ACCSCIENCE PUBLISHING

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RESEARCH ARTICLE

3D printed Mg-substituted hydroxyapatite/gelatin methacryloyl hydrogels encapsulated with PDA@DOX particles for bone tumor therapy and bone tissue regeneration

Supplementary File

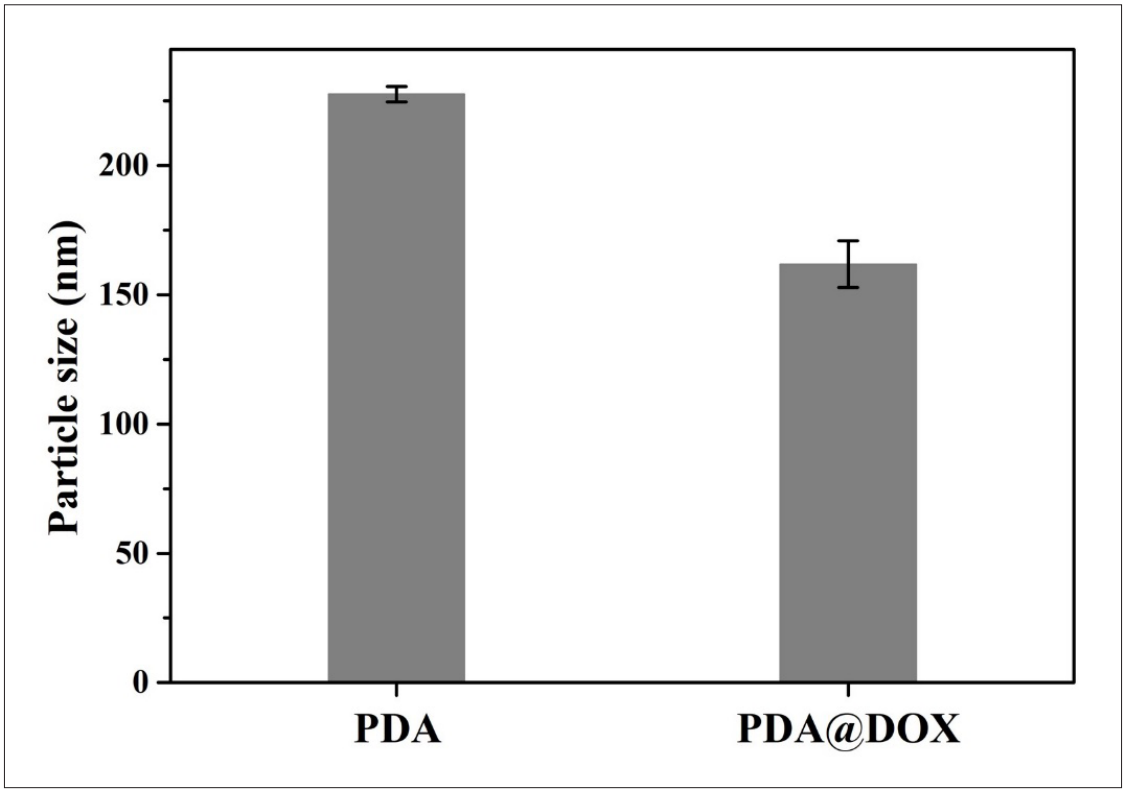

Figure S1. Diameter of PDA and PDA@DOX particles.

