

RESEARCH ARTICLE

# Photocurable 3D-printed PMBG/TCP biphasic scaffold mimicking vasculature for bone regeneration

## Supplementary File

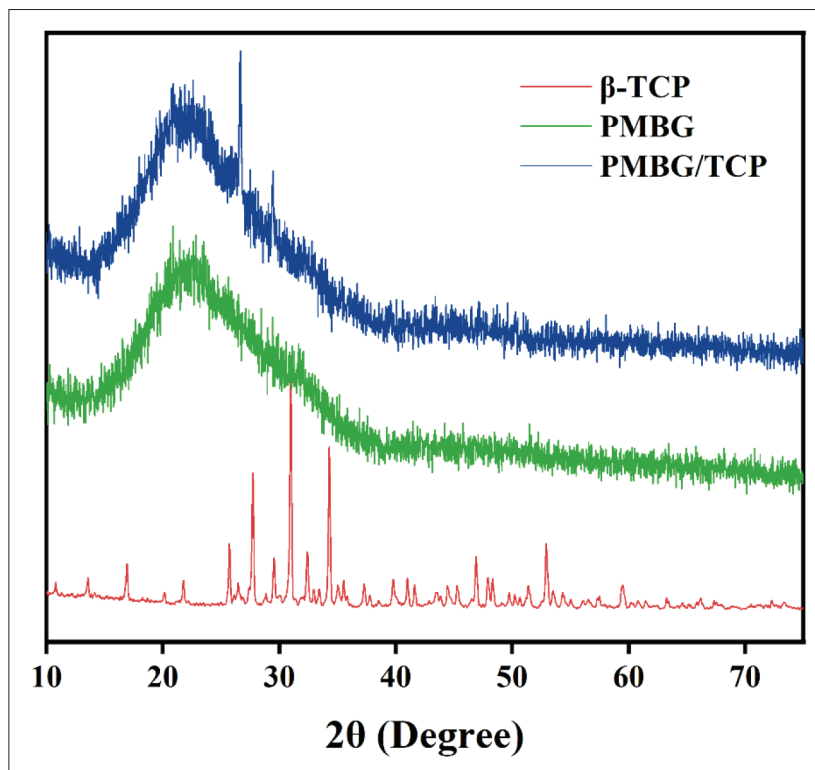


Figure S1. X-ray diffractometer patterns of PMBG, TCP, and PMBG/TCP.

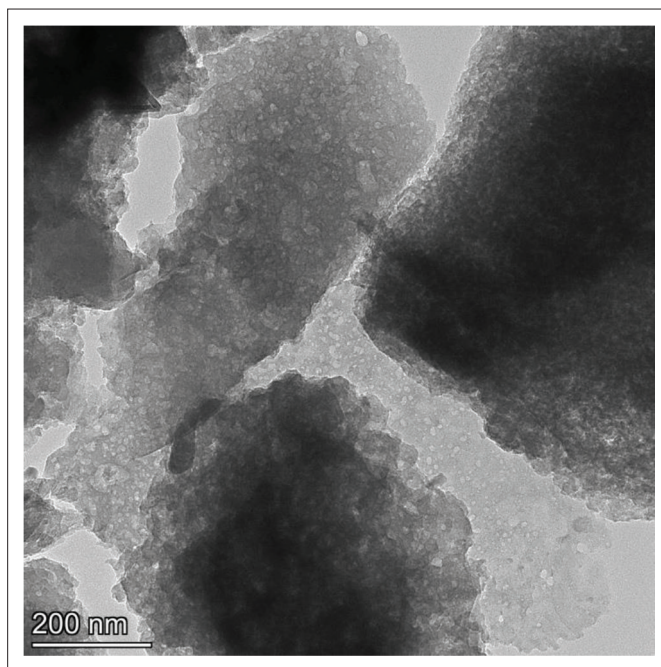


Figure S2. PMBG mesoporous structure observed by transmission electron microscopy.

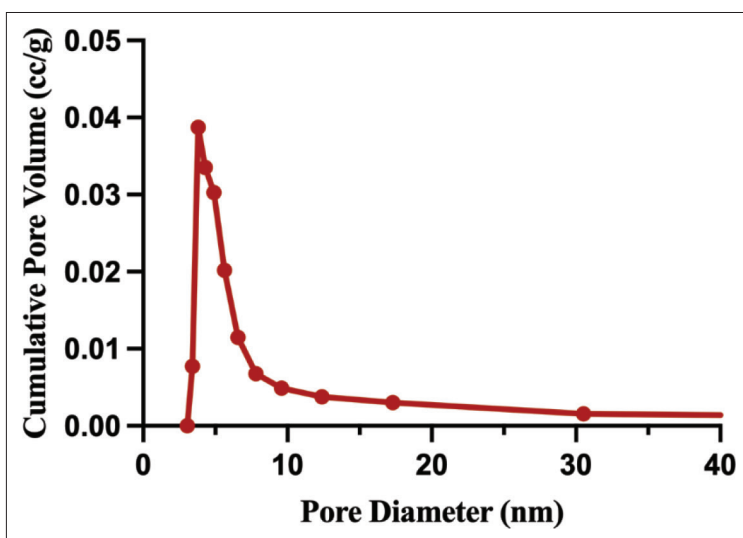


Figure S3. N2 adsorption-mesopore diameter distribution.

