

Supplementary Material

In this document, we include the experimental result of a water droplet falling on surfaces with different contact angles for $We = 0.3$ (S1), 11 (S2), 15 (S3), 25 (S4), and 33 (S5). For each case, the results of measurements of droplet height and contact diameter are shown in fragments (b) and (c). The droplet size is $D_0 = 2.3$ mm.

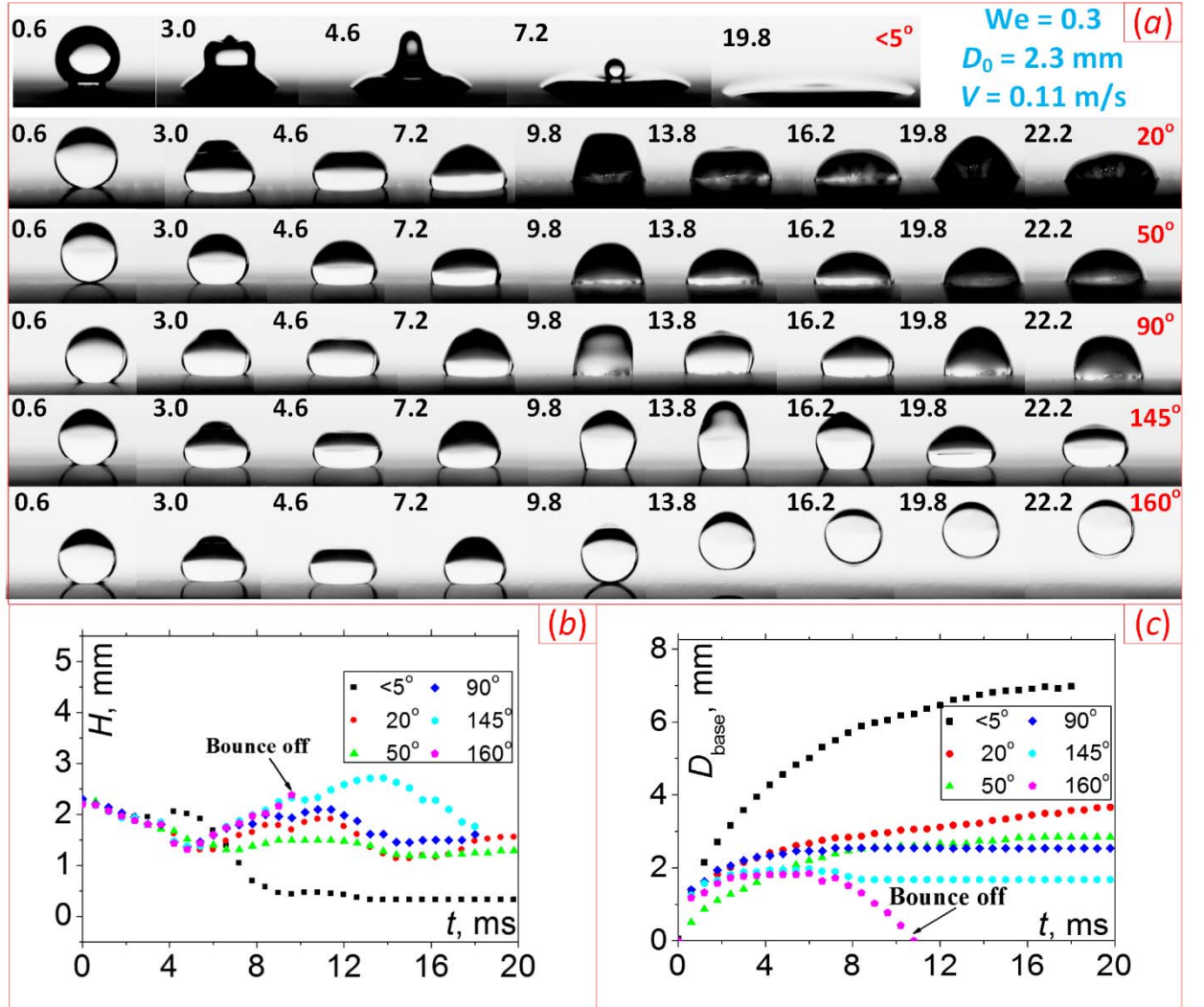


Figure S1. (a) Snapshots of droplet $D_0 = 2.3$ mm falling on surface with different contact angle for $We = 0.3$, numbers are time in ms; (b) Variation of droplet height and (c) contact line diameter in time. Contact angle θ $<5^\circ$ (■), 20° (●), 50° (▲), 90° (◆), 145° (◆), 155° (◆).