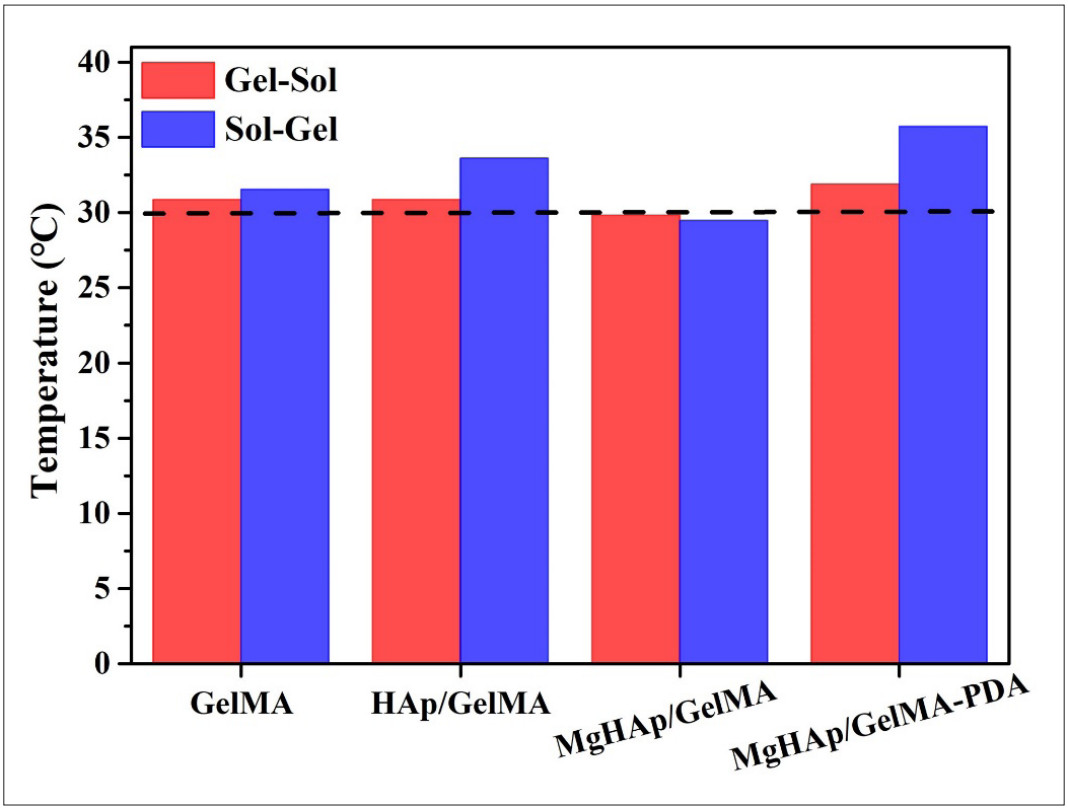

Figure S2. Sol-gel and gel-sol transition temperatures of GelMA, HAp/GelMA, MgHAp/GelMA, and MgHAp/GelMA-PDA inks.

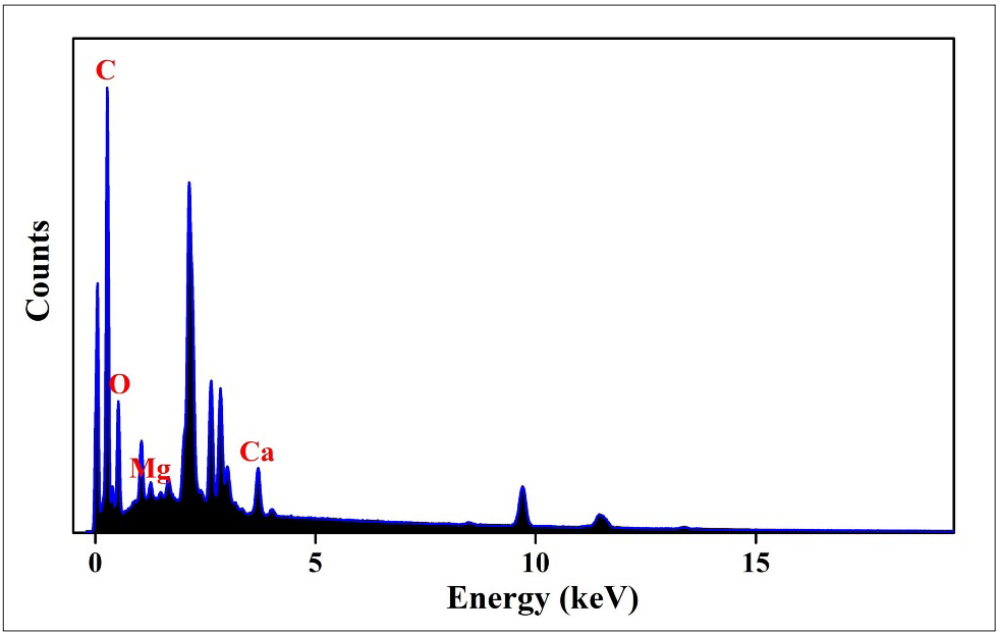

Figure S3. EDS pattern of 3D-printed MgHAp/GelMA-PDA hydrogel.

