Supplementary Materials

Improving osseointegration and antibacterial ability of Nb-doped micro arc oxidized coating with rod-like hydroxyapatite crystals on titanium surface

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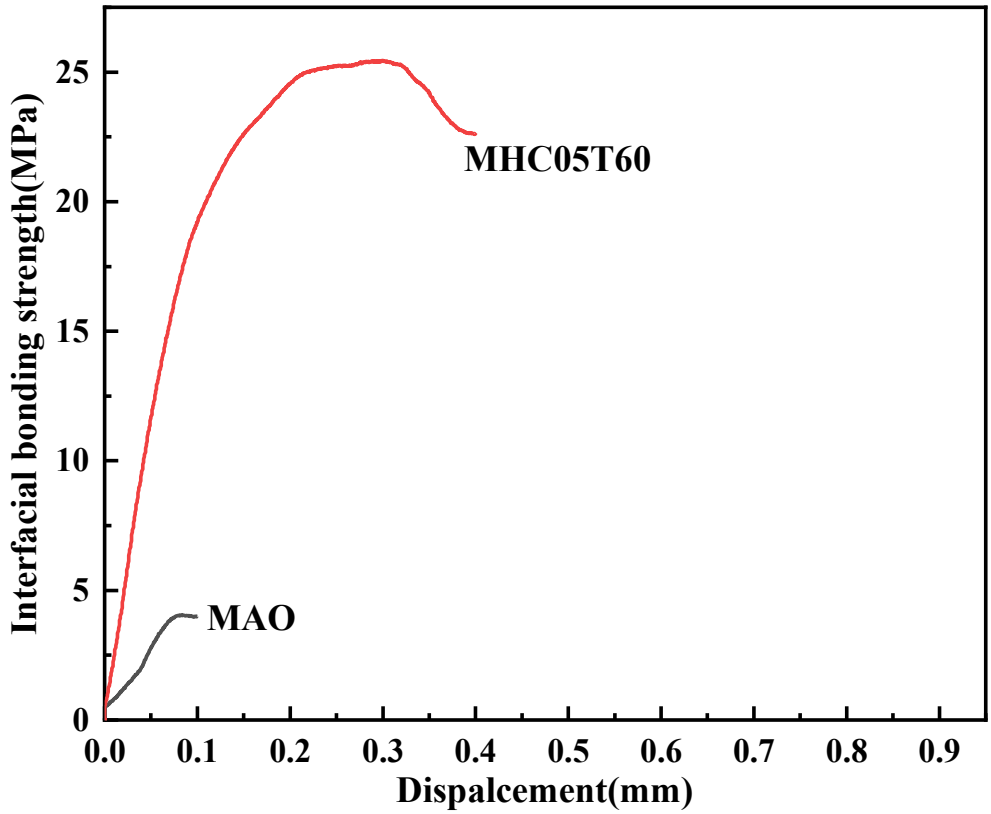

Figure S1. The interfacial bonding strength between MAO and MHC05T60 implant and tibia

Table S1 Comparison of the push-out force results of Ti implant with the similar structure

Research object	Surface modification	Implant surface structure	Healing time (week)	Implant site	Bone thickness (mm)	Implant size(mm)		Push-out strength (MPa)	Ref.
						ϕ	L		
Topological Structure	MAO MAO+HT	Micro scale surface + Ca, P Micro/nano scale surface + HA nanorod	8/12	femur	1.5	2.5	10	5.10/0.85 13.58/5.94	54
Topological Structure	MAO MAO+HT	Micro scale surface +	8	femur	1.5	2.5	10	4.67 10.19	22

		Sr, Ca, P Micro/nano scale surface + Sr-HA nanorod							
Topological Structure	MAO MAO+HT	Micro scale surface +Ca, P, Sr, F Micro/nano scale surface + Sr, F-HA nanorod	8	femur	1.5	2	10	6.36 12.73	52
Topological Structure	MAO MAO+HT	Micro scale surface + Ca, P Micro/nano scale surface + HA nanorod	8	femur	1.5	2.5	10	4.66 13.41	53
Topological Structure	MAO MAO+MH	Micro scale surface + Ca, P Micro/nano scale surface + HA nanowires, $Na_{0.23}TiO_2$ nanoflake	16	tibia	1	2	6	9.55 20.7	30
Topological Structure	MAO MAO+MSH	Micro scale surface + Ca, P Micro/na	16	Tibia	1	2	6	28.7	29

		no scale surface + HA nanowires							
Topological Structure	MAO MAO+MH	Micro scale surface + Ca, P, Nb Micro/nano scale surface + rod-like HA crystals	4	tibia	1	2	6	4 25	This work

Note: MAO: micro arc oxidation, HT: hydrothermal treatment, MH: microwave hydrothermal treatment.