Redox-Responsive Photo-polymerizable PEG-based Hydrogels: Diverse Functionalization, 3D-Printing, and On-Demand Degradation for Protein Release

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LIST of FIGURES

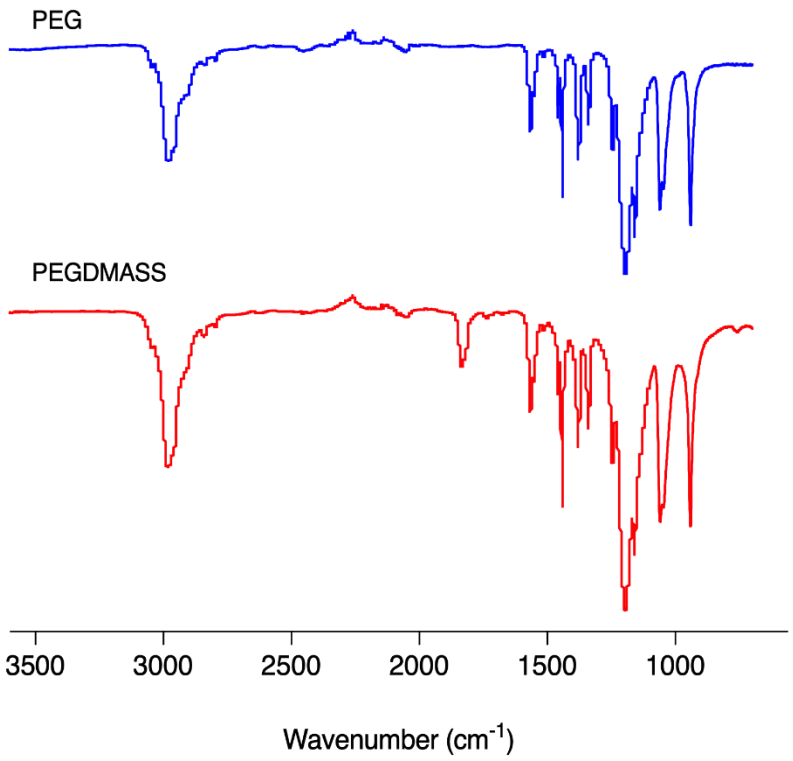

Figure S1. FTIR spectra of PEG and PEGDMASS polymers.

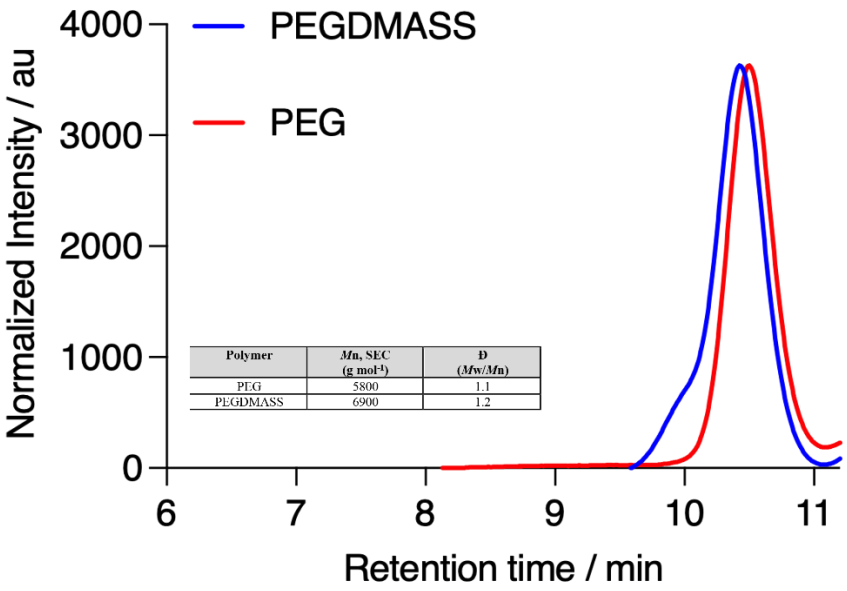

Figure S2. SEC chromatograms of PEG and PEGDMASS polymers using PMMA calibrants with dimethylacetamide as eluent.

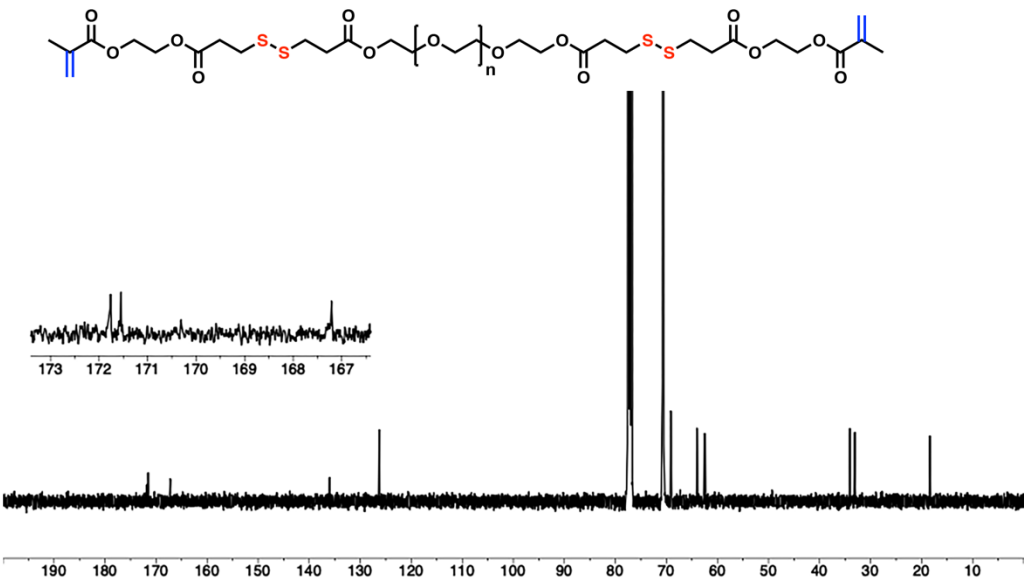

Figure S3. ^{13}C NMR spectrum of PEGDMASS Polymer.

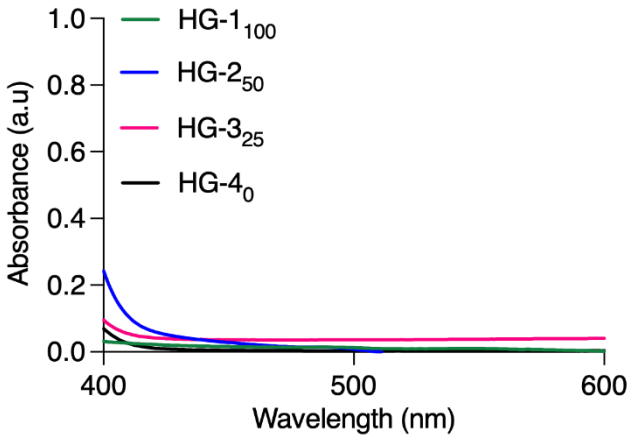

Figure S4. Ellman's assay for free thiol content measurement of hydrogel samples.

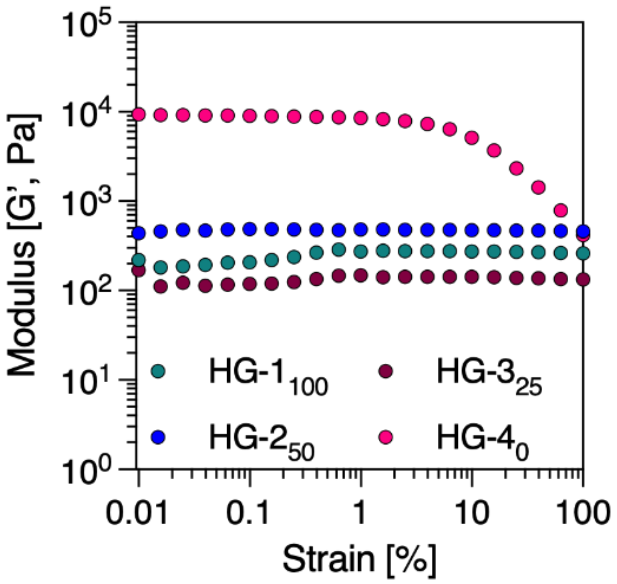

Figure S5. Amplitude sweep test of hydrogels.

