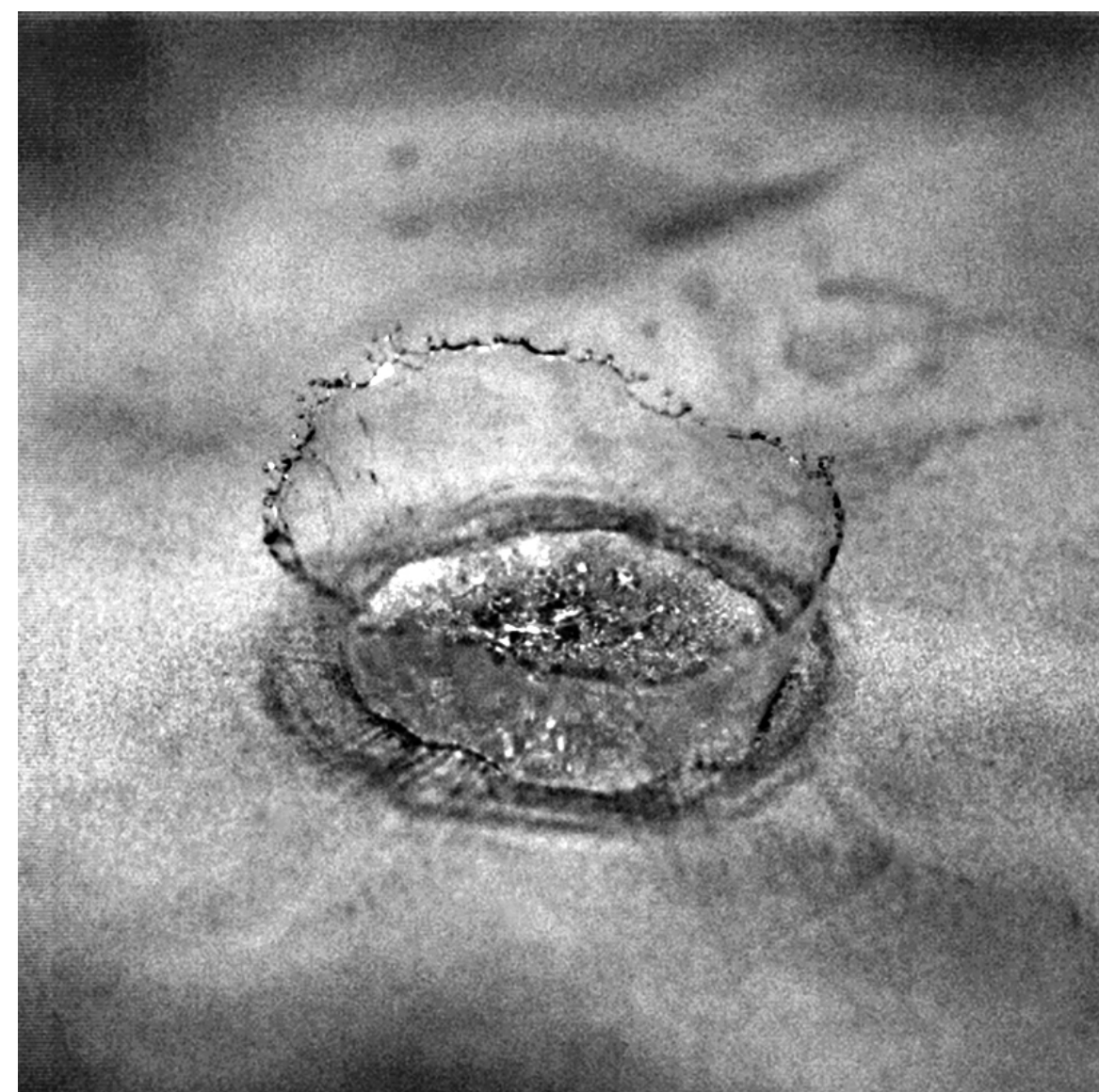# Shock wave-droplet interaction