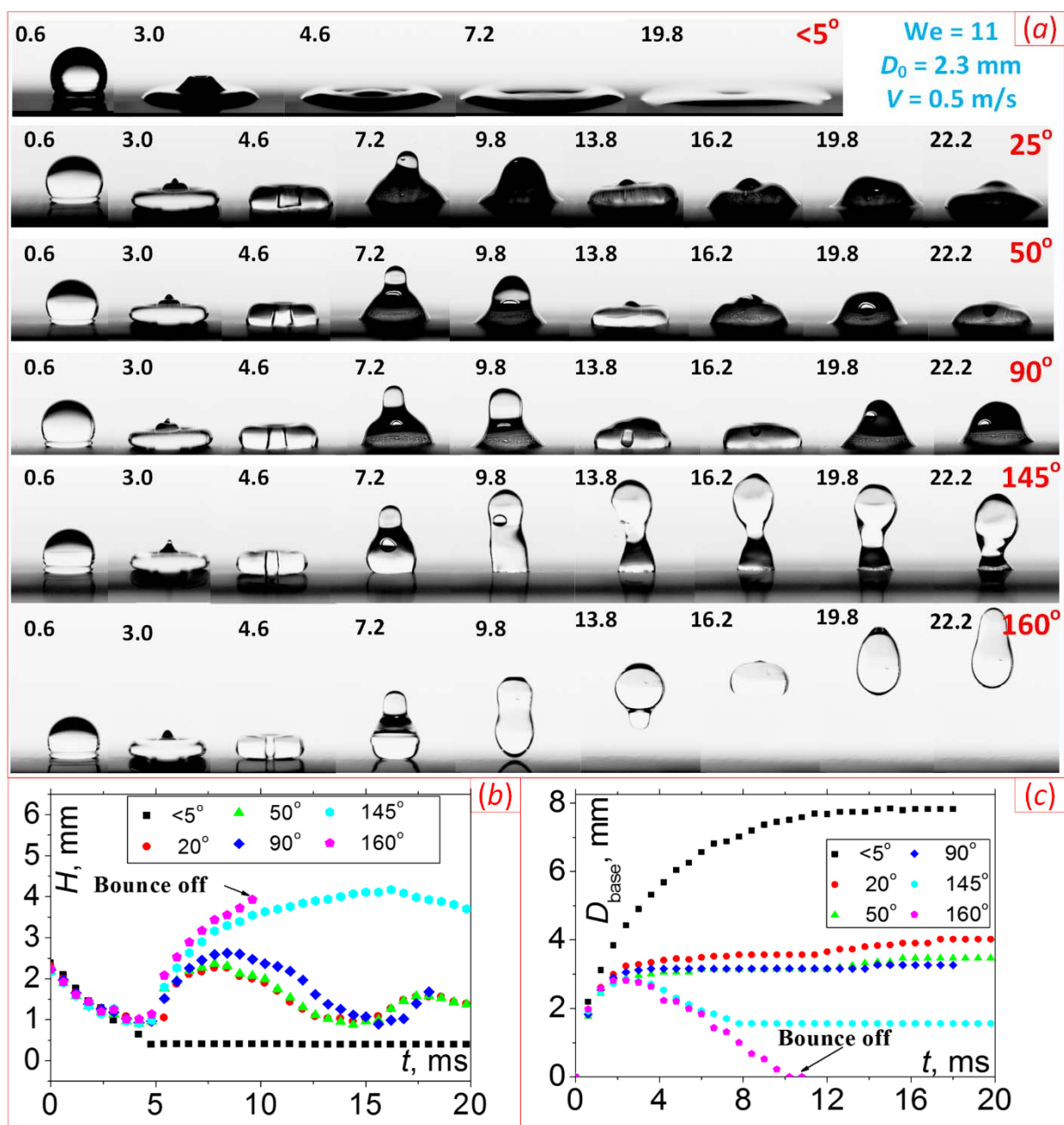


Figure S2. (a) Snapshots of droplet $D_0 = 2.3$ mm falling on surface with different contact angle for $We = 11$, numbers are time in ms; (b) Variation of droplet height and (c) contact line diameter in time. Contact angle $\theta < 5^\circ$ (\blacksquare), 20° (\bullet), 50° (\blacktriangle), 90° (\blacklozenge), 145° (\bullet), 155° (\blacklozenge).

