Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information

<<Effect of surface tension on the dewetting process>>

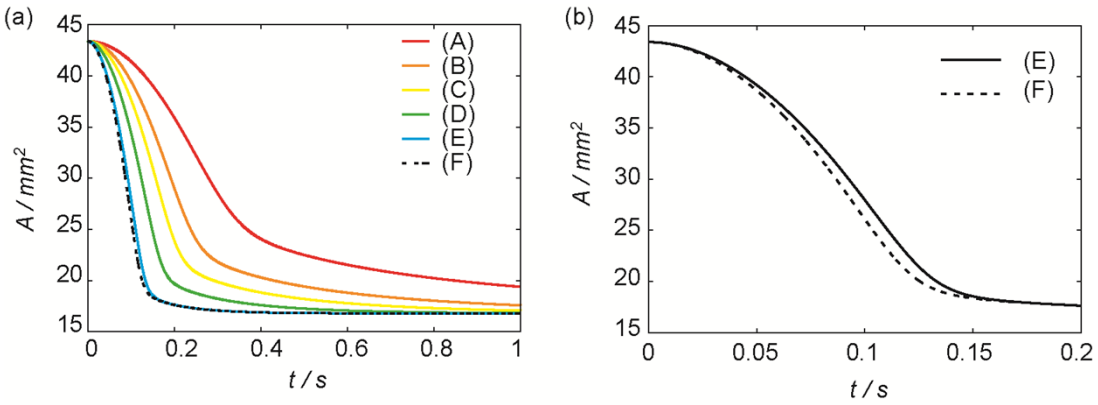

Figure S1. Time evolutions of contact area A of droplets with exact surface tensions simulated using Eq. (15). (a) The surfactant concentrations are (A) 1.0×10^{-5} M, (B) 2.0×10^{-5} M, (C) 3.0×10^{-5} M, (D) 5.0×10^{-5} M, (E) and (F) 1.0×10^{-4} M. In (A) ~ (E), the exact values of surface tensions are used and in (F) the surface tension of pure water is used. (b) Enlarged illustrations of (E) and (F) for the initial process of shrinking. Compared with (E) and (F), the shrinking speed of the droplet shows the slight decrease following the decrease in the surface tension.

<<Effect of droplet volume on the dewetting process>>

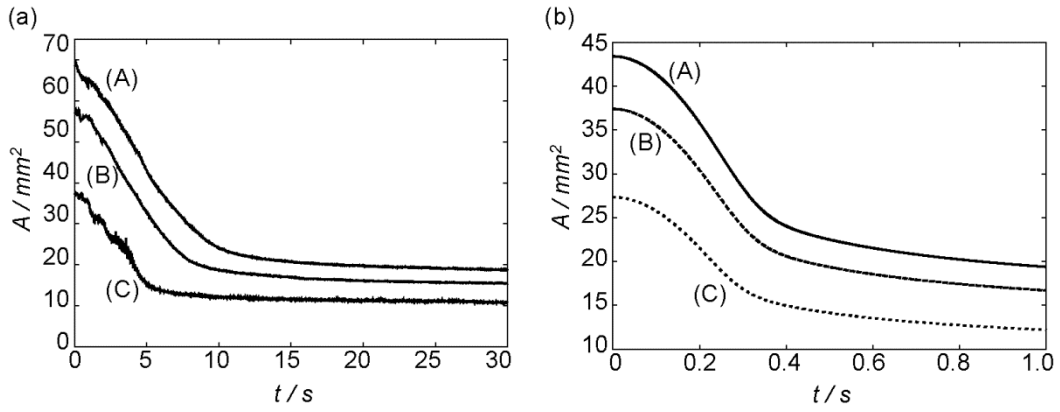

Figure S2. Time evolution of the contact area A of droplets with different volumes. Both results of (a) experiments and (b) simulation are shown. The volumes of (A), (B) and (C) are 10 [mm^3], 8 [mm^3] and 5 [mm^3], respectively. The parameters except for droplet volume are the same. The characteristics of the time evolution does not change. However the time when the contact area of a droplet finishes the drastic decrease becomes earlier as the decrease in the droplet volume. The initial contact area increases/decreases depending on the increase/decrease in volume of a droplet.

<<Viscosity of the surfactant solutions used in the present experiments>>

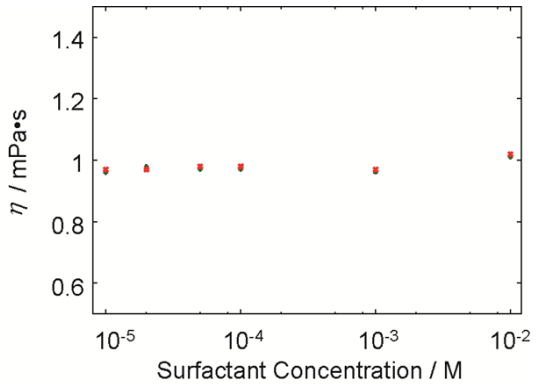

Figure S3. Viscosity η of the surfactant solutions. Drastic change in the viscosity is not observed near the CMC of ~ 1.0×10^{-3} M. Therefore the viscosity does not seem to affect the large final contact area.