Supporting Information

Surface modification of Ti surface with nanoscale bio-MOF-1 for improving biocompatibility and osteointegration *in vitro* and *in vivo*

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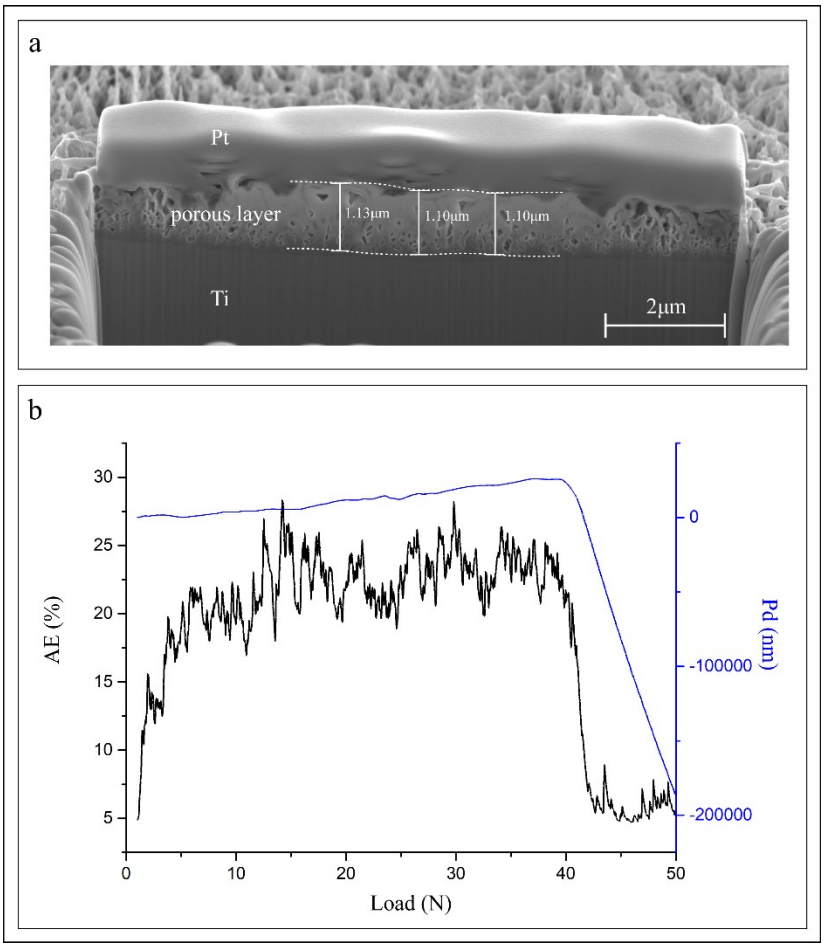

Fig. S1. Thickness of porous structure formed by alkali-heat treatment (a) and binding force between the deposited layer and substrate. (b)

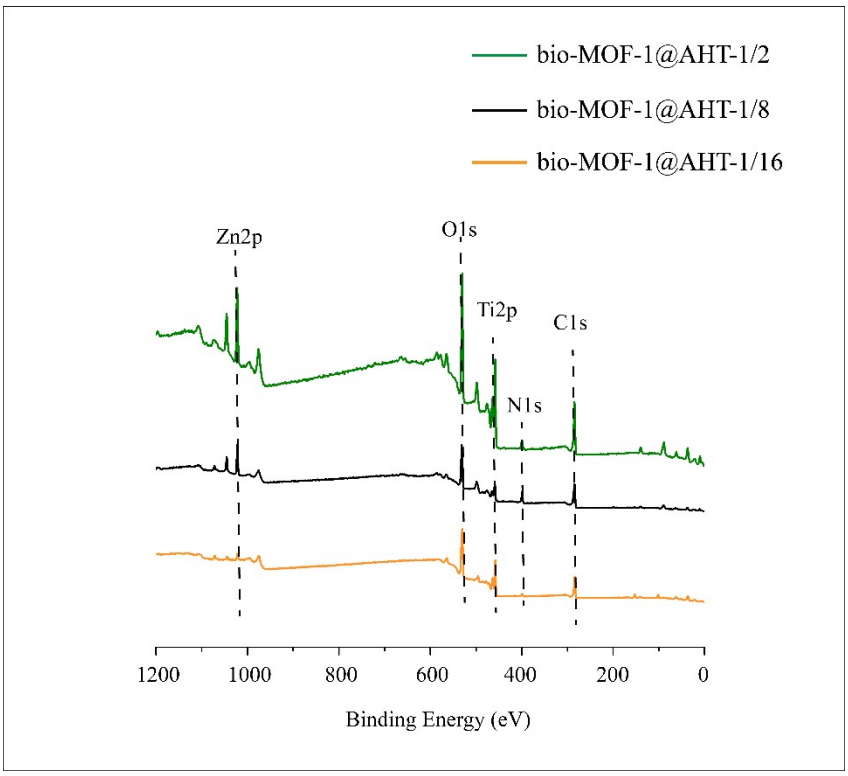

Fig. S2. XPS patterns of the as-prepared AHT and bio-MOF-1@AHTs.

