**Captions for Supplementary Movies**

Movies taken with a high-speed camera showing rippling, exploding and jumping behavior of single droplets that are drying while being suspended above a hot plate by their own vapor. The movies are slowed by a factor of 100. Droplets were formed from solutions containing 0.20 wt % of PS particles of radius 110 nm, as well as 0.05 wt % of PEO.

*Caption for rippling.mpeg*

A rippling droplet containing PEO of molecular weight $10^6$. Rippling is a liquid-like behavior that occurs early in the drying process.

*Caption for exploding-boiling.mpeg*

An exploding droplet containing PEO of molecular weight $10^6$. The droplet explodes later in the drying process soon after buckling has occurred. The lower portion of the droplet appears to remain attached to the hot plate after the explosion, implying that the explosion was caused by sustained droplet contact with the hot plate.

*Caption for jumping3.mpeg*

A jumping event that occurs before droplet buckling. The droplet contains PEO of molecular weight $10^4$. The motion is similar to the rippling motion and seems to originate from the bottom of the droplet near the hot plate.

*Caption for jumping.mpeg*

A jumping event that occurs well after droplet buckling. The droplet contains PEO of molecular weight $10^3$. Note how the motion causes the droplet to deform or flow even though the droplet is mostly “solid-like.”