

Supplemental Information for

Customizing STEM Organogels using PET-RAFT Polymerization

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Additional Tables and Figures

Table S1. Kinetic data for the parent gel synthesis using PET-RAFT polymerization.

Time (h)	Conversion (%)	$\text{Ln}[M]_0/[M]$	Standard error
0	0	0	0
1	0	0	0
2	4.67	0.0479	0.00923
3	16.0	0.175	0.0183
4	21.5	0.243	0.0511
8	54.0	0.777	0.0251
20	81.7	1.70	0.0476

Table S2. Swelling ratios of the parent and daughter gels in DMAc performed in triplicate.

Network	Average Dry Weight (mg)	Average Swelled Weight (mg)	Swelling Ratio (%)	Standard error (%)
Parent	98.0	1430	1383	63.64
D-MA	63.3	820	1189	35.61
D-MAX	50.7	729	1329	52.88
D-DMA	48.0	808	1590	38.22
D-DMAX	54.0	719	1235	24.30

Table S3. Swelling ratios of the parent and daughter gels in water performed in triplicate.

Network	Average Dry Weight (mg)	Average Swelled Weight (mg)	Swelling Ratio (%)	Standard error (%)
Parent	177	192	8.185	0.4846
D-MA	42.7	58.3	36.70	2.107
D-MAX	44.0	66.3	50.25	3.210
D-DMA	45.7	283	518.8	16.69
D-DMAX	40.7	189	349.4	32.56

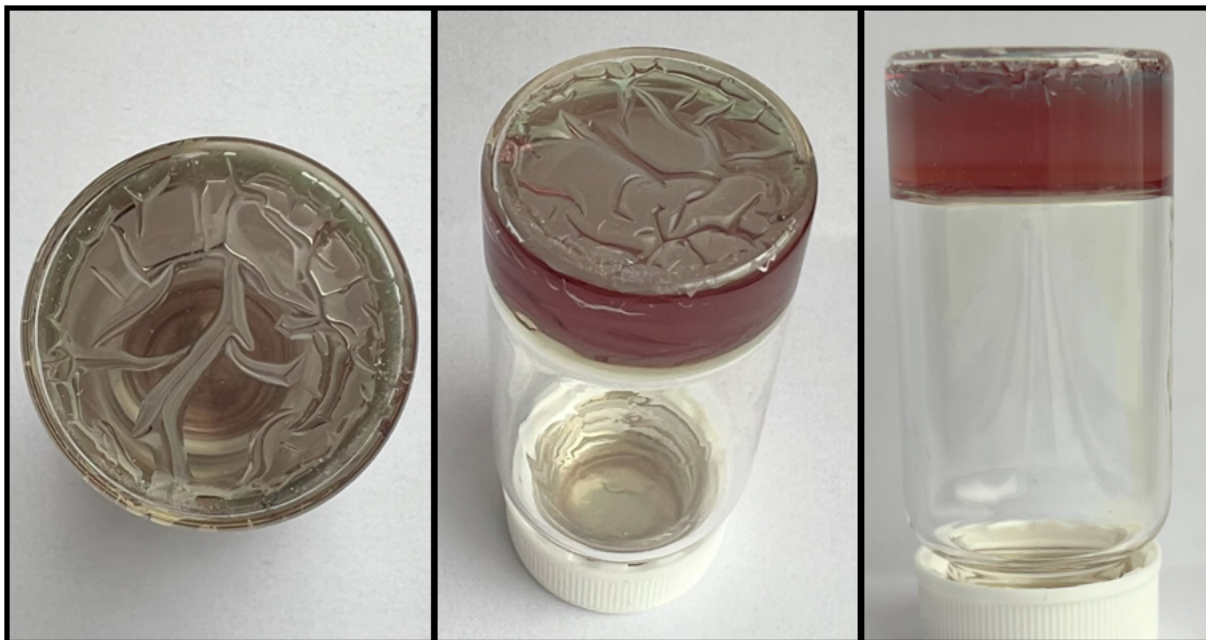
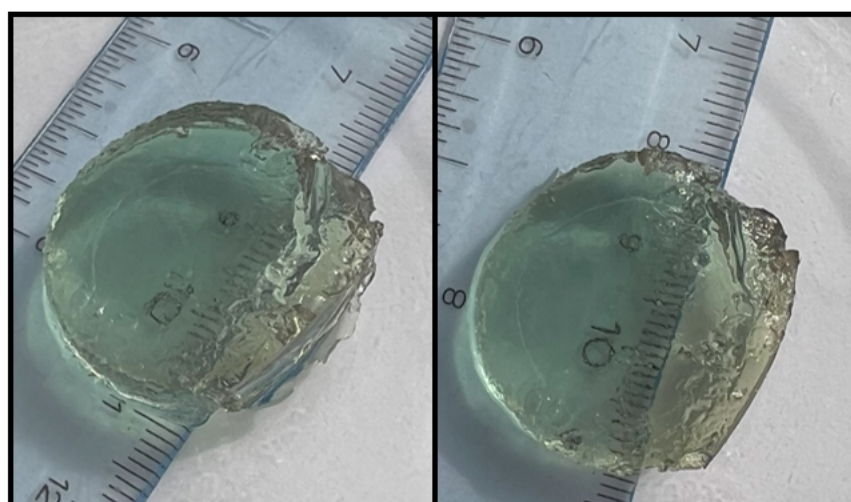
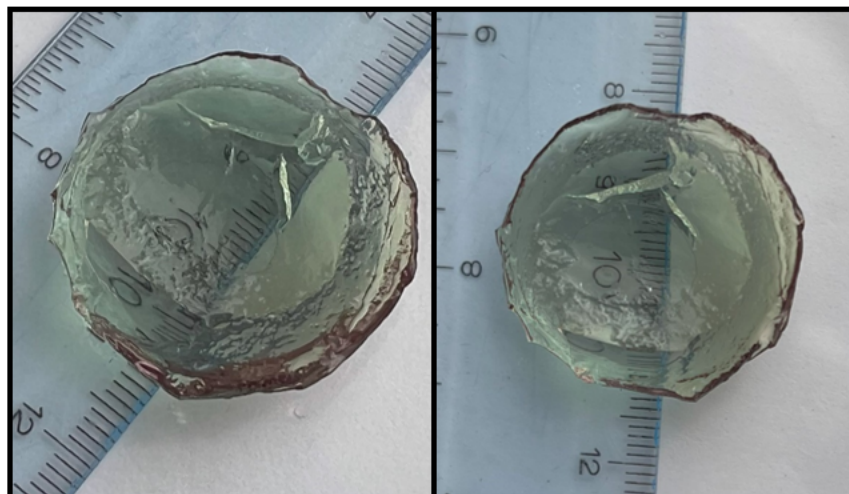


