

Electronic supplementary information movie caption

1. Movie 1: Swelling of a gel sphere maximum principal stress contour plot
2. Movie 2: Swelling of a gel sphere maximum shear stress contour plot
3. Movie 3: Swelling of a quadrant of a gel sphere chemical potential contour plot
4. Movie 4: Swelling of an irregular shape gel maximum principal stress contour plot
5. Movie 5: Swelling of an irregular shape gel maximum shear stress contour plot
6. Movie 6: Swelling of an irregular shape gel chemical potential contour plot
7. Movie 7: Squeezing of a gel cube chemical potential contour plot
8. Movie 8: 3D buckling of the “standard” tubular gel
9. Movie 9: 3D buckling of the “thick” tubular gel
10. Movie 10: 3D buckling of the “tall” tubular gel
11. Movie 11: 3D buckling of the “thick” tubular gel with strain-dependent permeability