materials

MDPI

Supplementary Materials

3D Printing of Polycaprolactone–Polyaniline Electroactive Scaffolds for Bone Tissue Engineering

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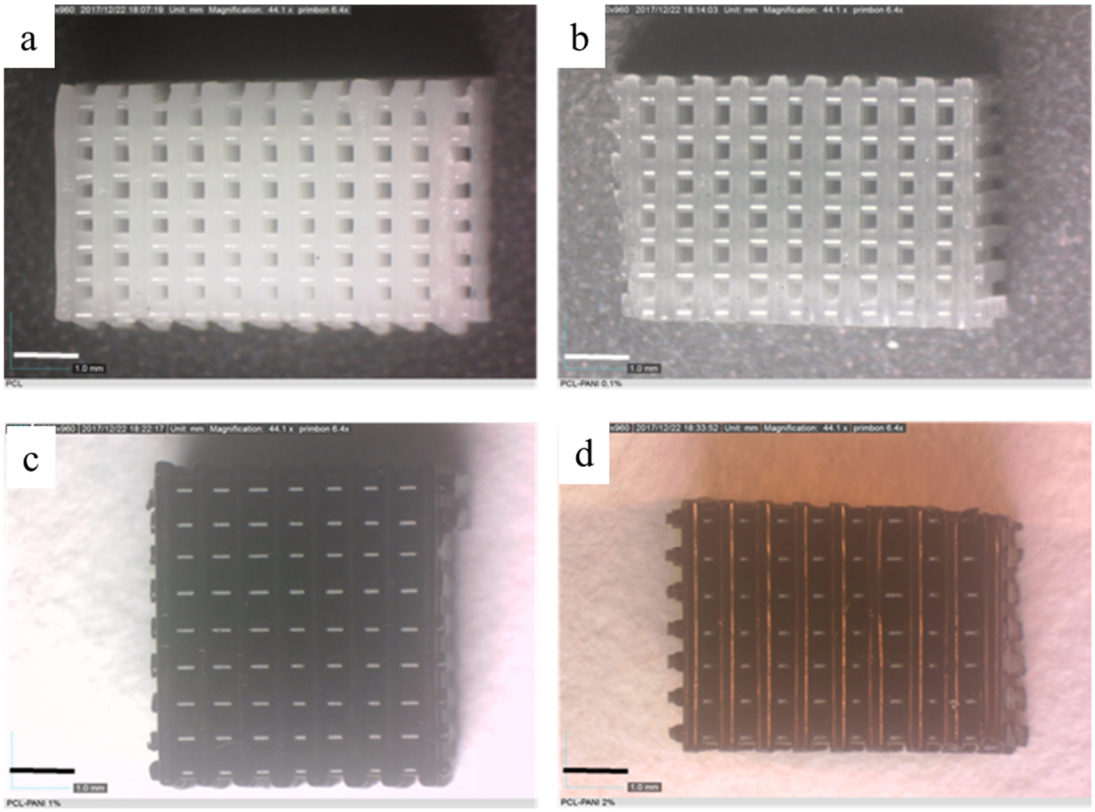

Figure S1. Optical microscopy images of the 3D printed PCL/PANI scaffolds: **a**) PCL, **b**) 0.1%, **c**) 1.0% and **d**) 2.0% wt. PANI (scale bar = 1 mm).

