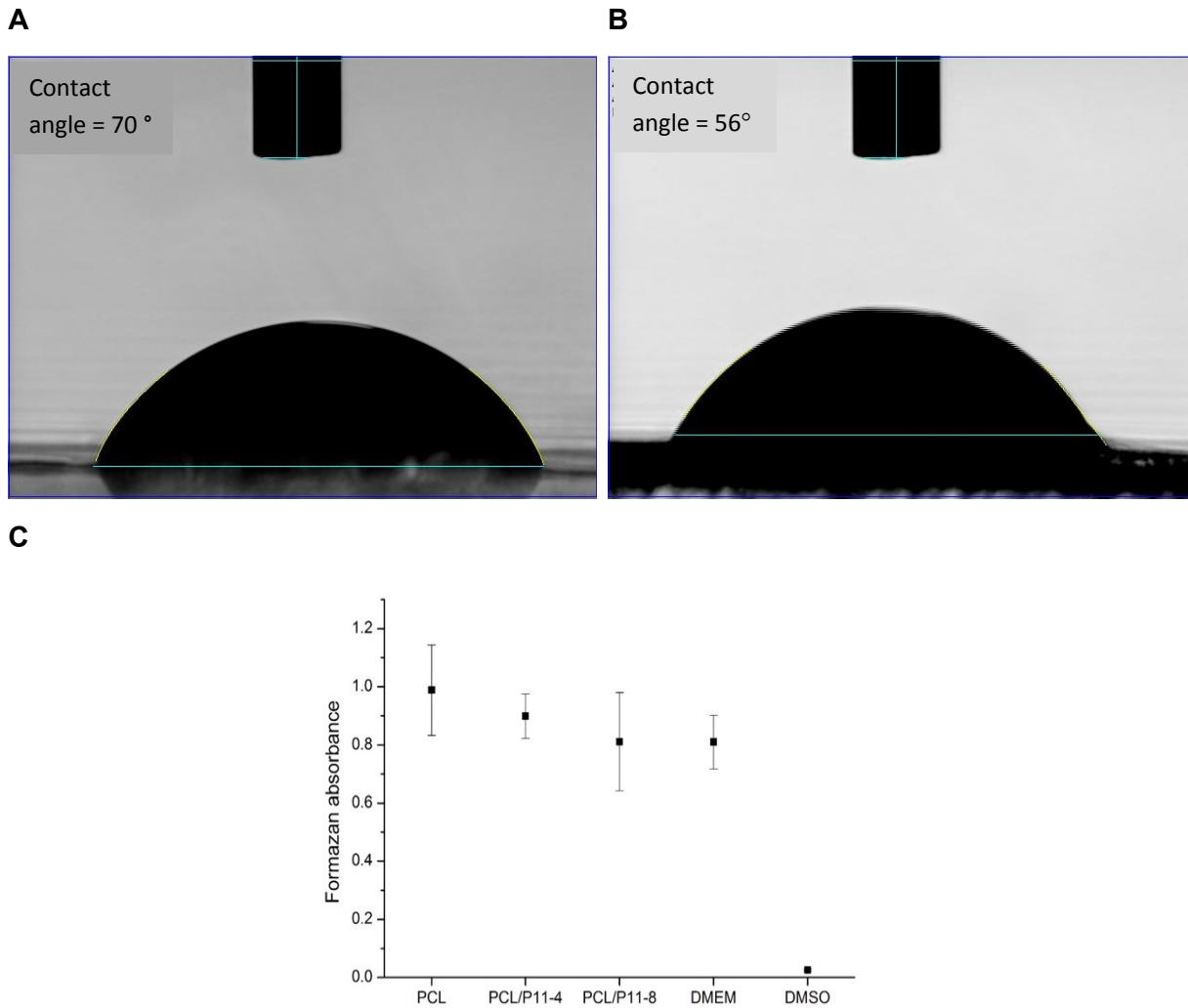


Supplementary information

SI Table 1. Reagents for preparation of SBF in the required order of dissolution.

