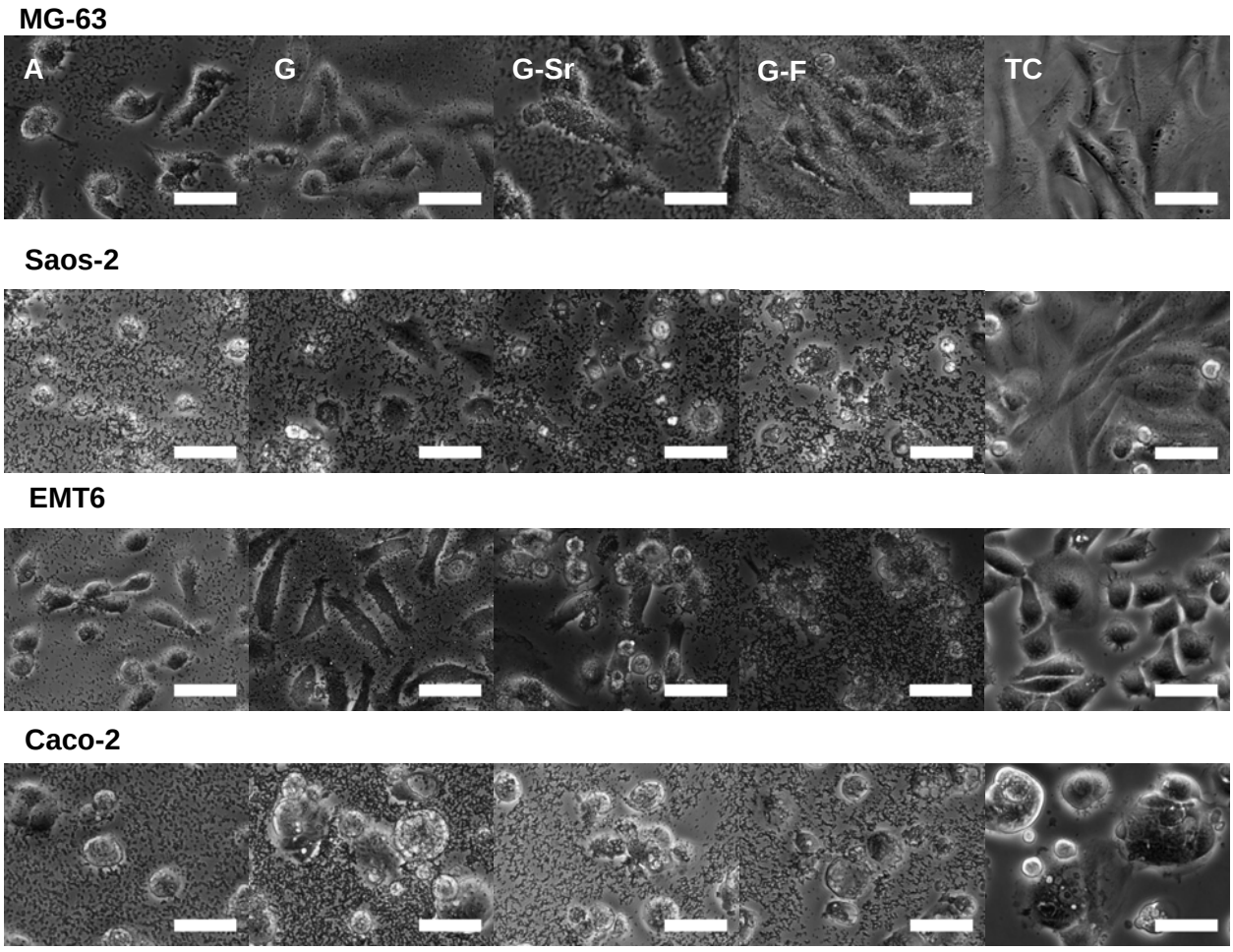
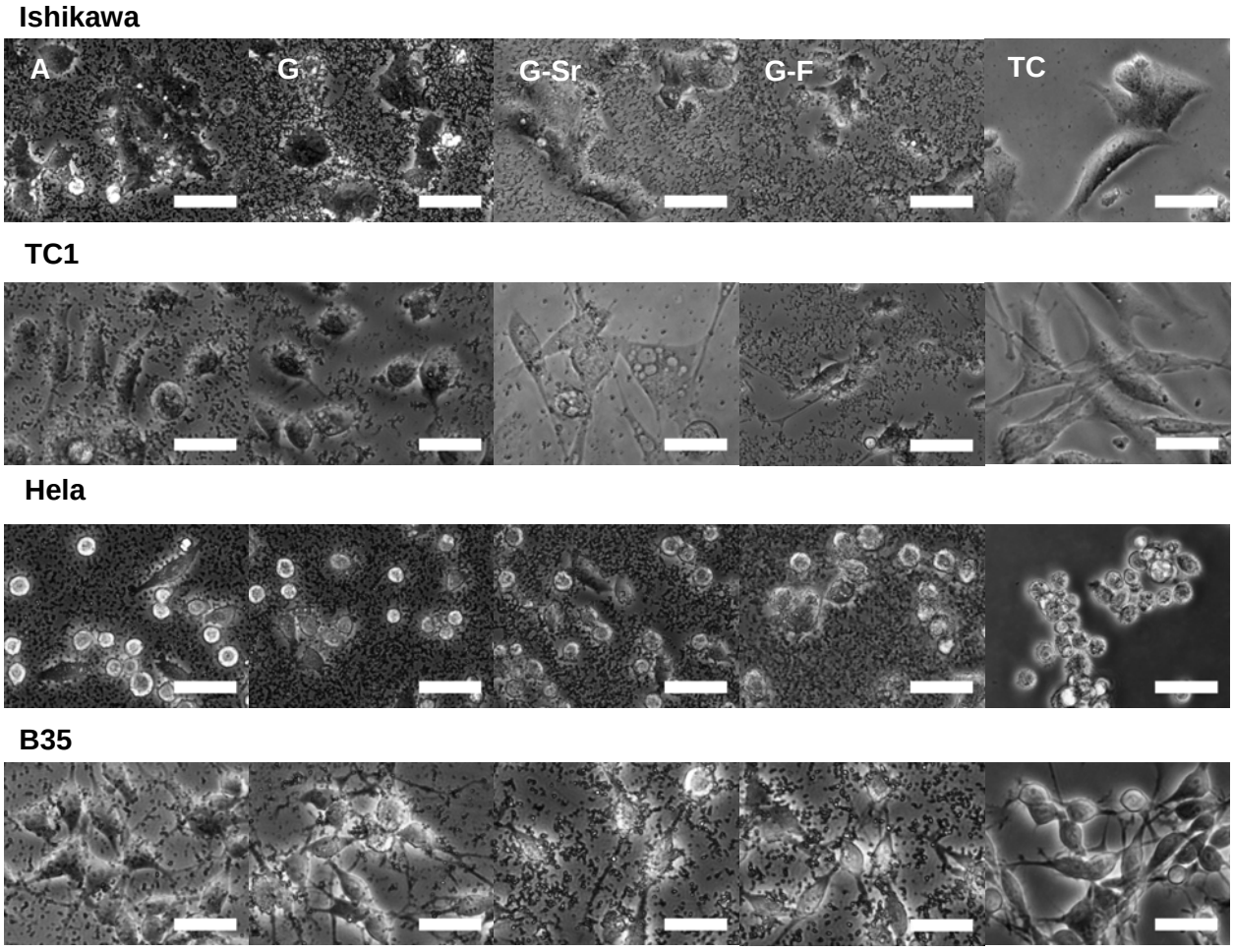
Table S1 Chemical composition of mineral nanocomposites formed after 24h mineralization as determined by semi-quantitative analysis of EDX spectra

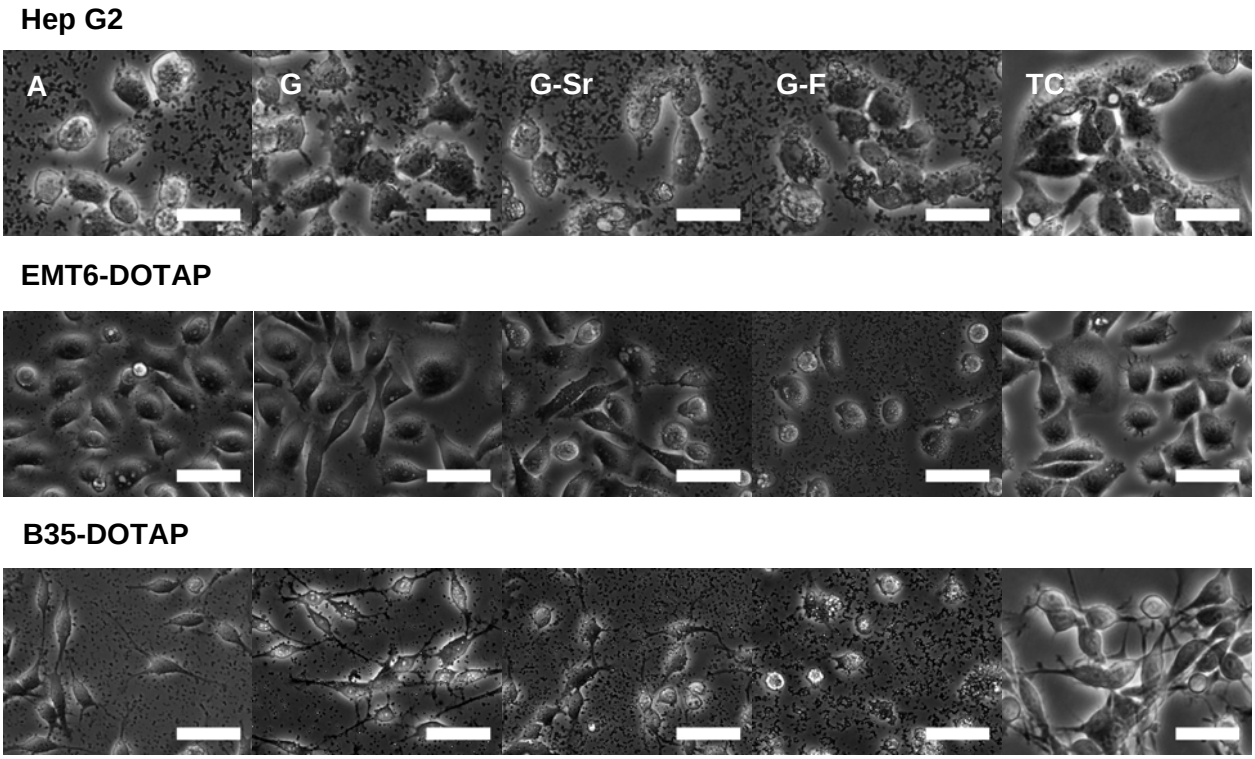
	Ca:P	**Mg:P**	**Sr:P**	**F:P**
A	1.55 ± 0.13	0.48 ± 0.10		
B	1.20 ± 0.32	0.28 ± 0.11		
G	1.83 ± 0.35			
H	0.79 ± 0.13	0.45 ± 0.12		
G-Sr	1.36 ± 0.38		0.48 ± 0.12	
