39	1.57	1.52
TiNT_Ce ₉	4.33	2.87	1.51
TiNT_Ce ₁₂	4.77	3.04	1.57