

Supporting Information for “Unstructured Direct Ink Write 3D Printing of Functional Structures with Ambient Temperature Curing Dual-Network Thermoset Ink”

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Supplementary Materials: Figures S1, S2, S3, Equation S1

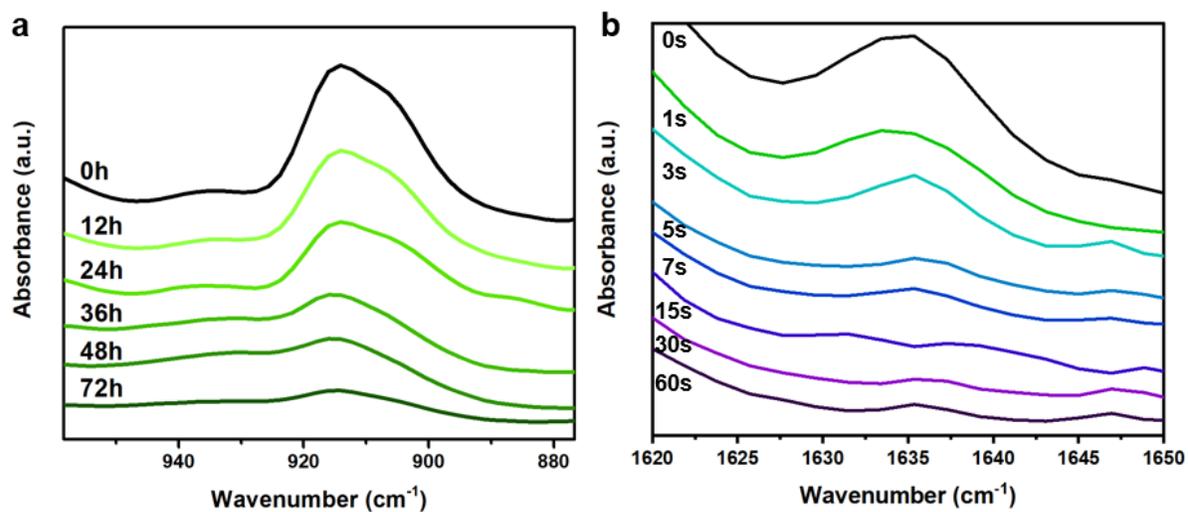


Figure S1 . Wavenumber data from FTIR characterization. (a) Absorbance versus wavenumber of the epoxy resin stage over time. (b) Absorbance versus wavenumber of the photopolymer resin stage when exposed to different lengths of UV irradiation.

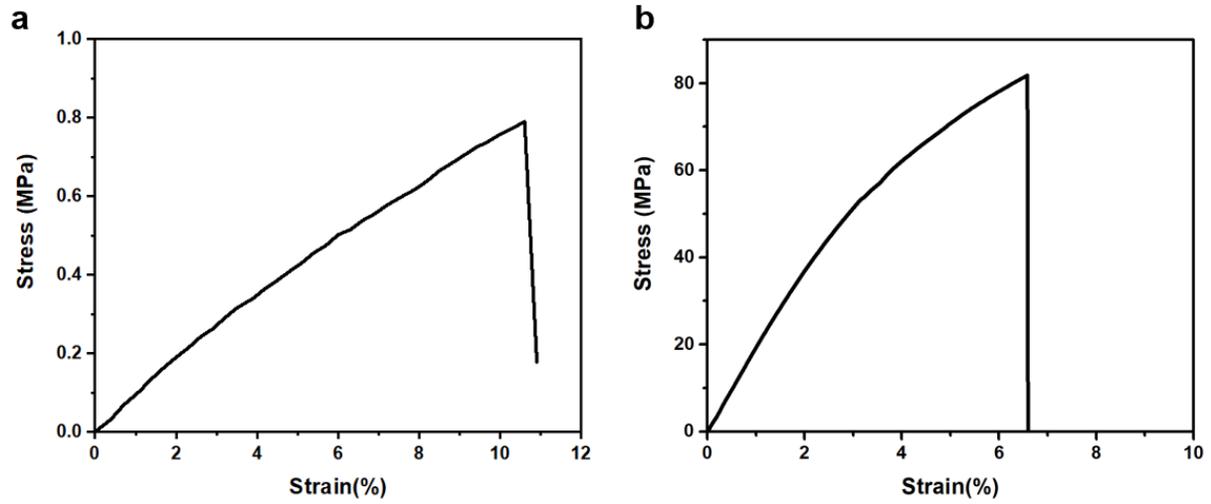


Figure S2 . Stress-strain curves from tensile testing of fully photo cured PE70 samples after (a) 0 hour, and (b) 72 hours.