G-F	1.68 ± 0.34			1.17 ± 0.40



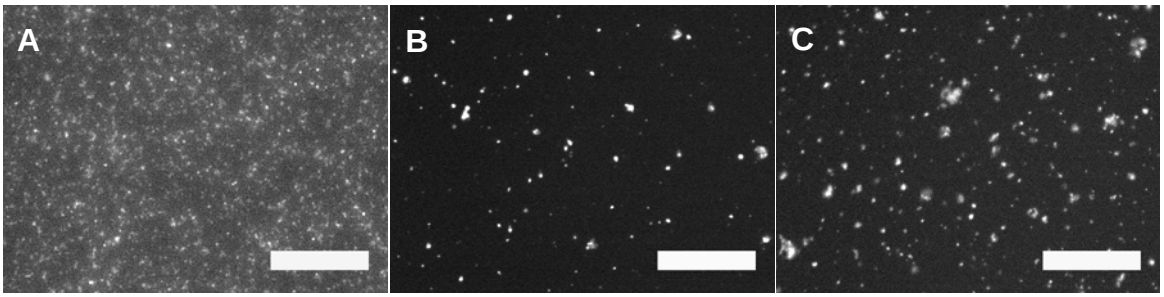
Supplemental Fig. S1



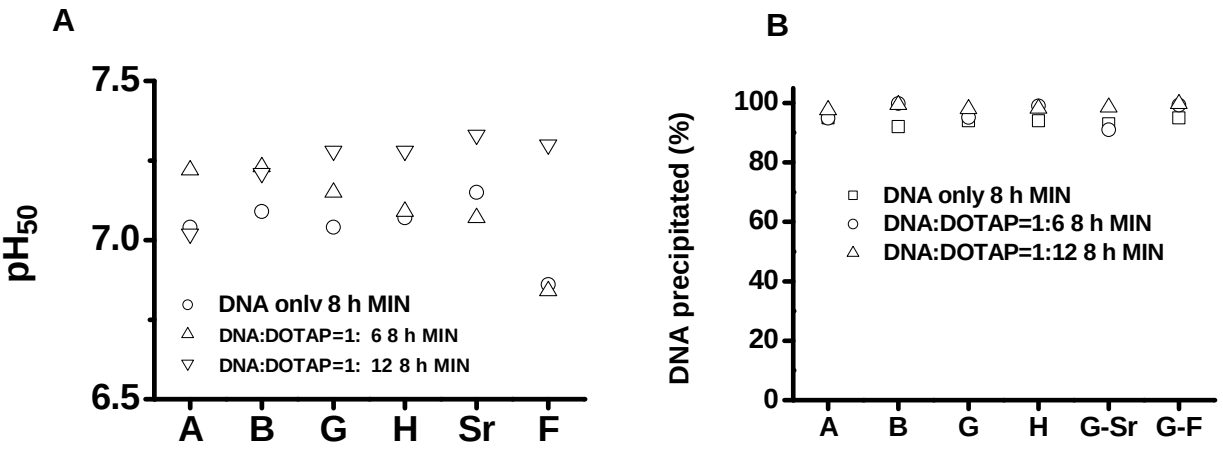
Supplementary Fig. S1 (continued)



Supplemental Fig. S1 Growth of cells on thin films of DNA/CaP nanocomposites. Cells were cultured on surfaces coated with nanocomposites formed from the indicated mineral formulation for 12 h and imaged with bright-field microscopy. Formulations B and H are not shown as nanocomposites are similar in morphology to formulation A. Cell plated on non-coated cell-culture surface (TC) are shown for comparison. The scale bar is 50 μm.



Supplemental Fig. S2 Fluorescent microscopy images of DNA-doped nanocomposites. a, Fluorescein-labeled DNA was co-precipitated with mineral formulation A for 8h and imaged. Fluorescein-labeled DNA was first complexed with DOTAP at a DNA:DOTAP ratio (w/w) of **b,** 1:6 or **c,** 1:12, mineralized for 8h, and imaged. The scale bar is 50 μm.



Supplemental Fig. S3 The pH_{50} and DNA precipitation efficiency of DNA/DOTAP-doped nanocomposites. a, The pH sensitivity of modified DNA/DOTAP-doped nanocomposites. The DNA was complexed with DOTAP at DNA:DOTAP ratios (w/w) of 1:6 and 1:12 (MIN: mineralization). **b,** The DNA-DOTAP precipitation efficiency for different DNA:DOTAP ratios (w/w) at 8 h.