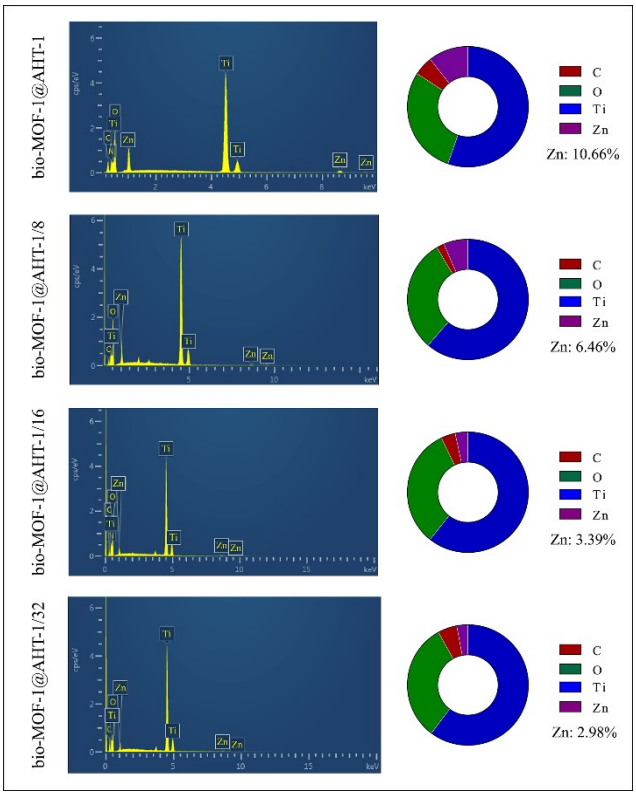

Fig. S3. EDS patterns of the as-prepared bio-MOF-1@AHTs.

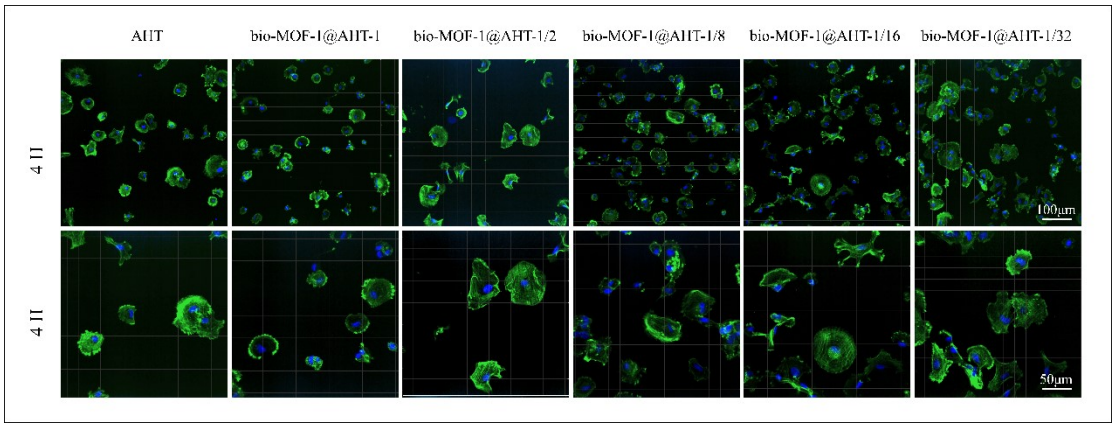

Fig. S4. The fluorescent images of cells incubated on AHT and bio-MOF-1@AHT surfaces at 4 h.