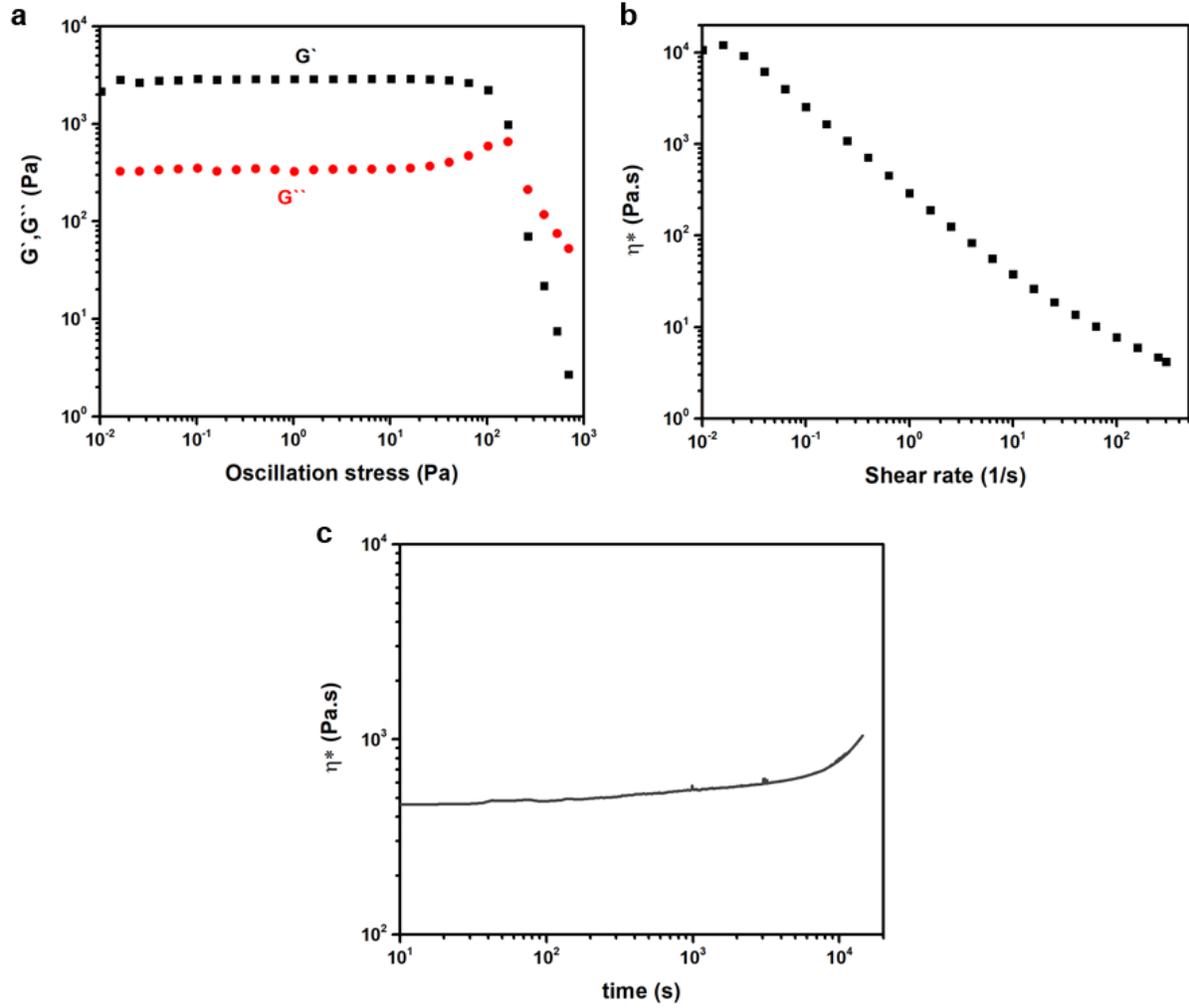


Figure S3 . Rheological characterization of uncured PE70 two-stage resin. **(a)** Storage (G') and loss (G'') moduli, of uncured two stage resin with 7wt% fumed silica rheological additive quantified over a range of oscillation stresses. **(b)** Viscosity with respect to shear rate. **(c)** Viscosity with respect to time.

$$V = \frac{A \sigma}{g \rho}$$

Equation S1 : Calculation of maximum printable volume where V = volume of the structure, A = base layer area, σ = adhesion strength, g = gravitational constant, and ρ = density of the two-stage ink.