

Figure S1 (a) Synthesis of CSD, (b)  $^1\text{H}$  NMR spectra of CS, dopamine and CSD, respectively.

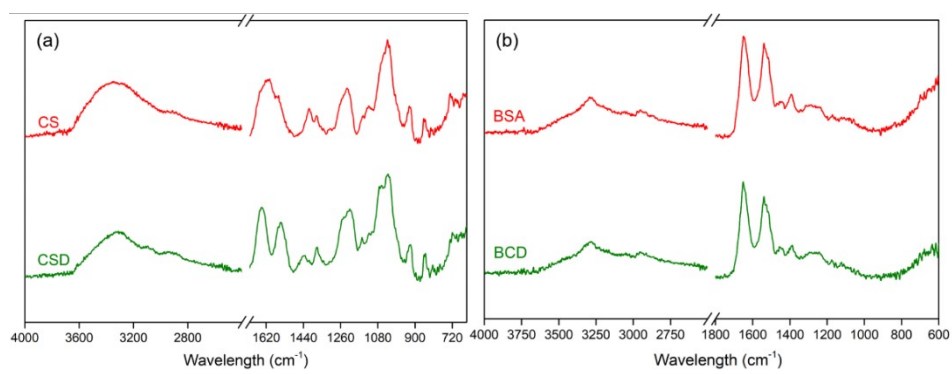


Figure S2 ATR-FTIR spectra of (a) CS, CSD and (b) BSA, BCD, respectively.

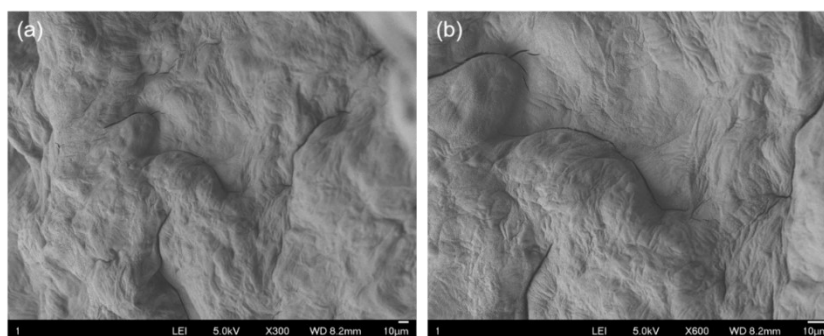


Figure S3 SEM images of TISSEEL-dLhCG under (a)  $\times 300$  and (b)  $\times 600$  magnification, respectively.

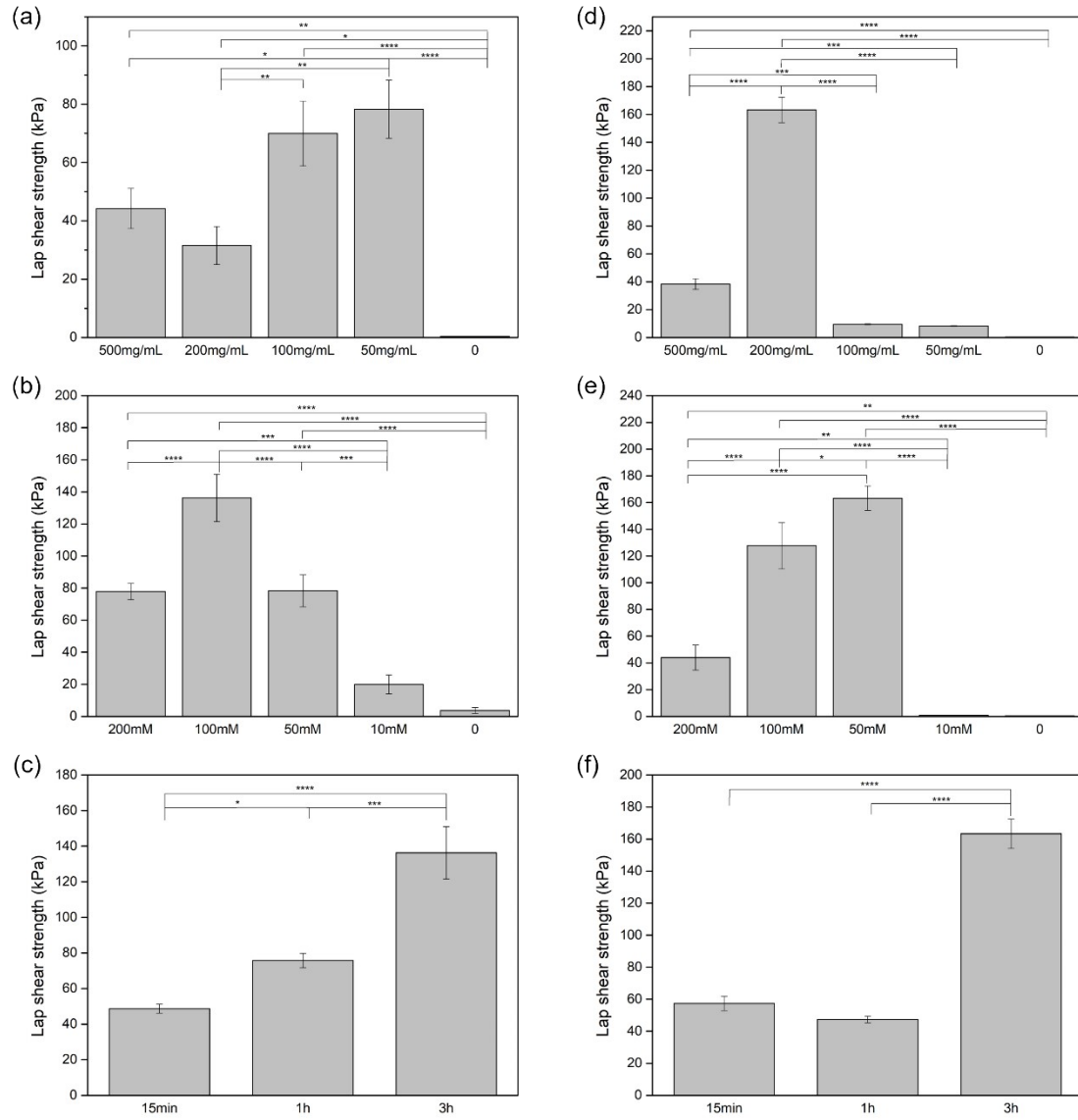


Figure S4 Lap shear strength between two slices of cartilage glued by BCD adhesive with different (a) BCD concentration, (b)  $\text{Fe}^{3+}$  concentration and (c) incubation time or CSD adhesive with different (d) CSD concentration, (e)  $\text{Fe}^{3+}$  concentration and (f) incubation time (\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ ).