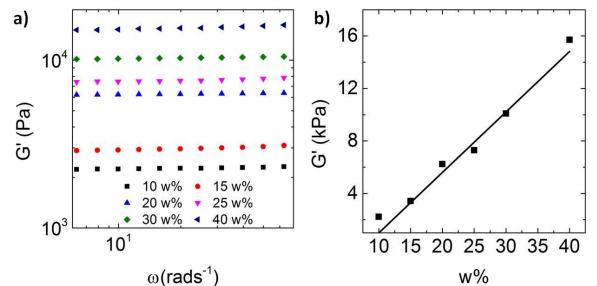
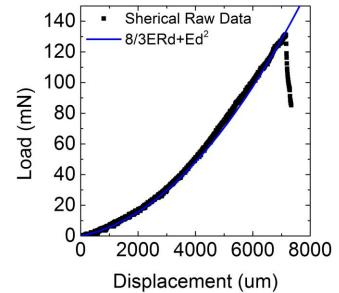


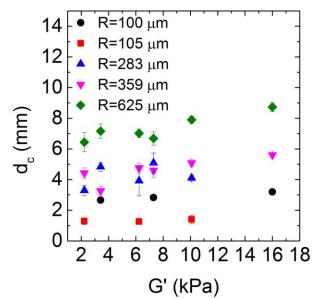
**ESI Fig. 1.** Images of spherically-tipped indenters. Rows 1 and 2 show indenters fabricated by gluing beads (no scale bars, labels indicate sphere radii), while row 3 shows indenters pulled and annealed in a microforge (scale bars indicate 1 mm, labels indicate tip radii).



**ESI Fig. 2.** Shear rheology of triblock copolymer gels. (a) Parallel-plate shear rheology of  $A_{25}$  B<sub>116</sub>  $A_{25}$  gels. Storage modulus is plotted versus angular frequency between 1 and 10 Hz. (b) Storage modulus, *G'*, averaged between 1 and 10 Hz versus weight percent polymer for  $A_{25}$  B<sub>116</sub>  $A_{25}$  gels.



ESI Fig. 3. Loading curve for 650µm spherical tip indenter fit with equation 5.



**ESI Fig. 4.** Puncture depth,  $d_c$  versus shear modulus, G', for flat-punch indenters of various radii.