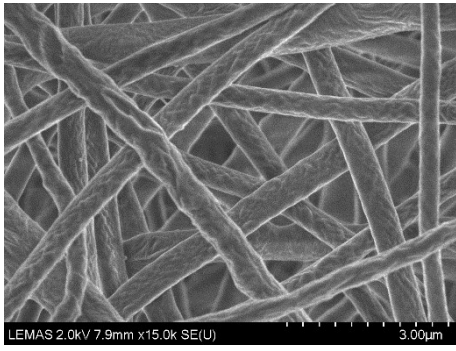
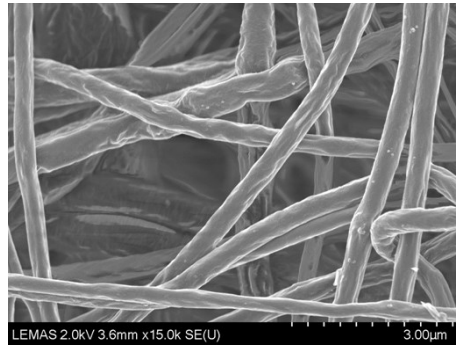
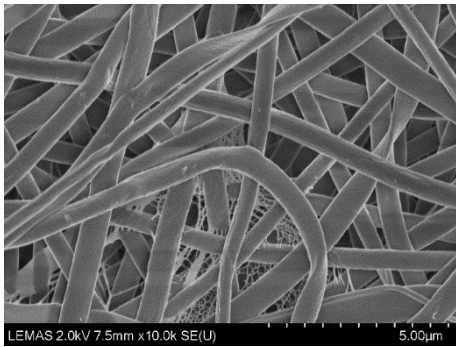
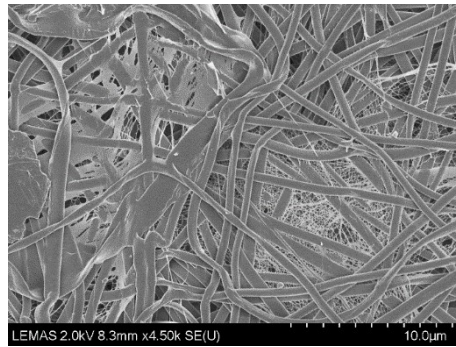
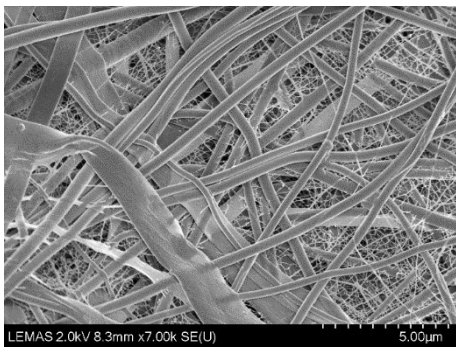
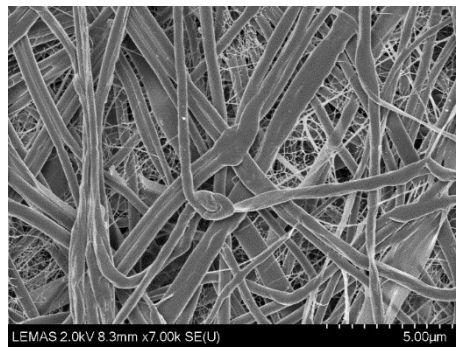
Order	Reagent	Amount	Purity (%)	Formula weight (g/mol)
1	Sodium chloride (NaCl)	8.03	99.5	58.44
2	Sodium hydrogen carbonate (NaHCO ₃)	0.35	99.5	84.00
3	Potassium chloride (KCl)	0.25	99.5	74.55
4	Di-potassium hydrogen phosphate trihydrate (K ₂ HPO ₄ · 3H ₂ O)	0.23	99	228.22
5	Magnesium chloride hexahydrate (MgCl ₂ · 6H ₂ O)	0.31	98	203.30
6	Hydrochloric acid solution (HCl) = 1 mol/L	39 (mL)	-	-
7	Calcium chloride (CaCl ₂)	0.29	95	110.98
8	Sodium sulphate (Na ₂ SO ₄)	0.07	99	142.04
9	Tris- hydroxymethyl aminomethane ((HOCH ₂) ₃ CNH ₂)	6.11	99	121.13



SI Figure 1. Initial contact angle of deionised water on electrospun scaffolds: (A-B) sample 2 and 3; PCL with 10 and 20 mg mL⁻¹ P₁₁₋₄ respectively, showing increase in hydrophilicity with the addition of peptide. (C) OD absorption of fibrous samples 4 and 5 (PCL with 40 mg mL⁻¹ of P₁₁₋₄ and P₁₁₋₈ respectively) and control samples at 570-650 nm correlated to the number of viable cells.

SI Table 2. Cell viability percentage of samples 4 and 5 (PCL with 40 mg mL⁻¹ of P₁₁₋₄ and P₁₁₋₈ respectively) calculated based on OD absorption data. Blank is the the cell-free DMEM sample.