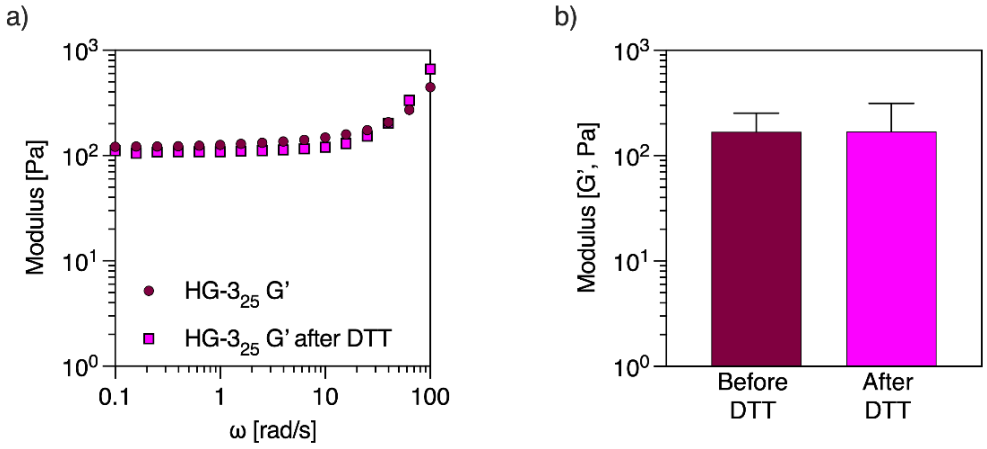

Figure S6. Frequency sweep (ω) comparison of HG-3_{25} hydrogels. a) Storage modulus (G') of HG3_{25} in its initial state and b) storage modulus (G') after dye functionalization of HG-3_{25} and subsequent DTT treatment.

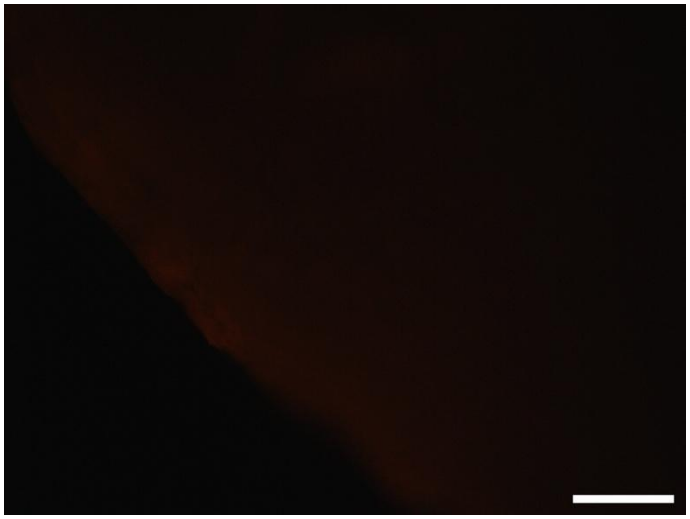

Figure S7. Schematic illustration and fluorescence microscopy images of HG-4_0 modified with thiol-reactive maleimide-containing TAMRA molecule. Scale bar represents 100 μm.

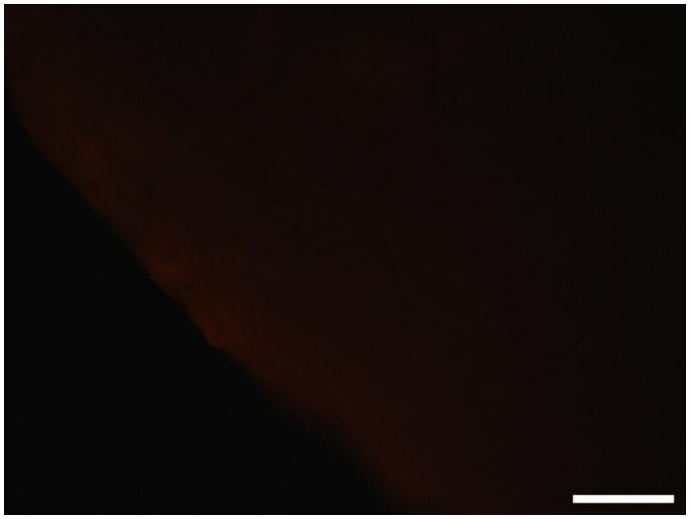

Figure S8. Schematic illustration and fluorescence microscopy images of HG-4_0 modified with thiol-reactive SAMSA fluorescent dye. Scale bar represents 100 μm.