Figure S1. Additional images of the P(MA-*s*-DSDA) parent organogel network after synthesis.



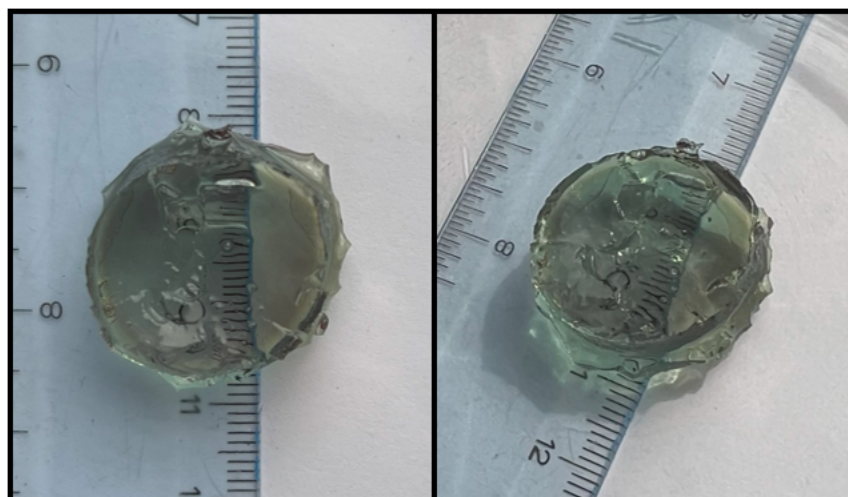
D-MA swollen in DMAc

Figure S2. Additional images of the daughter gel D-MA swollen in DMAc.