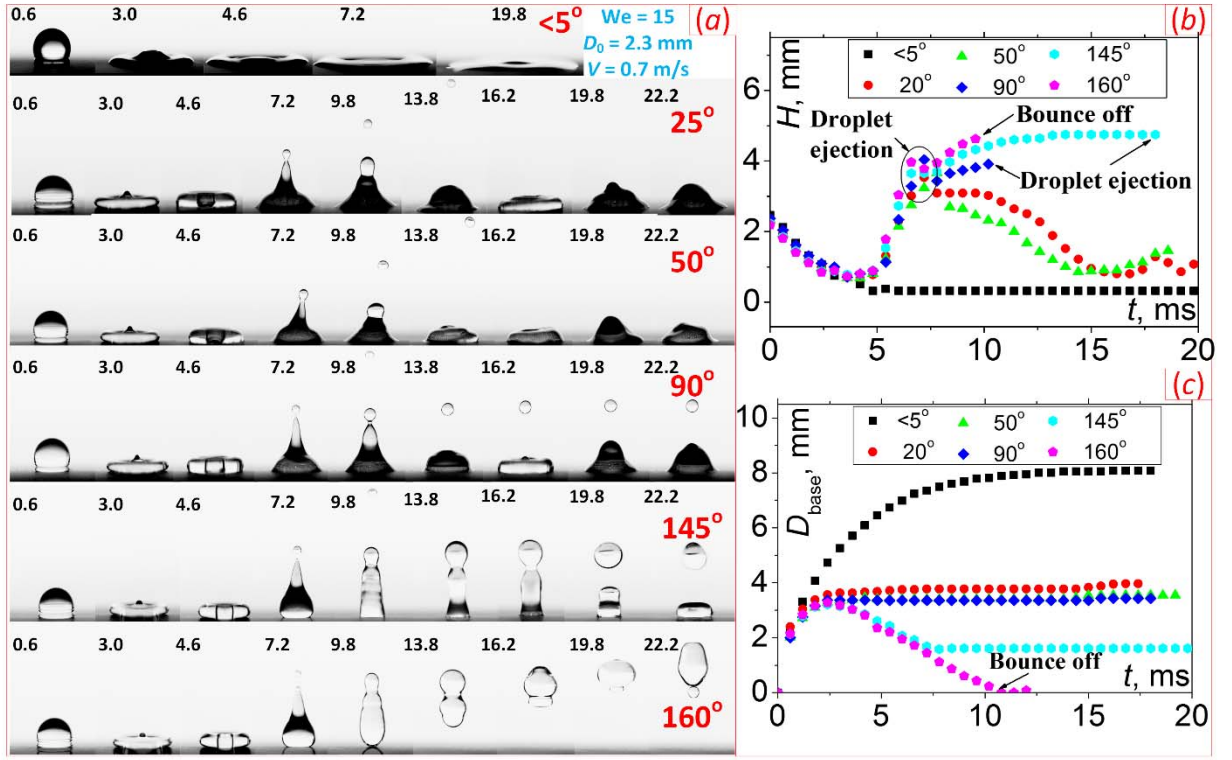


Figure S3. (a) Snapshots of droplet $D_0 = 2.3$ mm falling on surface with different contact angle for $We = 15$, numbers are time in ms; (b) Variation of droplet height and (c) contact line diameter in time. Contact angle $\theta < 5^\circ$ (\blacksquare), 20° (\bullet), 50° (\blacktriangle), 90° (\blacklozenge), 145° (\bullet), 155° (\blacklozenge).

