

Supporting information

A Composite Hydrogel with High Mechanical Strength, Fluorescence, and Degradable Behavior for Bone Tissue Engineering

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Table 1. The mechanical properties of the CDs/HA/PVA SN hydrogels with various proportions.

Samples	Mass ratios of CDs to PVA (wt%)	Mass ratios of HA to PVA	Young's modulus (kPa)	Compression strength at a maximum strain of 85% (kPa)
CDs _{0.0} /HA _{0.6} /PVA	0.0	0.6	0.43±0.028	390.0±101.56
CDs _{1.5} /HA _{0.6} /PVA	1.5	0.6	0.62±0.025	470.2±36.26
CDs _{3.0} /HA _{0.6} /PVA	3.0	0.6	0.81±0.058	710.6±74.74
CDs _{4.5} /HA _{0.6} /PVA	4.5	0.6	0.18±0.031	220.7±102.31
CDs _{6.0} /HA _{0.6} /PVA	6.0	0.6	0.15±0.018	150.5±52.38
CDs _{3.0} /HA _{0.0} /PVA	3.0	0.0	0.43±0.043	435.7±8.13
CDs _{3.0} /HA _{0.2} /PVA	3.0	0.2	0.52±0.038	570.8±162.44
CDs _{3.0} /HA _{0.4} /PVA	3.0	0.4	0.32±0.006	610.7±44.60
CDs _{3.0} /HA _{0.6} /PVA	3.0	0.6	0.26±0.016	409.4±239.70
CDs _{3.0} /HA _{0.8} /PVA	3.0	0.8	0.25±0.017	330.6±64.54

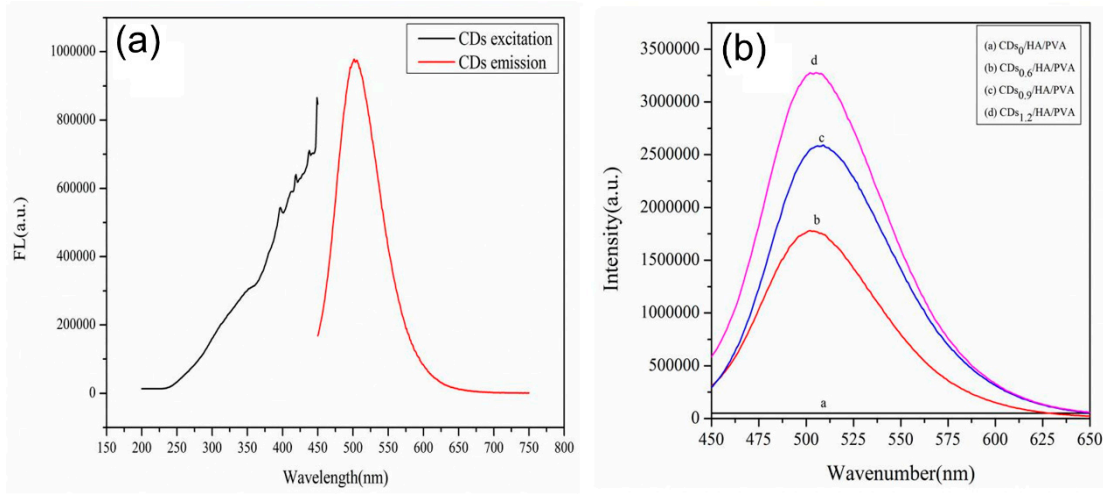


Figure S1. (a) the fluorescence excitation and emission spectroscopy of the as-prepared CDs and (b) fluorescence emission spectroscopy of the CDs/HA_{0.6}/PVA SN hydrogels with mass ratios of CDs to PVA at 0.0%, 0.6%, 0.9% and 1.2%, respectively ($\lambda_{\text{exc}}=300 \text{ nm}$).