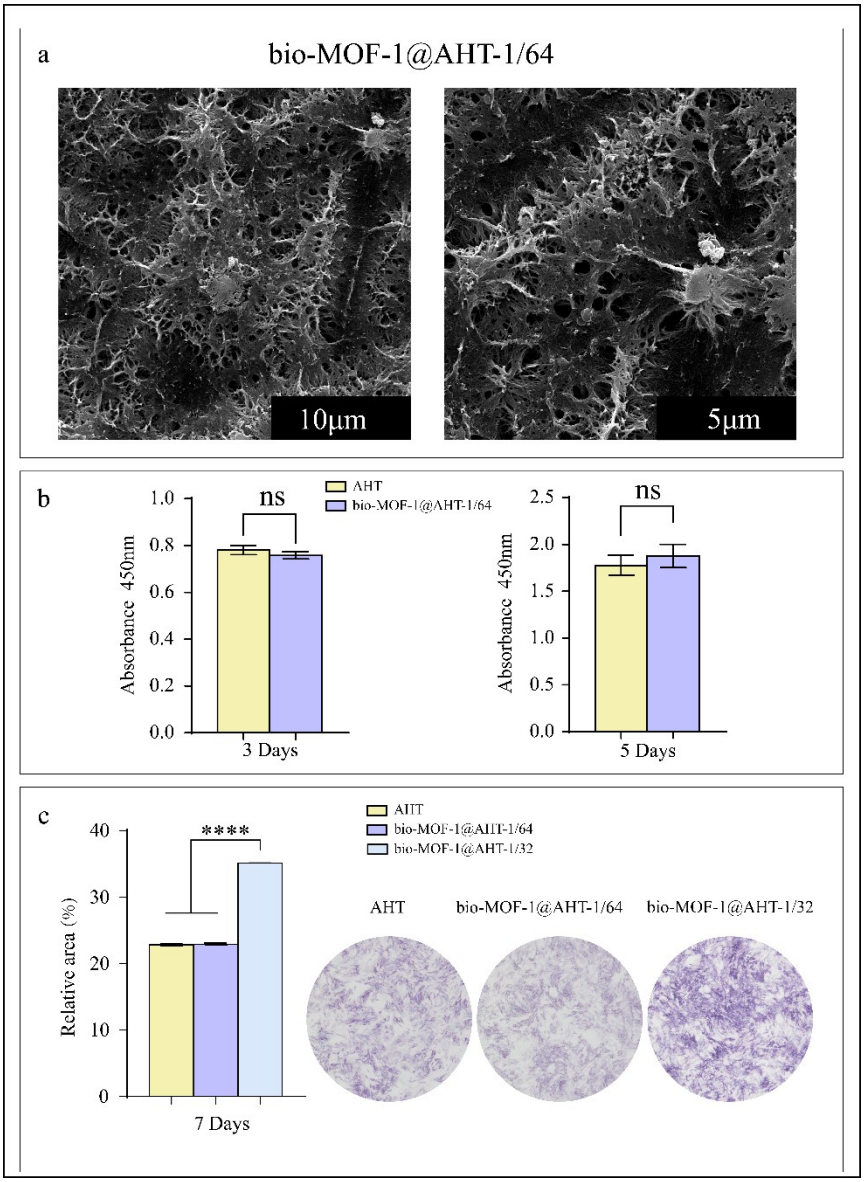

Fig. S5. (a) SEM images of bio-MOF-1@AHT-1/64. CCK-8 (b) and ALP activity kit (c) of AHT, bio-MOF-1@AHT-1/64, and bio-MOF-1@AHT-1/32.

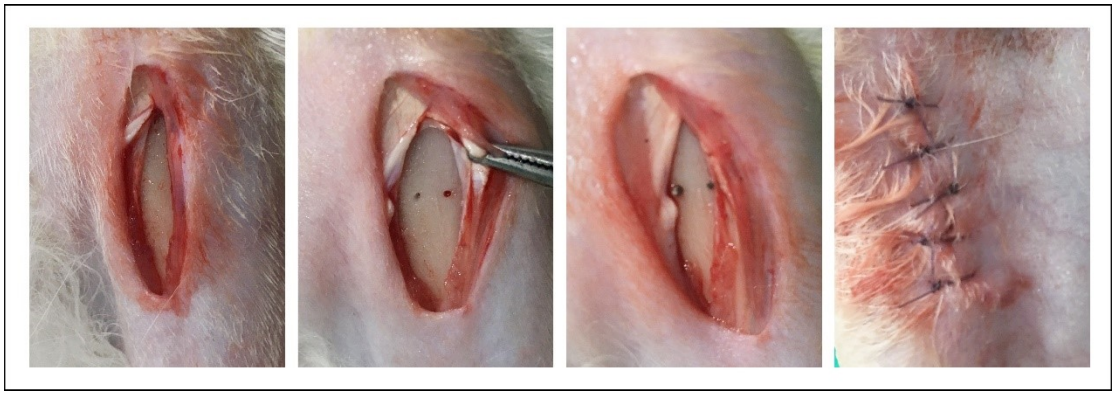

Figure. S6 Surgery of implantation on the tibia of rabbit.

β-Actin (*Actb*)	forward	CTCTGTGTGGATTGGTGGCT
	reverse	CGCAGCTCAGTAACAGTCCG
COL1 (*Col1*)	forward	GTACATCAGCCCAAACCCCA
	reverse	CAGGATCGGAACCTTCGCTT
ALP (*Alp*)	forward	GGCGTCCATGAGCAGAACTACATC
	reverse	CAGGCACAGTGGTCAAGGTTGG
RUNX2 (*Runx2*)	forward	CCGTGGCCTTCAAGGTTGTA
	reverse	ATTTCGTAGCTCGGCAGAGTAGTT
BMP2 (*Bmp2*)	forward	AGAGCTTTGATGTCACCCCG
	reverse	AACCCTCCACAACCATGTCC
OPN (*Spp1*)	forward	TGAGTTTGGCAGCTCAGAGG
	reverse	CTTCCCGTTGCTGTCCTGAT
OSX (*Sp7*)	forward	GCCTACTTACCCGTCTGACTTTGC
	reverse	CCCTCCAGTTGCCCACTATTGC
WNT (*Wnt*)	forward	CGGGTTCTTCTCTGGTCCTTG
	reverse	GGGCATGATCTCCACGTAGT
AKT (*Akt*)	forward	ACCTCTGAGACCGACACCAG
	reverse	AGGAGAACTGGGGAAAGTGC
β-catenin (*Ctnnb1*)	forward	ATCATTCTGGCCAGTGGTGG
	reverse	GACAGCACCTTCAGCACTCT

Table S1. Primers used for qRT-PCR analysis.