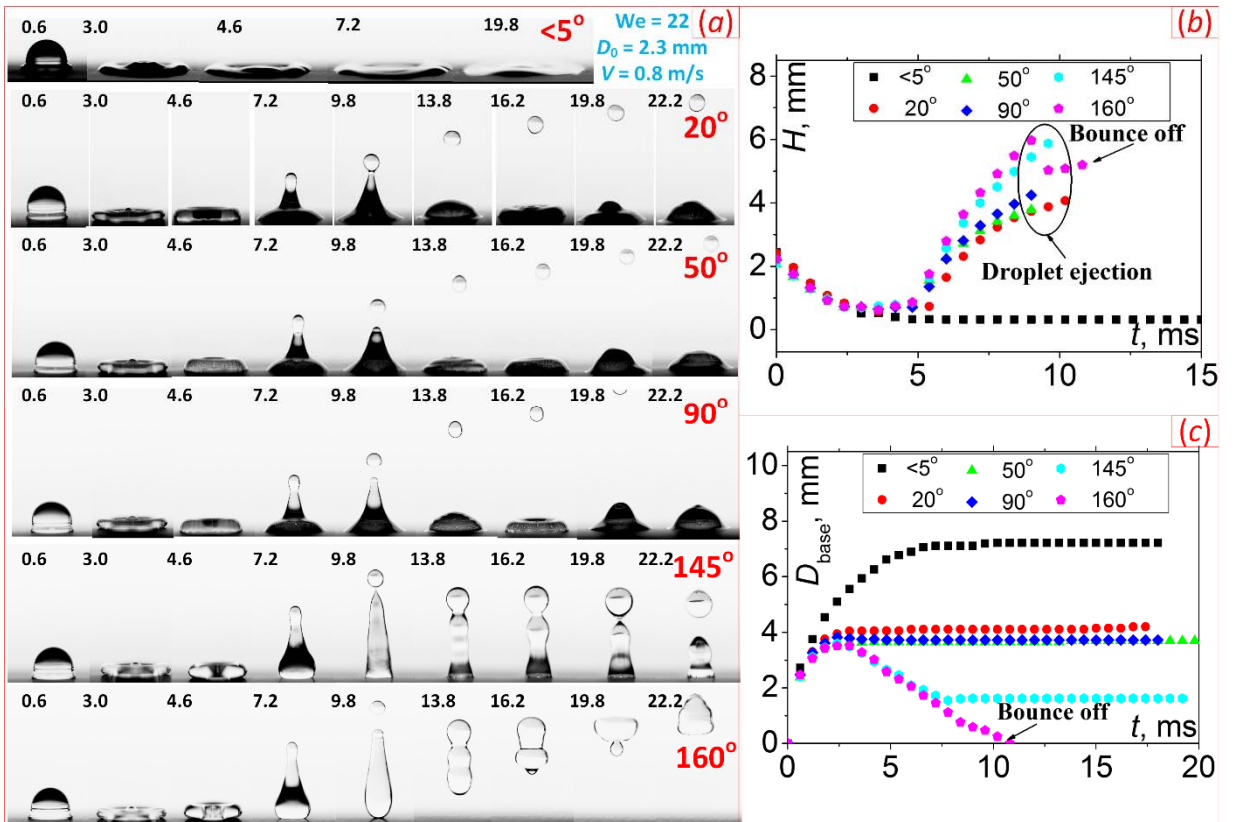


Figure S4. (a) Snapshots of droplet $D_0 = 2.3$ mm falling on surface with different contact angle for $We = 22$, numbers are time in ms; (b) Variation of droplet height and (c) contact line diameter in time. Contact angle $\theta < 5^\circ$ (\blacksquare), 20° (\bullet), 50° (\blacktriangle), 90° (\blacklozenge), 145° (\bullet), 155° (\blacklozenge).