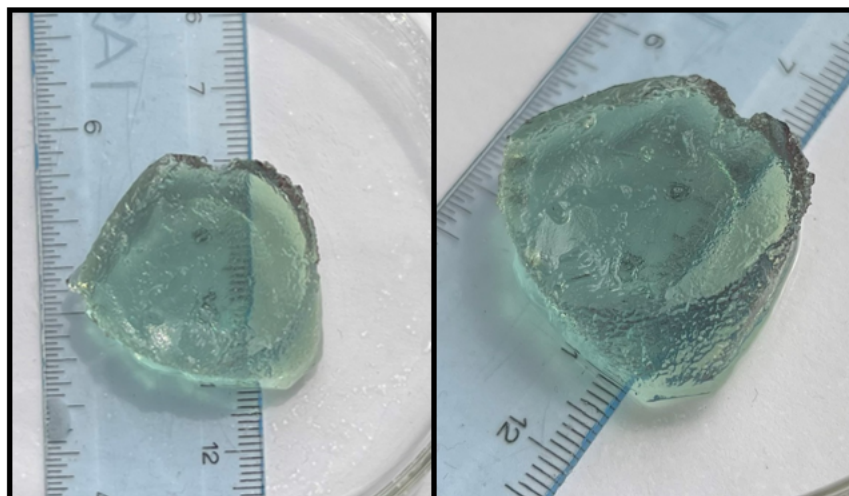
D-MAX swollen in DMAc

Figure S3. Additional images of the daughter gel D-MAX swollen in DMAc.



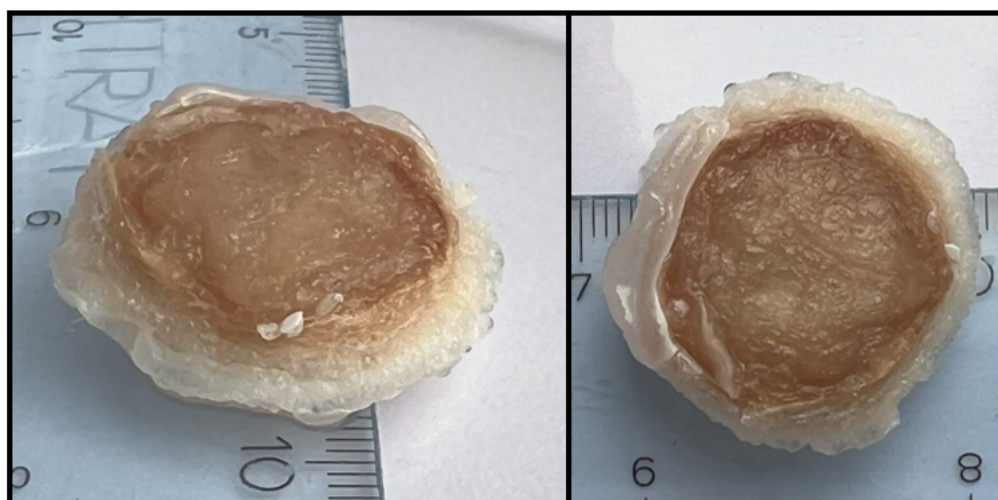
D-DMAX swollen in DMAc

Figure S4. Additional images of the daughter gel D-DMAX swollen in DMAc.



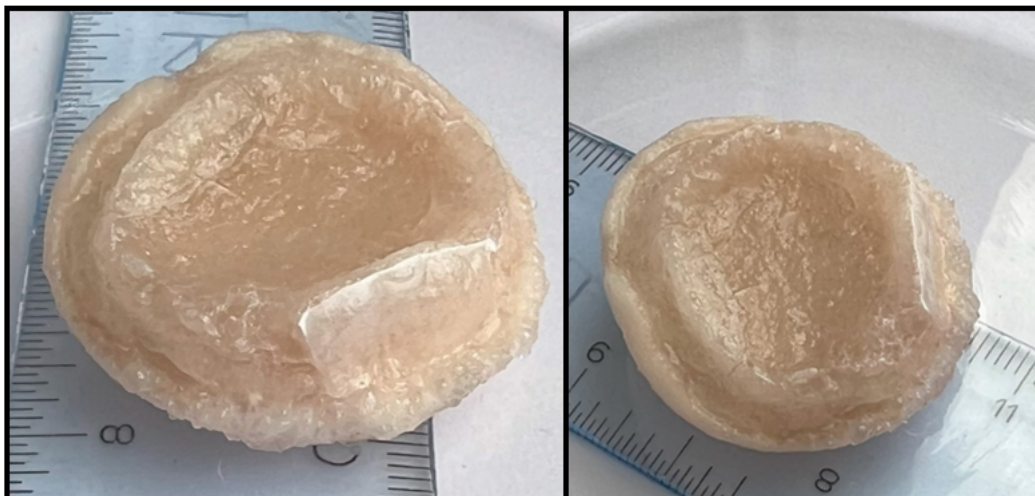
D-DMA swollen in DMAC

Figure S5. Additional images of the daughter gel D-DMA swollen in DMAC.