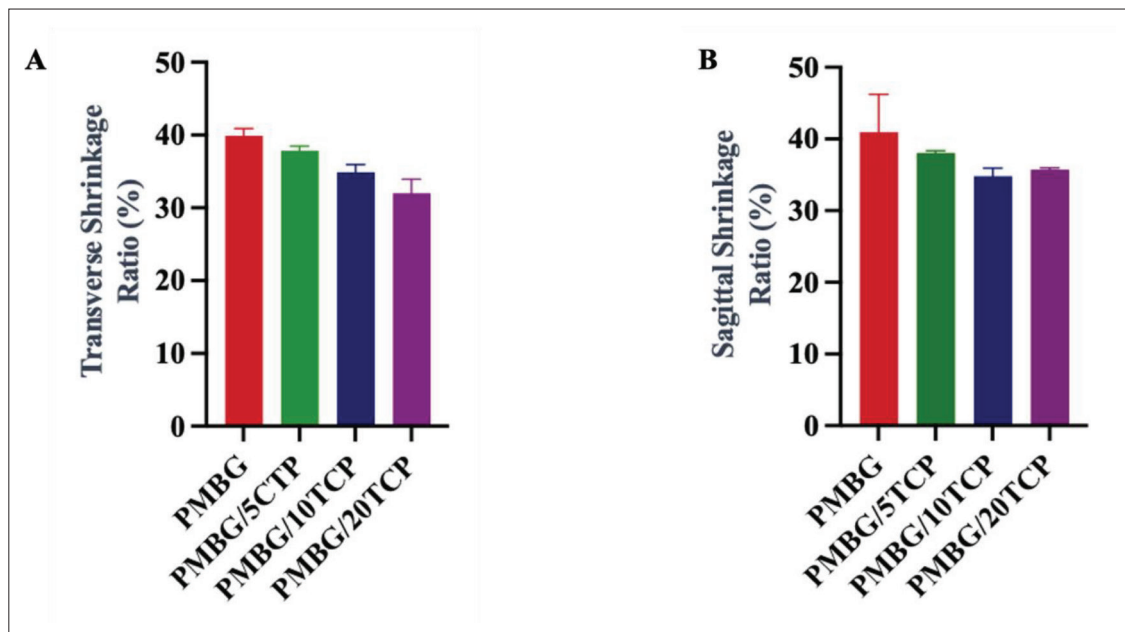


Figure S4. (A) Shrinkage rates in the transverse direction of each group of scaffolds. (B) Shrinkage rates in the sagittal plane of each group of scaffolds.