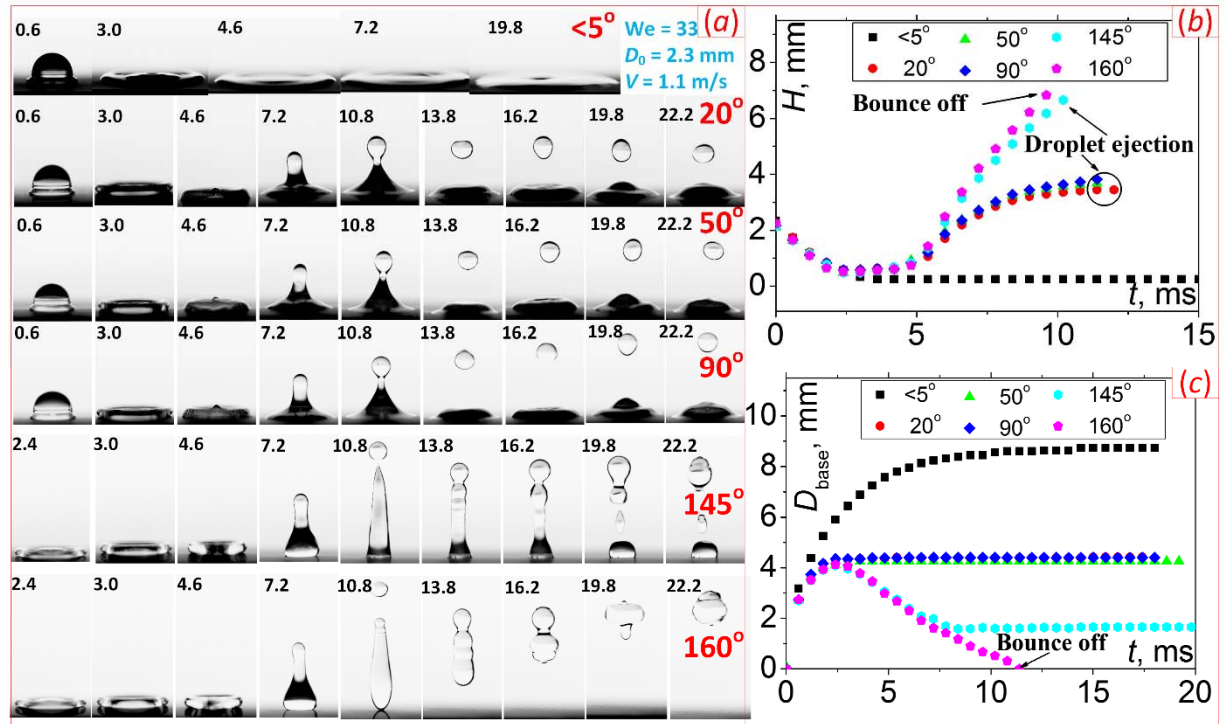


Figure S5. (a) Snapshots of droplet $D_0 = 2.3 \text{ mm}$ falling on surface with different contact angle for $We = 33$, numbers are time in ms; (b) Variation of droplet height and (c) contact line diameter in time. Contact angle $\theta < 5^\circ$ (■), 20° (●), 50° (▲), 90° (◆), 145° (●), 155° (●).