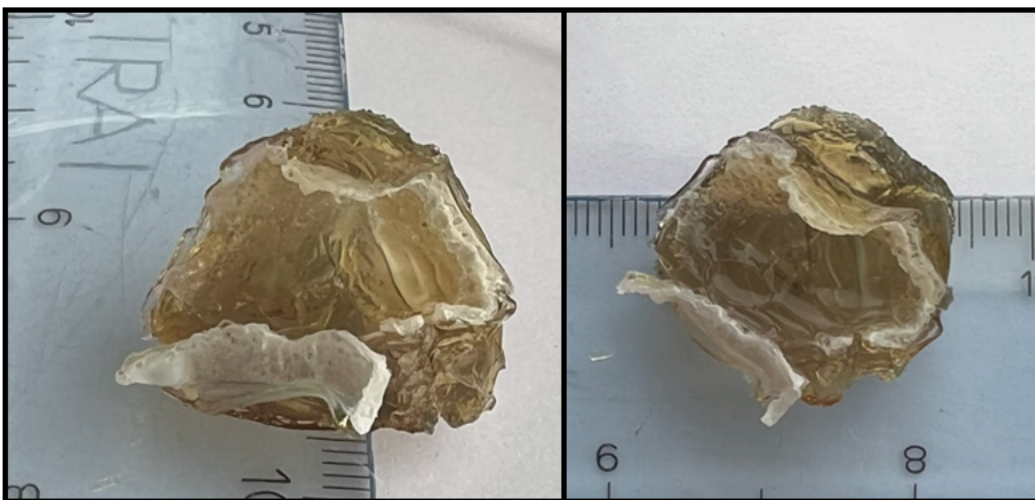
D-MA swollen in water

Figure S6. Additional images of the daughter gel D-MA swollen in water.



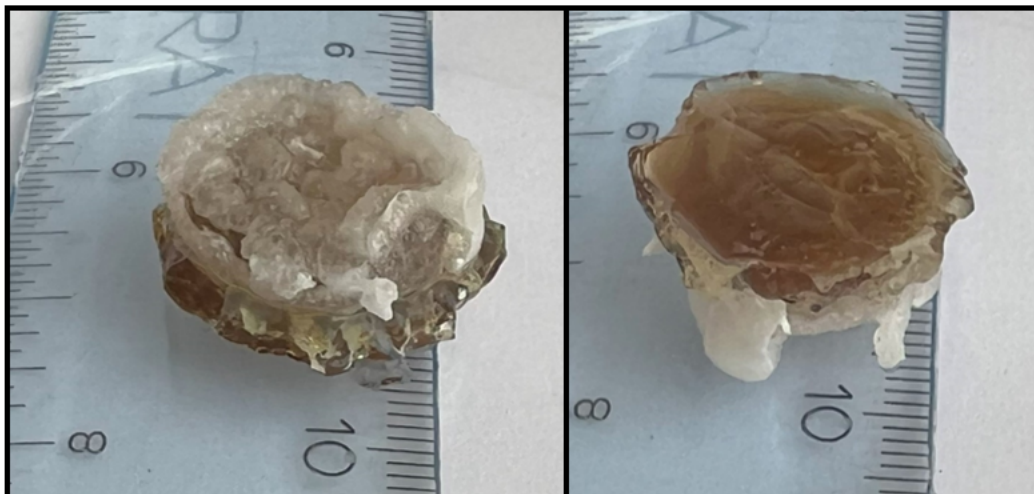
D-MAX swollen in water

Figure S7. Additional images of the daughter gel D-MAX swollen in water.



