## Supplementary data



Figure S1. The high-resolution XPS spectrum of Ag 3d.



Figure S2. The SEM observation of supramolecular hydrogel.



**Figure S3.** Quantitative analysis of AR staining of BMSCs cultured in the different scaffolds after osteogenic induction for 14 and 21 days.



Figure S4. Gross images of surgical incision at 6 and 12 weeks after operation.

Gene subtype	Oligonucleotide Primers (5'-3')
ALP	F: ATC GGA CCC TGC CTT ACC
	R: CTC TTG GGC TTG CTG TCG
Runx-2	F: ACTACCAGCCACCGAGACCA
	R: ACTGCTTGCAGCCTTAAATGACTCT
OCN	F: AGCCACCGAGACACCATGAGA
DMD 2	E: CAACACCGTCCTCACCTTCC
DIVIT-2	R: TTCCCACTCATTTCTGAAAGTTCC
GAPDH	F: CAATGACCCCTTCATTGACC
	R: TGGACTCCACGACGTACTCA

Table S1. Primer sequences of genes