Electronic Supplementary Material (ESI) for Soft Matter.

Supplementary section:

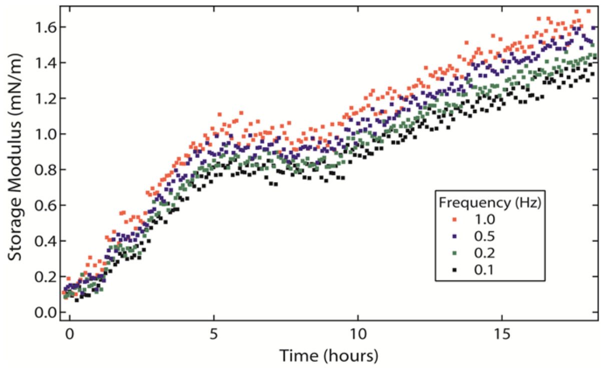

Fig. S1 During network formation, different probing frequencies can record different storage moduli. Unless otherwise specified, the data presented in this paper was measured at 0.1 Hz to ensure the measurements were as quasi-static as possible.

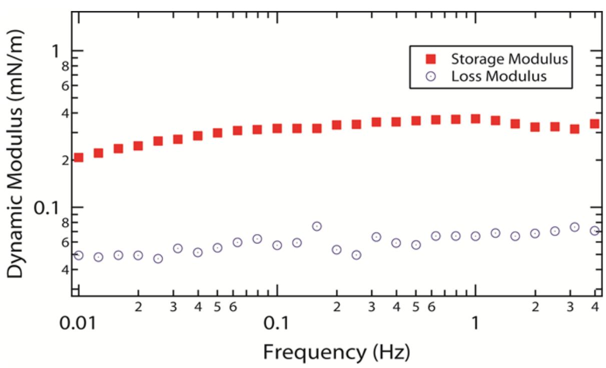

Fig. S2 A frequency sweep on a mature network is insensitive to frequency over a large frequency range. This indicates that the network is comprised of stable, long-lived bonds.

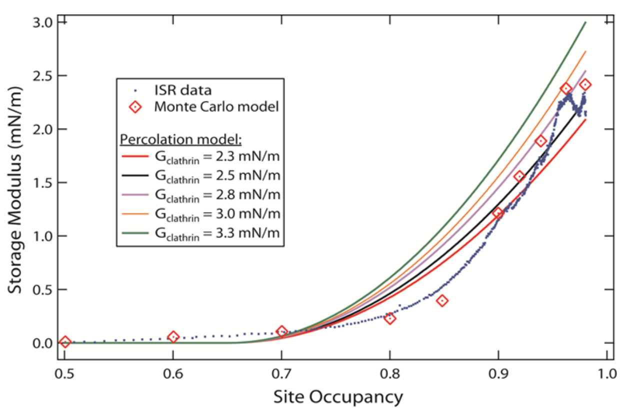

Fig. S3 Variations in $G_{clathrin}$ change the magnitude of the percolation model curve, but do not affect its critical features.

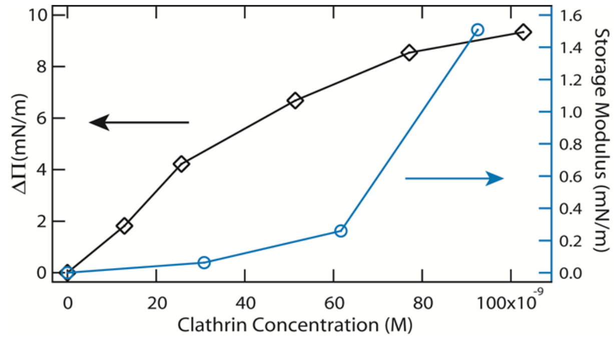

Fig. S4 Serial injection of clathrin allows for the change of surface pressure and storage modulus to be measured without kinetic complications. The increase in surface pressure (black diamonds, left axis) with protein concentration follows a concave growth pattern. The increase in storage modulus (blue circles, right axis) follows a convex growth pattern. This difference suggests very different processes are involved in the growth of these two surface properties.

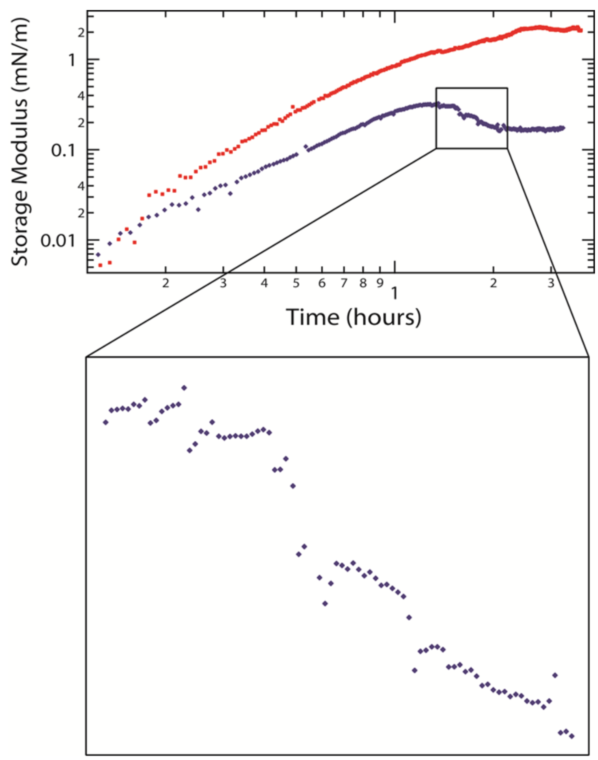

Fig. S5 Clathrin network formation being measured at two different strains shows that the film is easily damaged at 2% strain. The network fails in discrete steps, which indicates mechanical tearing, not desorption or oxidation. The storage modulus grows faster when measured at a lower strain, but this relationship was not studied.

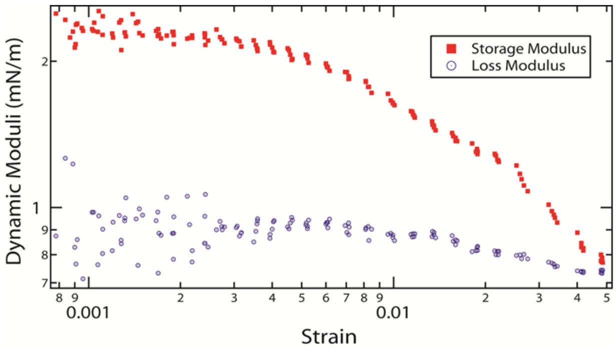

Fig. S6 Strain sweeps show evidence of network destruction above 0.002 strain. Measurements below 0.003 strain show an increased signal-to-noise ratio.