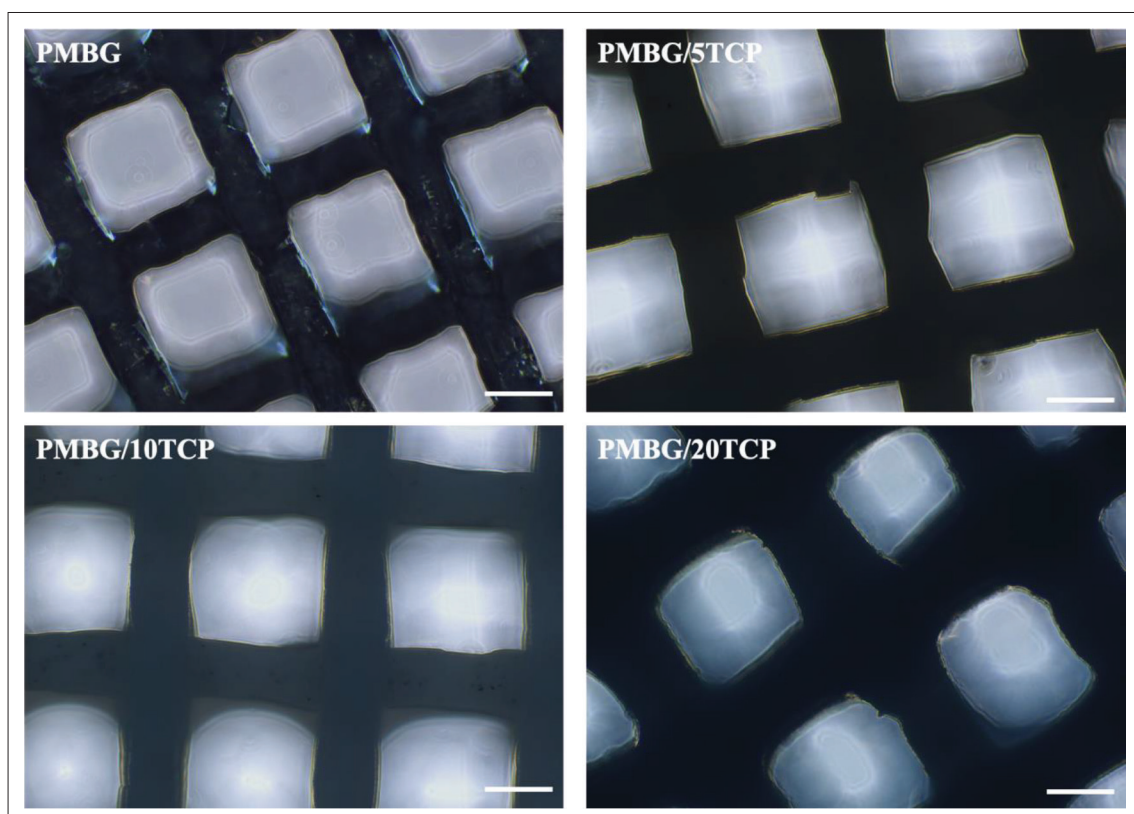
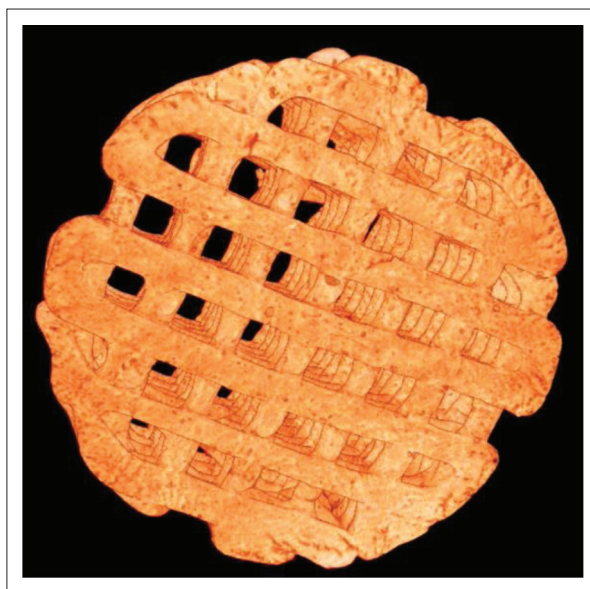


Figure S5. Scaffolds of each group under an optical microscope.



**Figure S6.** Three-dimensional imaging of PMBG/TCP scaffold using X-ray microscopy.

**Table S1. Primers used in this study.**

Primer	Sequence
RUNX2 Forward	5'-TTTAGGGGCGCATTCTCATC-3'
RUNX2 Reverse	5'-GGAAGTGGTGCAGAGTTCA-3'
OPN Forward	5'-GCCTGGAACATCAGAGC-3'
OPN Reverse	5'-GAAATGCGGAATTTTCAGATACC-3'
COL1 Forward	5'-CGAGTCACACCGGAACCTGG-3'
COL1 Reverse	5'-CCAATGTCCAAGGGAGCCAC-3'
$\beta$ -actin Forward	5'-CATCCGTAAGACCTCTATGCCAAC-3'
$\beta$ -actin Reverse	5'-ATGGAGCCACCGATCCACA-3'
FGF Forward	5'-AAGAGCGACCCACACGTC-3'
FGF Reverse	5'-CCCTTGATGGACACAACCTCC-3'
ANG Forward	5'-ATGCGCCTTATGCTAACAG-3'
ANG Reverse	5'-TTTAGATTGGAAGGGCCACA-3'
CD31 Forward	5'-ACTGCACAGCCTTCAACAGA-3'
CD31 Reverse	5'-TTTCTTCCATGGGGCAAG-3'
GAPDH Forward	5'-CAAGAGCACAAGAGGAAGAGAG-3'
GAPDH Reverse	5'-CTACATGGCAACTGTGAGGAG-3'

## Other files:

**Videoclip S1.** PMBG ultrafast photocuring.

**Videoclip S2.** Three-dimensional structure of PMBG/TCP scaffold.