

## Supplementary materials

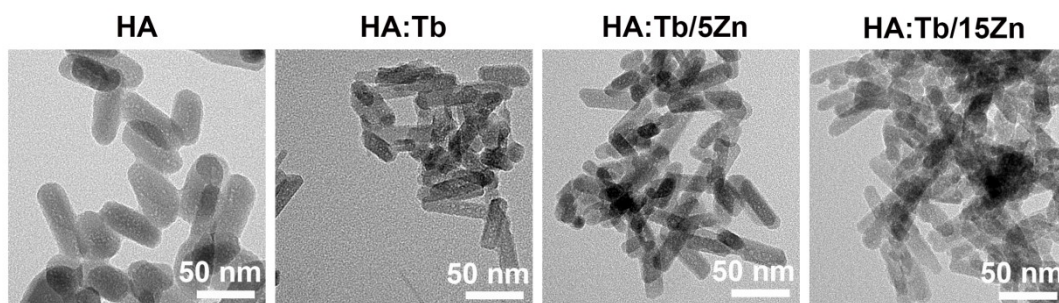


Fig. S1 TEM images of HA, HA:Tb, HA:Tb/5Zn, HA:Tb/15Zn samples.

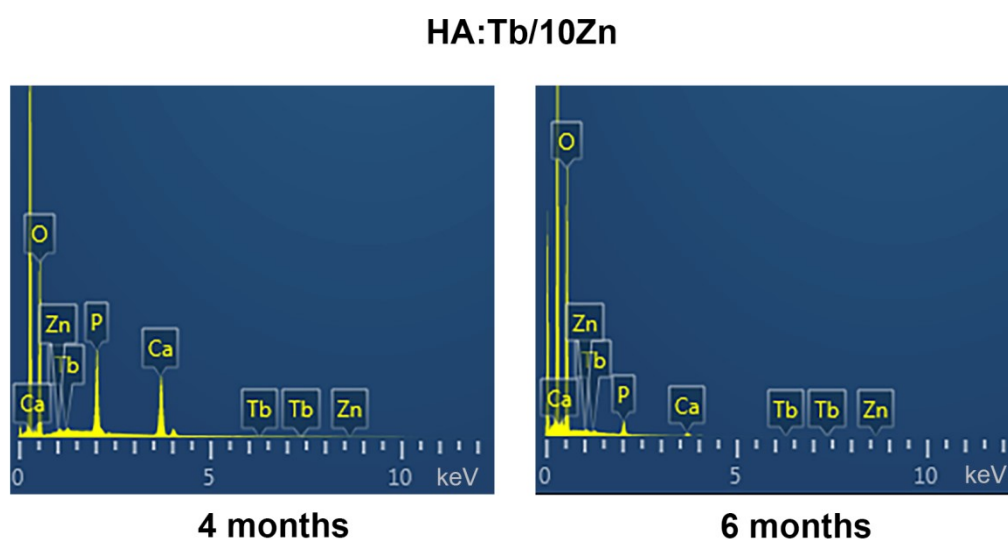


Fig. S2 Element evaluation of HA:Tb/10Zn histological section through EDS.

Doping content relative to Ca+O+P+Zn+Tb (wt %)		
Samples	Tb	Zn
HA:Tb/10Zn (4 m)	0.03%	0.05%
HA:Tb/10Zn (6 m)	0.02%	Lower than 0.01%

Table S1 The element content of HA:Tb/10Zn histological section samples at 4 months and 6 months.