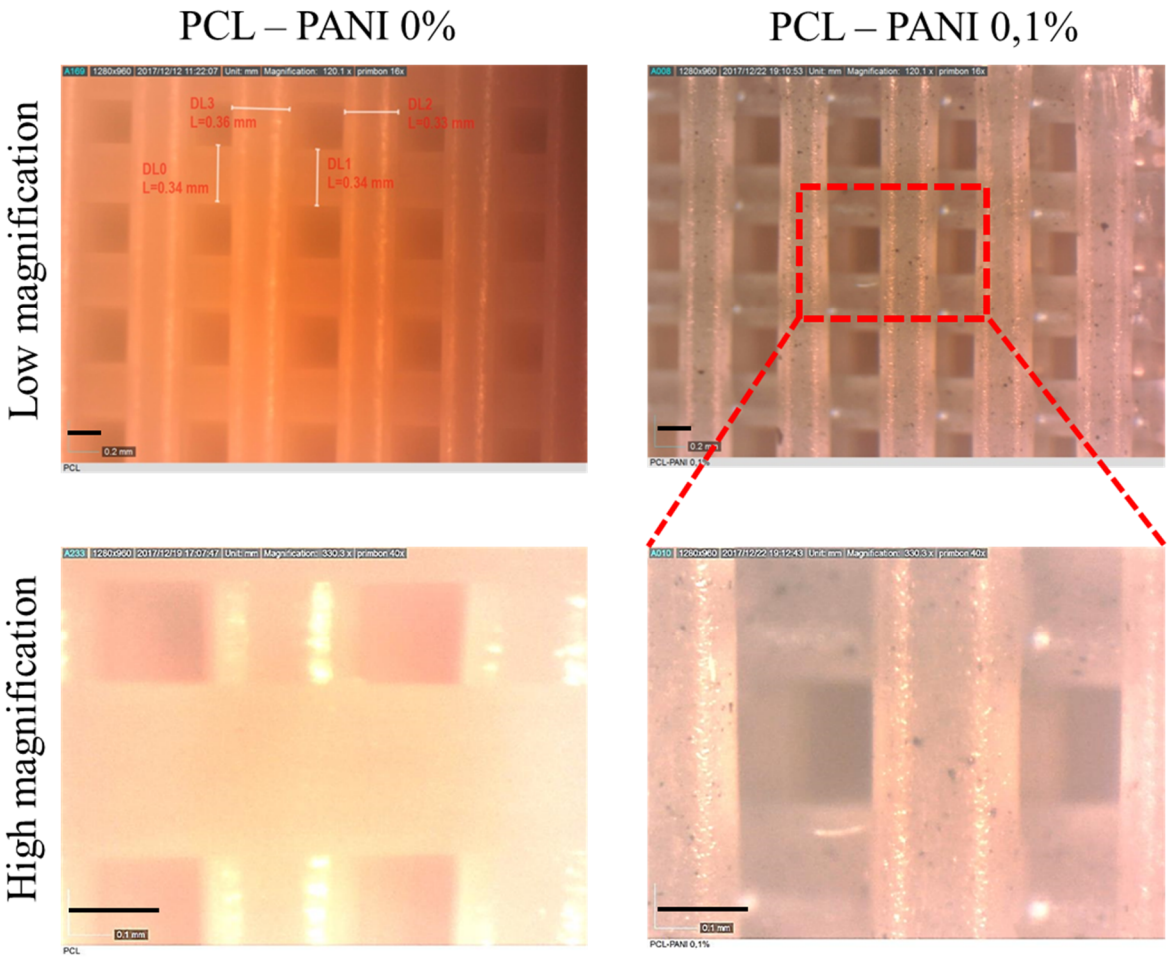

Figure S2. Optical microscopy of scaffold with 0 and 0.1 wt.% PANI scaffold highlighting the observable inclusion of the PANI microparticles within the PCL matrix. Scale bar = 0.2 mm.

