Degradable Thermosets from Cellulose Acetate Allyl Carbonate via Thiol-ene Click Chemistry

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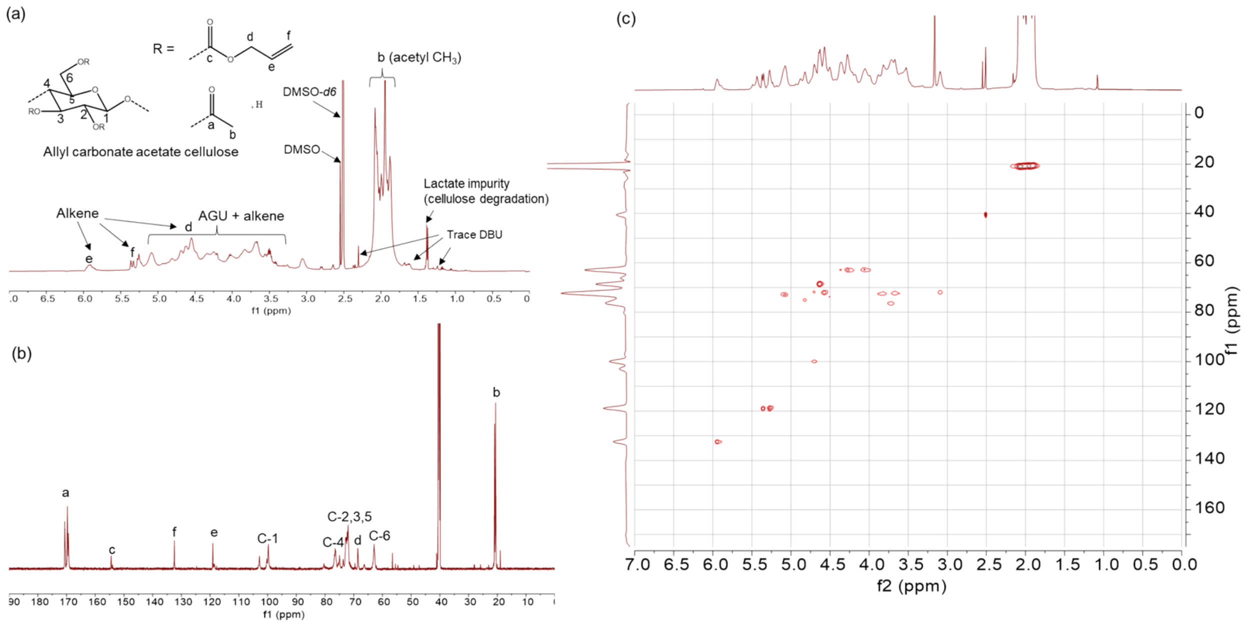


Figure S1. **(a)** ^{1}H NMR spectrum, **(b)** ^{13}C NMR spectrum. and **(c)** ^{13}C-^{1}H HSQC 2-D NMR spectrum of the representative cellulose acetate allyl carbonate sample (CAAC5). The ^{1}H and ^{13}C NMR spectra were obtained with a NMR solvent of DMSO-*d6* containing a tiny amount of TFA-*d*. The ^{13}C-^{1}H HSQC 2-D NMR spectrum was obtained using DMSO-*d6*.

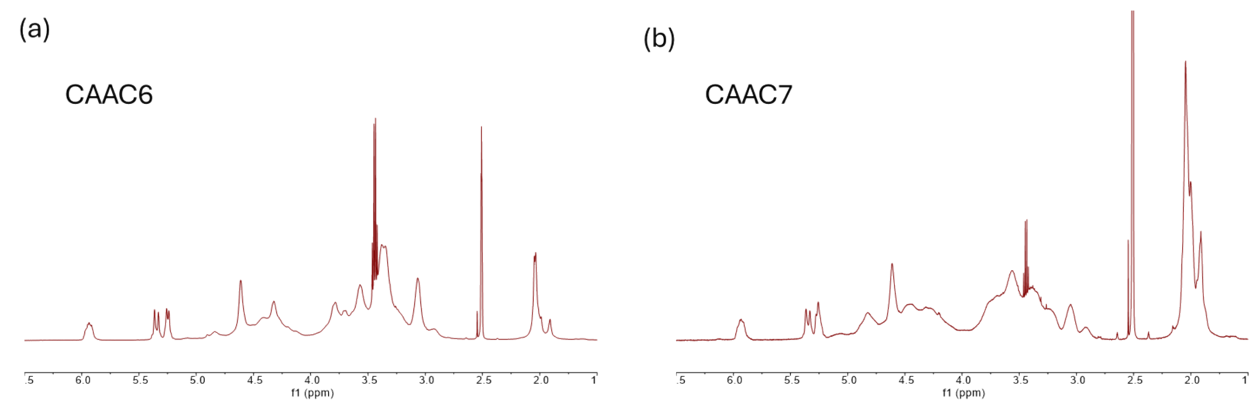


Figure S2. ^{1}H NMR spectra for (a) CAAC6 and (b) CAAC7. The ^{1}H spectra were obtained with a NMR solvent of DMSO-*d6* containing a tiny amount of TFA-*d*.