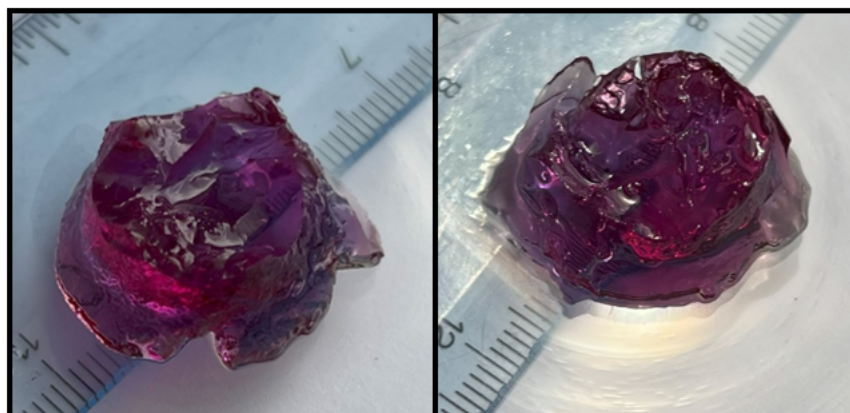
D-DMA swollen in water

Figure S8. Additional images of the daughter gel D-DMA swollen in water.



D-DMAX swollen in water

Figure S9. Additional images of the daughter gel D-DMAX swollen in water.



D-MA after hv

D-MAX after hv

Figure S10. D-MA and D-MAX after irradiation showing asymmetric expansion of the network on the bottom.

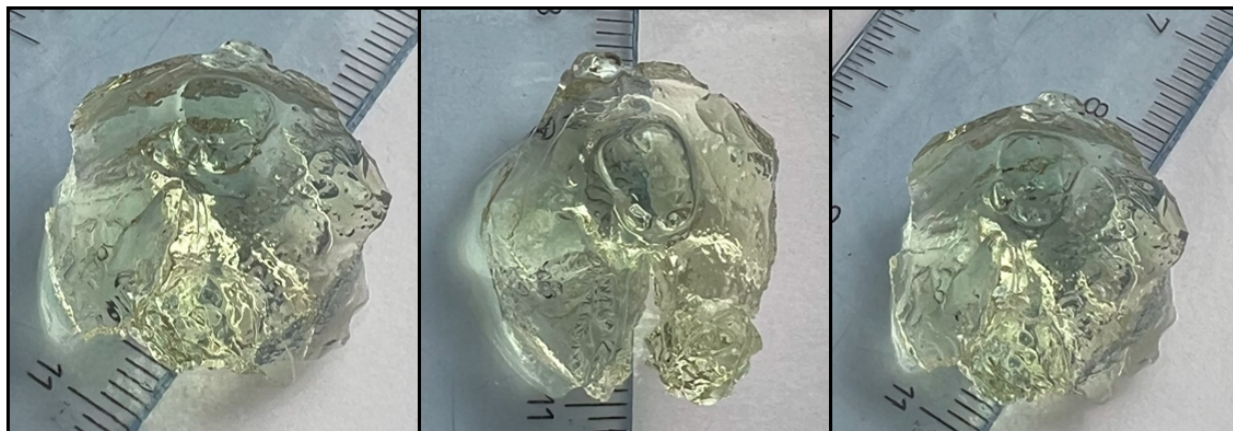


Figure S11. D-MA daughter gel synthesized with a checkerboard pattern on the bottom of the petri dish swollen in DMAc.