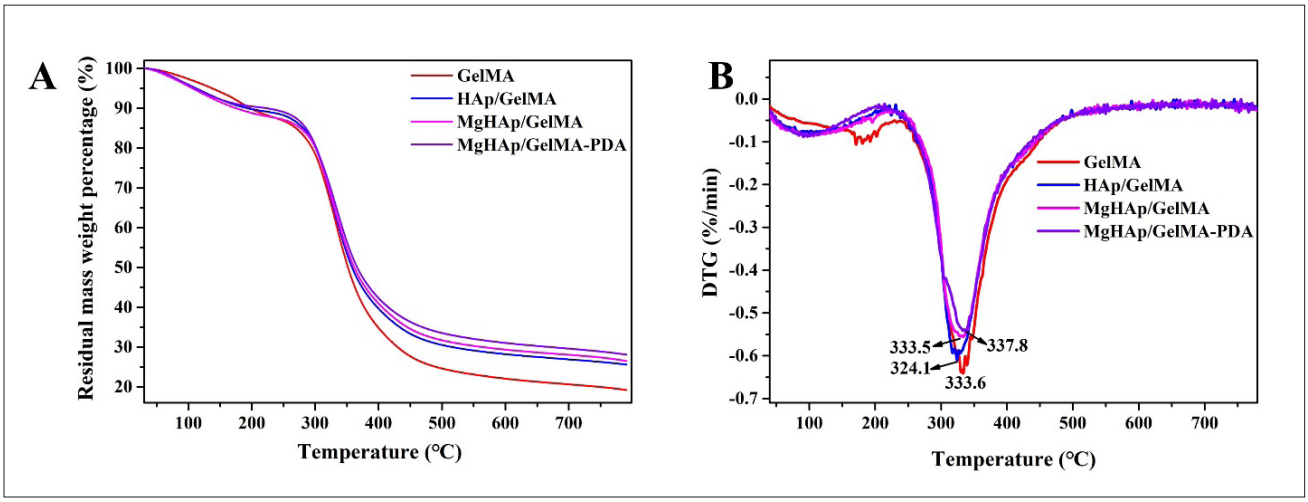

Figure S4. Thermogravimetric analysis (TGA) and derivative thermogravimetry (DTG) results of 3D-printed GelMA, HAp/GelMA, MgHAp/GelMA, and MgHAp/GelMA-PDA hydrogels.