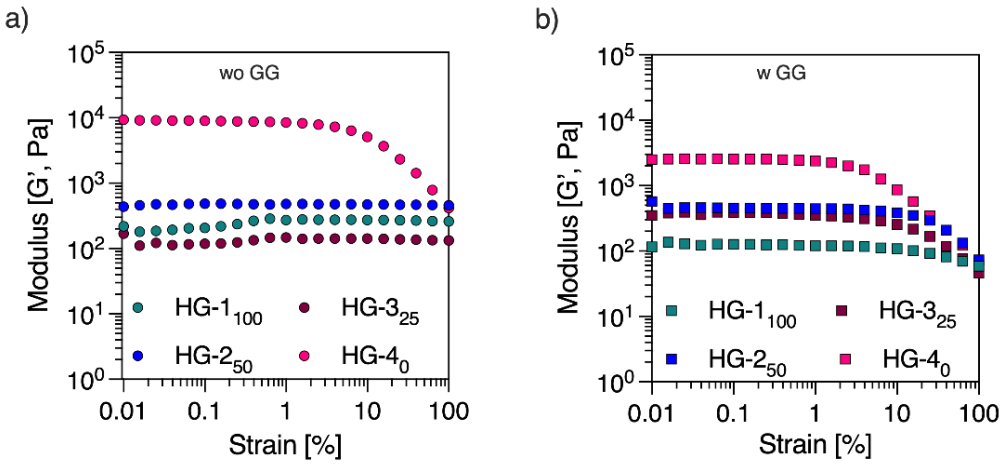

Figure S9. The amplitude sweep tests of hydrogels, a) without (data already presented as Figure S5) and b) with GG.

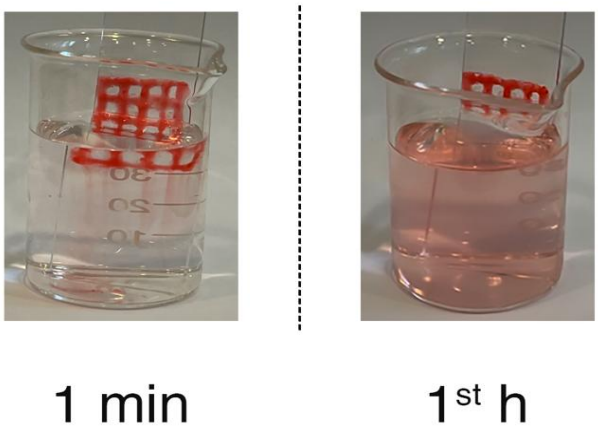

Figure S10. Degradation profiles of 3D-printed hydrogel in 100 mM DTT in PBS at room temperature.

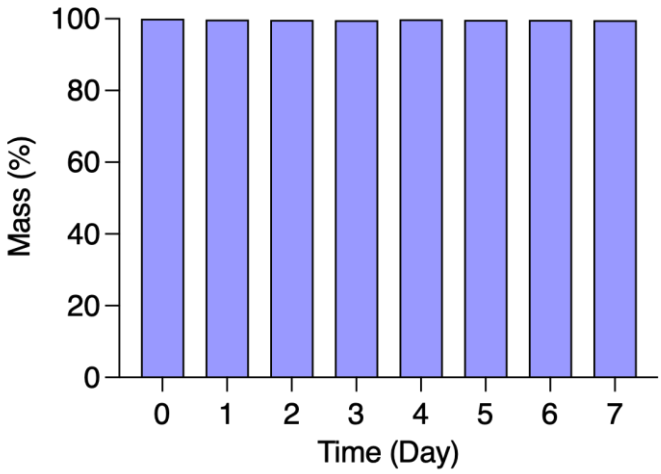

Figure S11. The gravimetric mass change of 3D-printed hydrogels over 7 days period.