

Supporting Information to

Greener and more mechanically robust 3D acrylate composites by adding tannin

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Table S1. Composition of the acrylate-tannin samples

Formulation	T-0	T-5	T-10	T-15	T-20	T-25
CN154 ^a (wt.%)	39.9	37.9	35.9	33.9	31.9	29.9
PETA ^b (wt.%)	39.9	37.9	35.9	33.9	31.9	29.9
HDDA ^c (wt.%)	19.9	18.9	17.9	16.9	15.9	14.9
BAPO ^d (wt.%)	0.3	0.3	0.3	0.3	0.3	0.3
Tannin (wt.%)	-	5	10	15	20	25

^a acrylate oligomer; ^b pentaerythritol tetraacrylate; ^c hexanediol diacrylate; ^d bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide

Table S2. Estimated working curves parameters.

Sample	D_p (μm)	E_c (mJ/cm^2)
T-0	339	17
T-5	322	67
T-10	279	94
T-15	244	159
T-20	137	155
T-25	127	151

Table S3. Char yield at 800 °C, and viscoelastic properties of acrylate-tannin composites.

Sample	Char yield (%)	E' at 25 °C (MPa)	T_g (°C)
T-0	11.8	211.1	128
T-5	14.6	428.9	126
T-10	15.2	489.8	116
T-15	17.3	538.6	108
T-20	21	584.9	107
T-25	21.7	639.9	103

Table S4. Mechanical parameters of acrylate-tannin composites at room temperature.

Sample	Tensile strain at break (%)	Tensile stress at break (MPa)	Young's modulus (MPa)
T-0	0.78 ± 0.08	6.5 ± 1.5	1225 ± 282
T-5	1.10 ± 0.1	9.8 ± 1.1	1299 ± 164
T-10	1.40 ± 0.07	13.7 ± 1.4	1616 ± 7
T-15	1.3 ± 0.08	9.3 ± 1.4	1598 ± 15
T-20	0.85 ± 0.2	6.8 ± 0.8	1537 ± 37
T-25	0.86 ± 0.2	7.5 ± 1.5	1525 ± 78

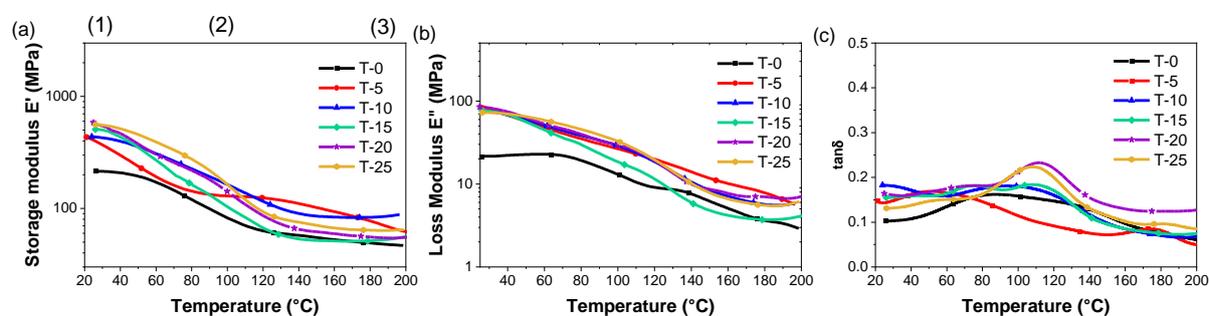


Figure S1. (a) Storage modulus; (b) loss modulus ;and (c) $\tan\delta$ as function of temperature.