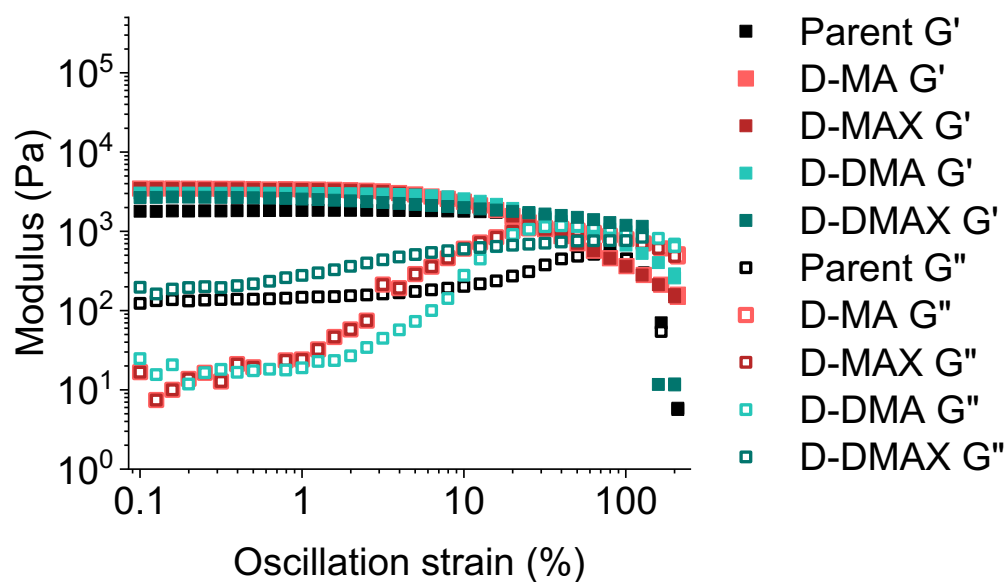


Figure S12. Full strain sweeps conducted on the parent and daughter gels with storage (filled squares, G') and loss moduli (open squares, G'').

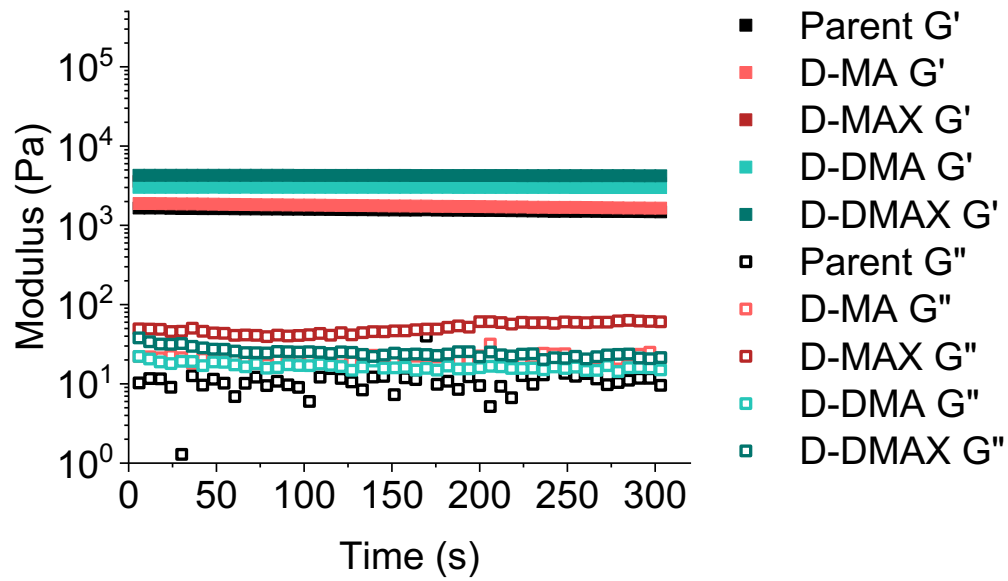


Figure S13. Time sweeps conducted on the parent and daughter gels with storage (filled squares, G') and loss moduli (open squares, G'').

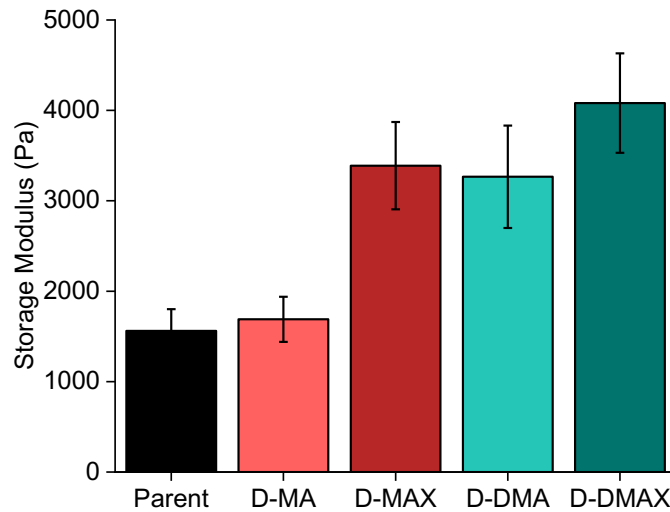


Figure S14. Parent and daughter gel average ($n=3$) storage moduli (G') from time sweeps.