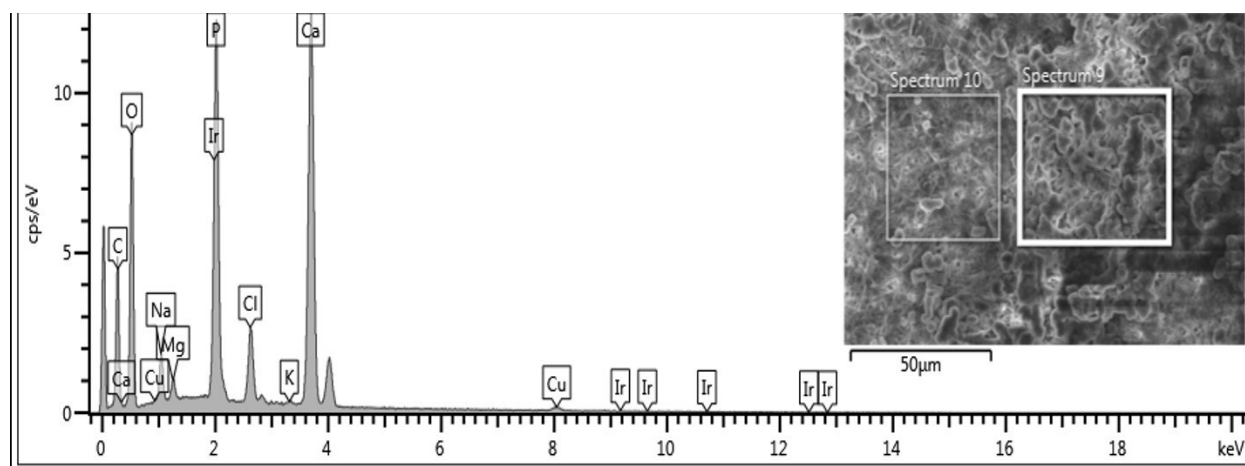
Sample	Mean OD (6 repetition)	Cell Viability % Based On Control 1	Cell Viability % Based On Control 2
PCL/P11-4	1.21	100.12	83.67
PCL/P11-8	1.12	92.08	76.95
Blank	0.05	-	-
PCL (control 1)	1.21	-	-
Cell only (control 2)	1.43	-	-
Negative control	0.10	-	-

A**B****C****D****E****F**

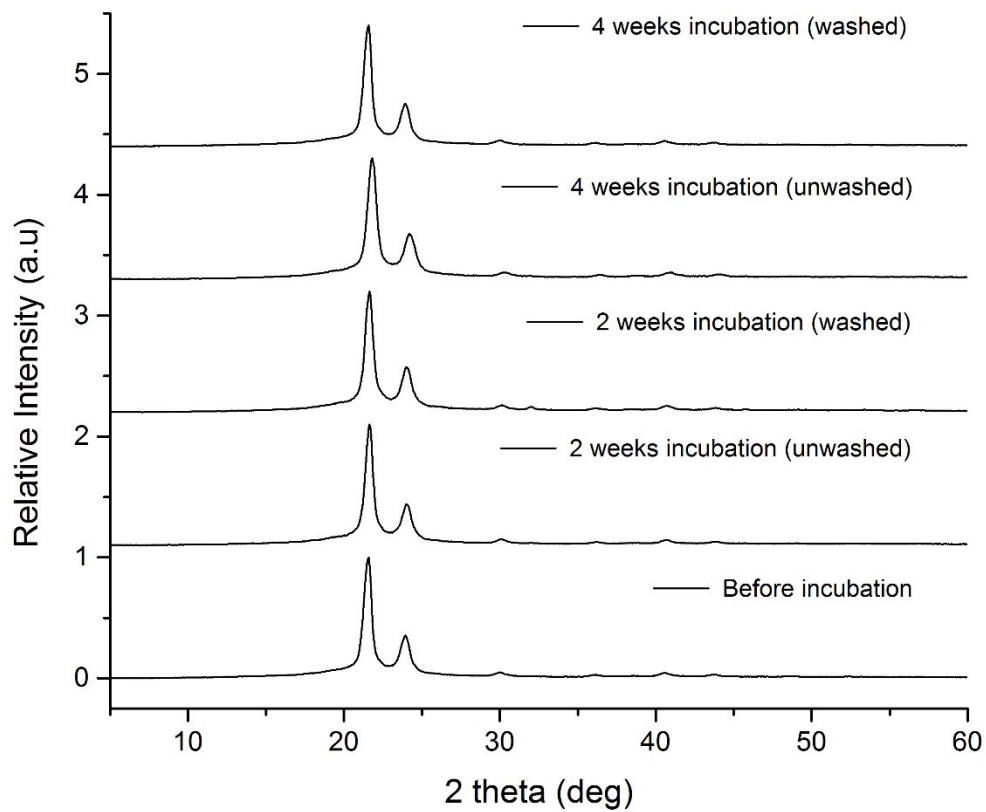
SI Figure 2. SEM micrographs of electrospun scaffolds after 168 hours incubation of (A-B) PCL at pH 3.5 and 10.5, (C-D) PCL/P₁₁-4 (40 mg mL⁻¹) at pH 3.5 and 10.5, and (E-F) PCL/P₁₁-8 (40 mg mL⁻¹) at pH 3.5 and 10.5.

SI Table 3. An example of elemental analysis of chemical elements in the P₁₁-4-supplemented scaffolds (with peptide concentration of 40 mg mL⁻¹) after immersion in SBF for 2 weeks obtained by SEM/EDX showing calcium and phosphorous atomic contents.

Element	Atomic Content (%)
C	37.07
O	40.54
Na	1.40
Mg	0.44
P	6.85
Cl	1.61
K	0.09
Ca	11.80
Cu	0.02
Ir	0.19
Total:	100.00



SI Figure 3. EDX spectra of P₁₁-4-supplemented scaffold (with peptide concentration of 40 mg mL⁻¹) immersed in SBF for 2 weeks showing calcium and phosphorous peaks.



SI Figure 4. X-ray diffraction patterns of PCL control scaffolds before and after 2 and 4 weeks incubation in SBF (both washed and unwashed samples) showing no hydroxyapatite formation.