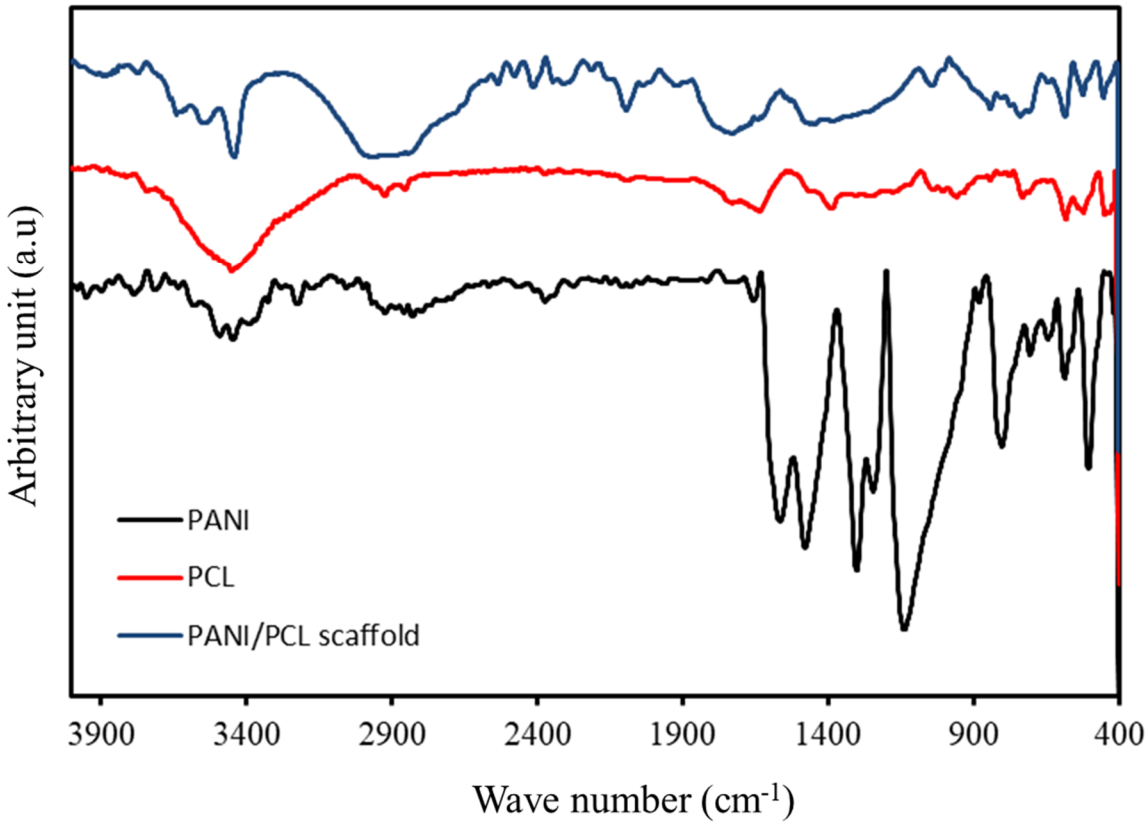

Figure S3. FTIR spectra of PANI, PCL and PANI/PCL scaffold. Suggesting that no new bonds are formed between PCL-PANI in the composite scaffold; this implies that only physical blending of PANI and PCL occurred in the PCL/PANI scaffold.

Table S1. pH observation of phosphate buffered saline solution after immersion of scaffolds as a function of immersion time (n = 3).

Incubation time (days)	Samples			
	PCL-PANI 0%	PCL-PANI 0.1%	PCL-PANI 1.0%	PCL-PANI 2.0%
0	7.45 ± 0.02	7.45 ± 0.01	7.45 ± 0.01	7.45 ± 0.01
1	7.45 ± 0.01	7.45 ± 0.02	7.45 ± 0.02	7.45 ± 0.01
3	7.44 ± 0.01	7.44 ± 0.01	7.44 ± 0.01	7.44 ± 0.02
5	7.44 ± 0.01	7.44 ± 0.01	7.44 ± 0.01	7.44 ± 0.01
7	7.34 ± 0.01	7.35 ± 0.01	7.34 ± 0.01	7.33 ± 0.01
9	7.34 ± 0.01	7.36 ± 0.01	7.31± 0.02	7.32 ± 0.02
11	7.33 ± 0.02	7.34 ± 0.01	7.31 ± 0.01	7.30 ± 0.01
14	7.31 ± 0.01	7.33 ± 0.03	7.28 ± 0.01	7.27 ± 0.01

Table S2. Scaffold weight loss during incubation in PBS solution for up to 15 days (n = 3).