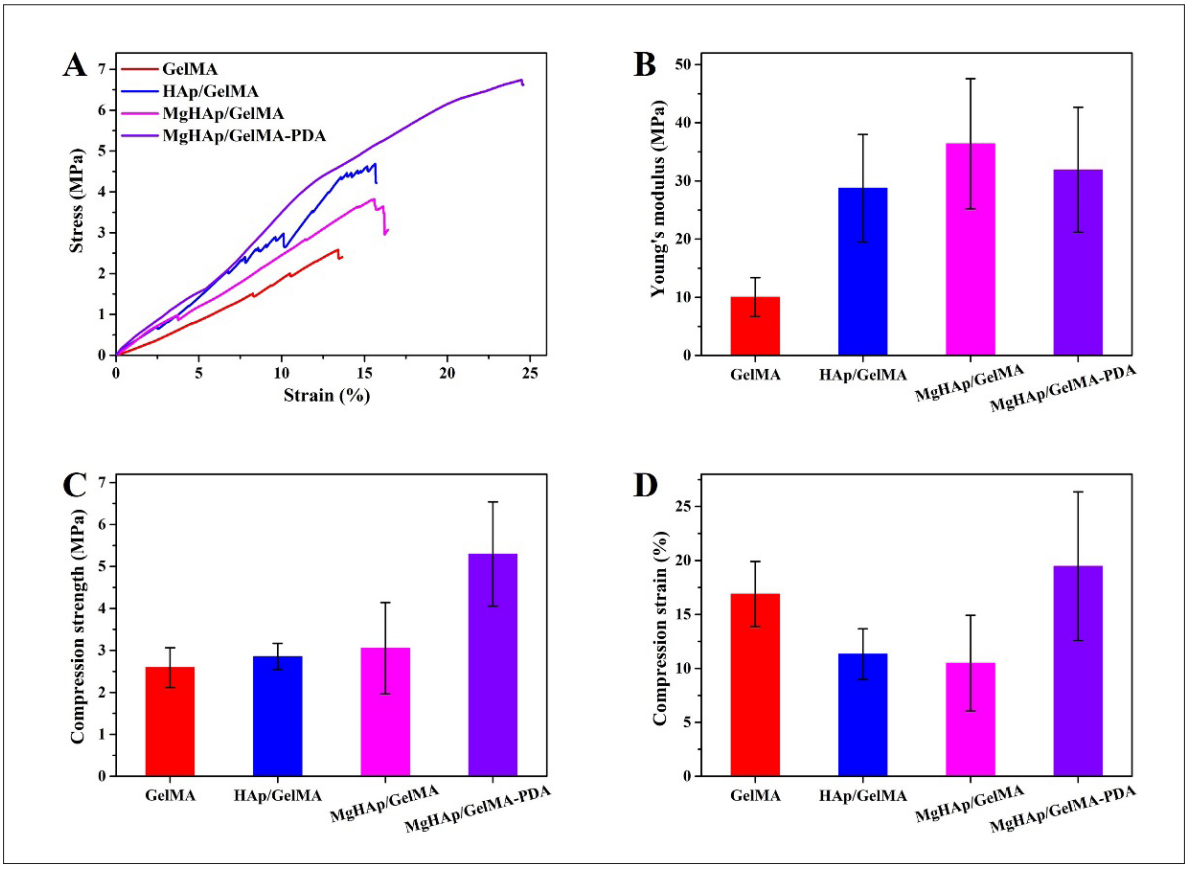

Figure S5. Mechanical properties of printed hydrogels in dry state. (A) Typical compression stress-strain curves, (B) Young's modulus, (C) compression strength, and (D) compression strain of 3D-printed GelMA, HAp/GelMA, MgHAp/GelMA, and MgHAp/GelMA-PDA hydrogels.

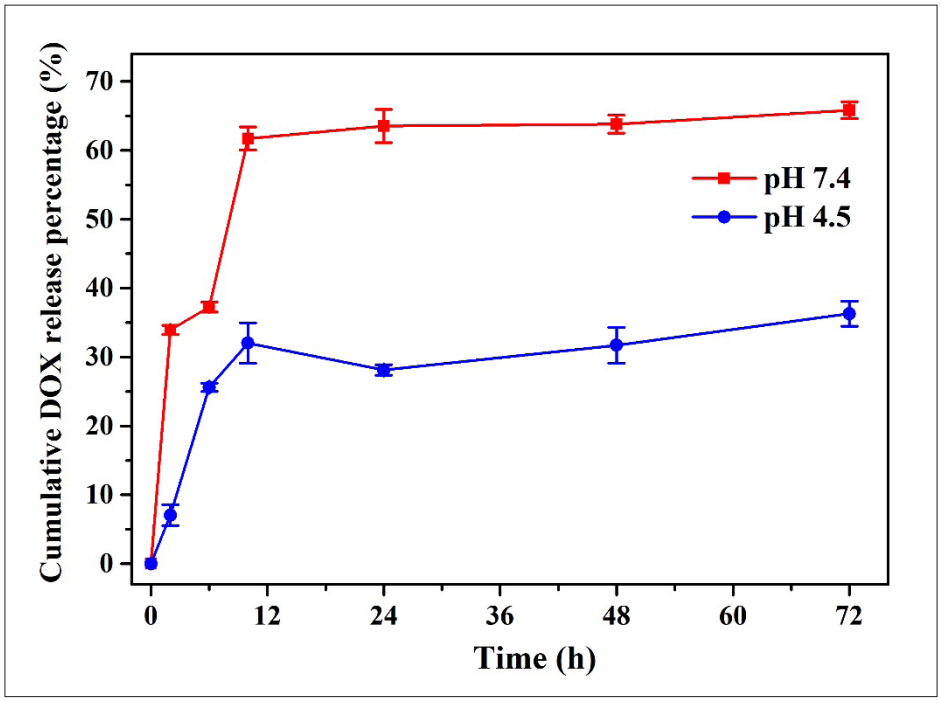

Figure S6. *In vitro* DOX release curves of PDA@DOX particles in pH 4.5 and pH 7.4 buffer solutions.

Table S1. Sequences of primers used in qRT-PCR experiment.

Genes	Primer sequences (5' to 3')
Ocn	Forward: CAAGCAGGAGGGCAATAAGGT
	Reverse: AGCAGGGTCAAGCTCACATAG
Col1	Forward: TGAACGTGGTGTACAAGGTC
	Reverse: CCATCTTTACCAGGAGAACCAT
Runx2	Forward: TTCAACGATCTGAGATTTGTGGG
	Reverse: GGATGAGGAATGCGCCCTA
Bmp2	Forward: AAGCGTCAAGCCAAACACAAACAG
	Reverse: CCAGTCATTCCACCCCACATCAC
Gapdh	Forward: GACATGCCGCCTGGAGAAAC
	Reverse: AGCCCAGGATGCCCTTTAGT