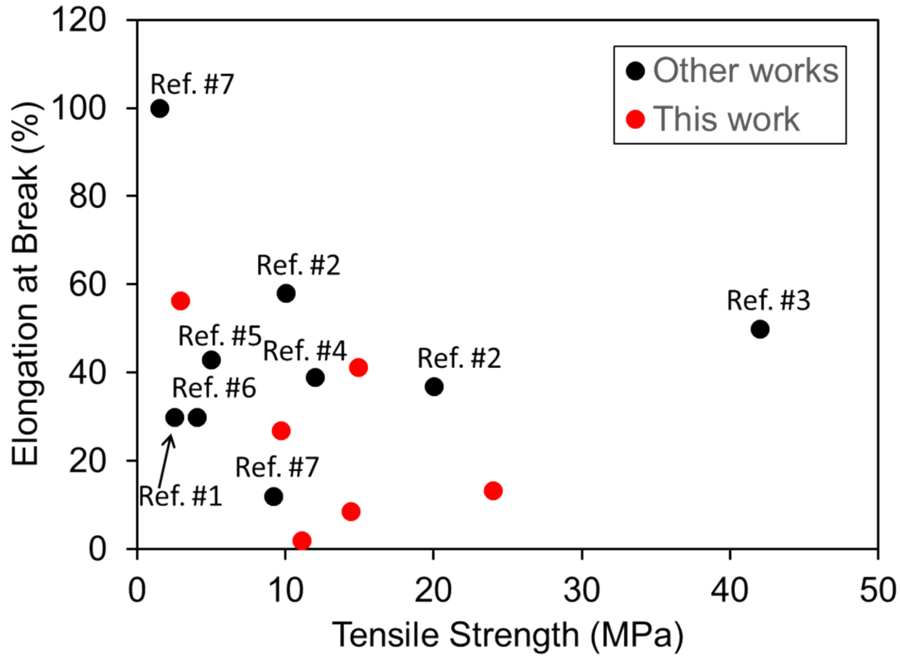
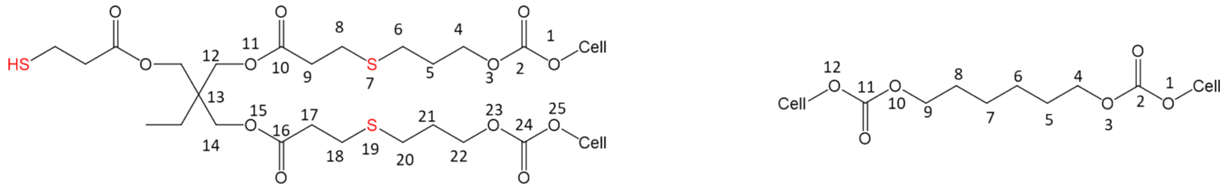


Figure S3. Tensile strength versus elongation at break for thiol-ene-based thermosets from the other reference papers[1–7] and this work.



Thiol-Ene by trimethylolpropane tris(3-mercaptopropionate) (3SH)

Ene-Ene cross linking

Figure S4. Graphical representation of cross linking by thiol-ene and ene-ene

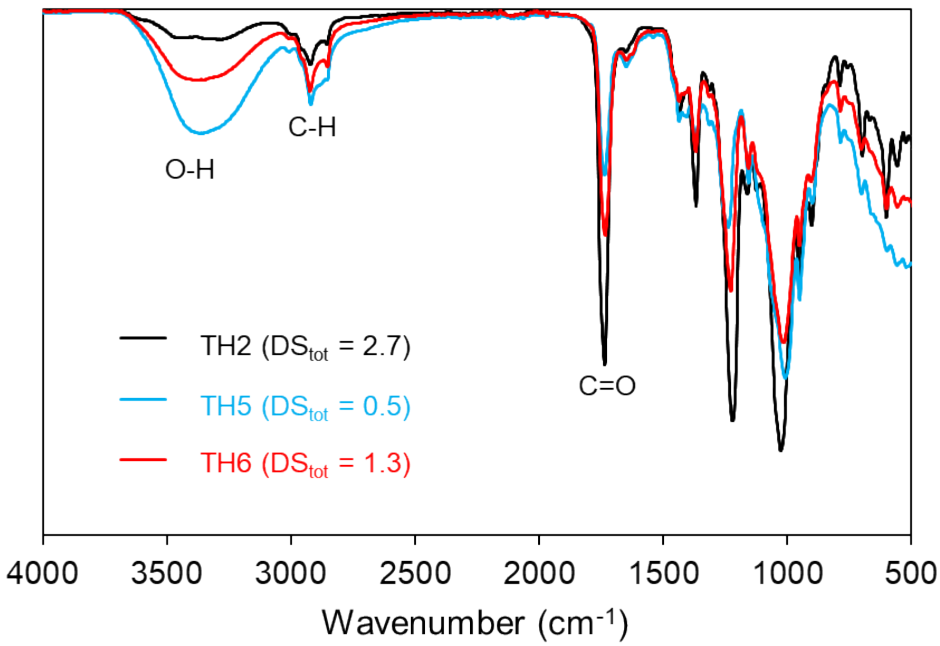


Figure S5. FT-IR spectra for TH2, TH5 and TH6

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