Sample	Remaining mass of scaffold (%) as incubation time (days)					
	0	3	6	9	12	15

PCL-PANI 0.0%	100.00 ± 0.23	99.92 ± 0.08	99.84 ± 0.16	99.23 ± 0.19	99.23 ± 0.25	98.96 ± 0.10
PCL-PANI 0.1%	100.00 ± 0.13	99.56 ± 0.18	99.47 ± 0.24	99.29 ± 0.32	99.35 ± 0.22	98.99 ± 0.22
PCL-PANI 1.0%	100.00 ± 0.24	99.66 ± 0.29	99.70 ± 0.35	99.16 ± 0.17	98.65 ± 0.34	98.82 ± 0.29
PCL-PANI 2.0%	100.00 ± 0.25	99.68 ± 0.22	99.78 ± 0.20	99.39 ± 0.23	99.39 ± 0.23	98.80 ± 0.17

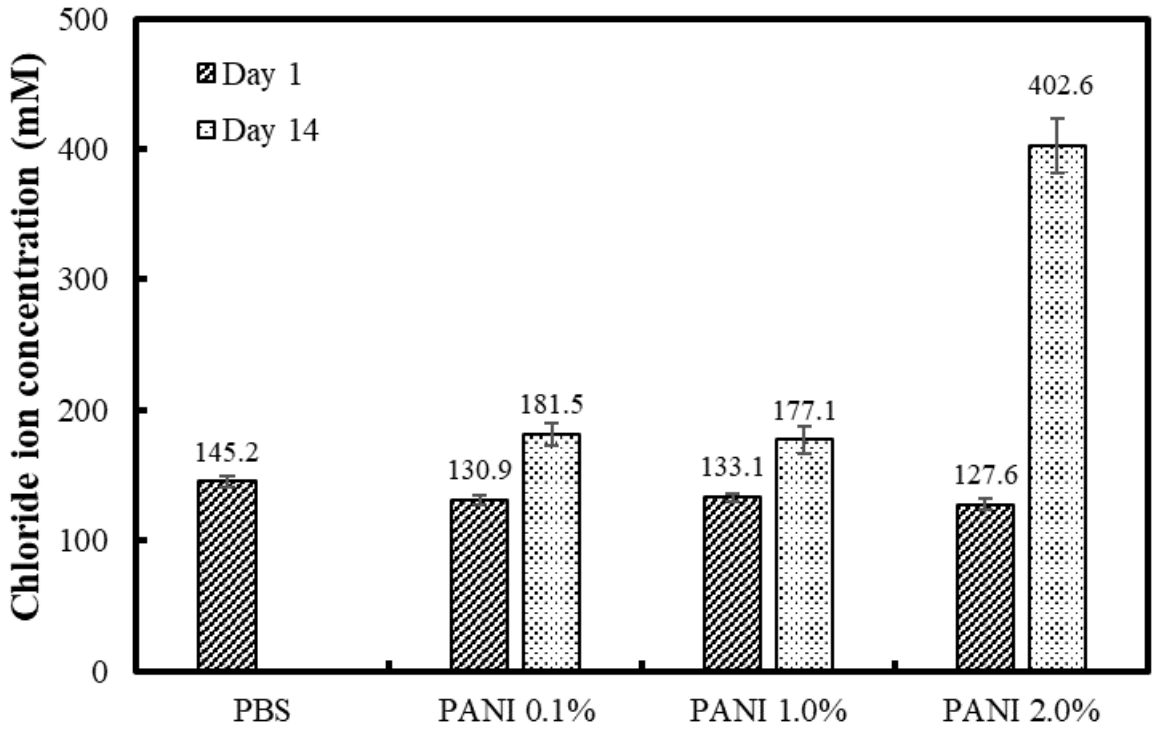

Figure S4. Determination of chloride ion in phosphate buffered saline (PBS) solution after immersion of scaffolds for 1 and 14 days (n = 3).