Hamed Habibi and Rouslan Krechetnikov
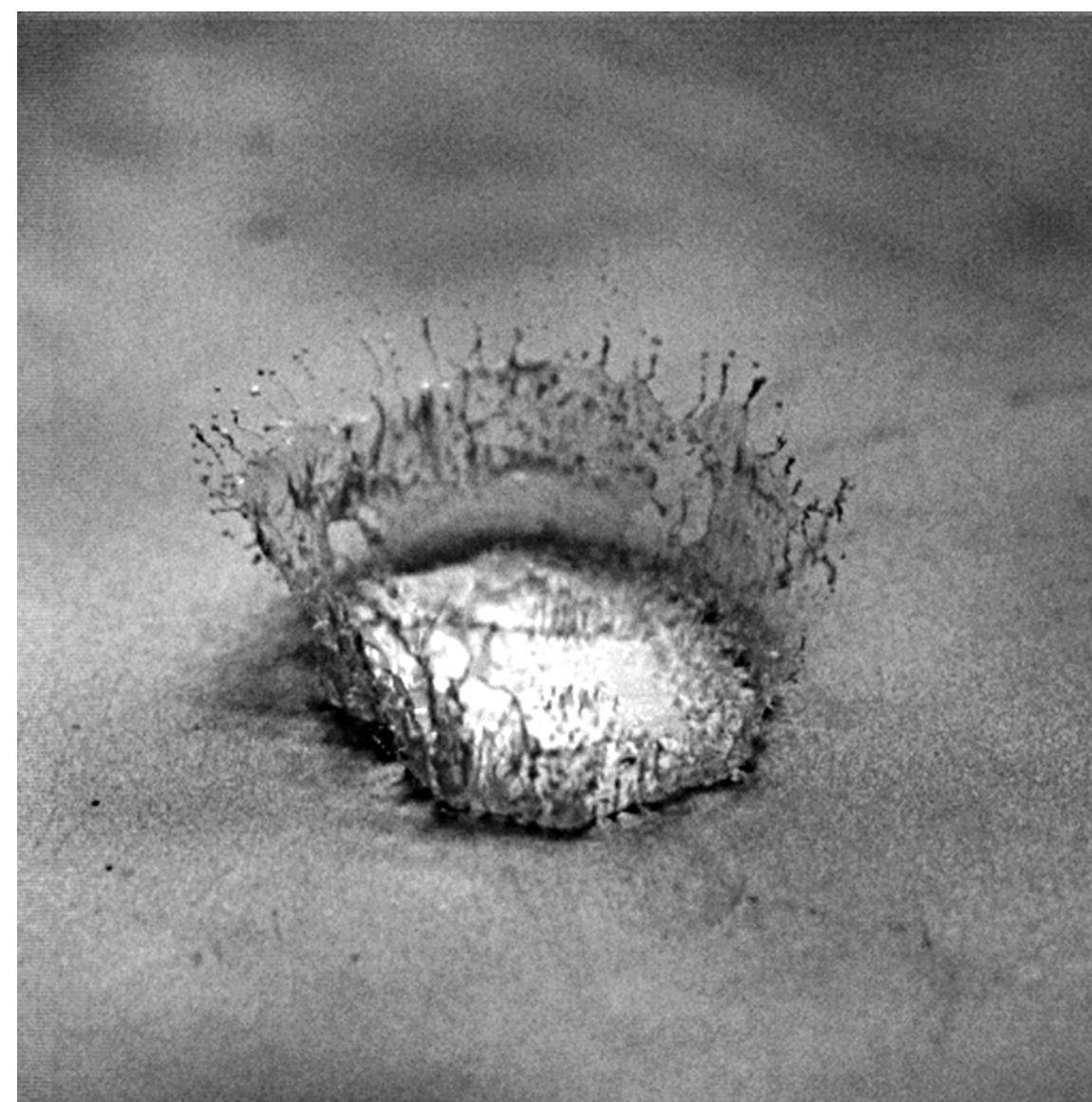
Water droplet
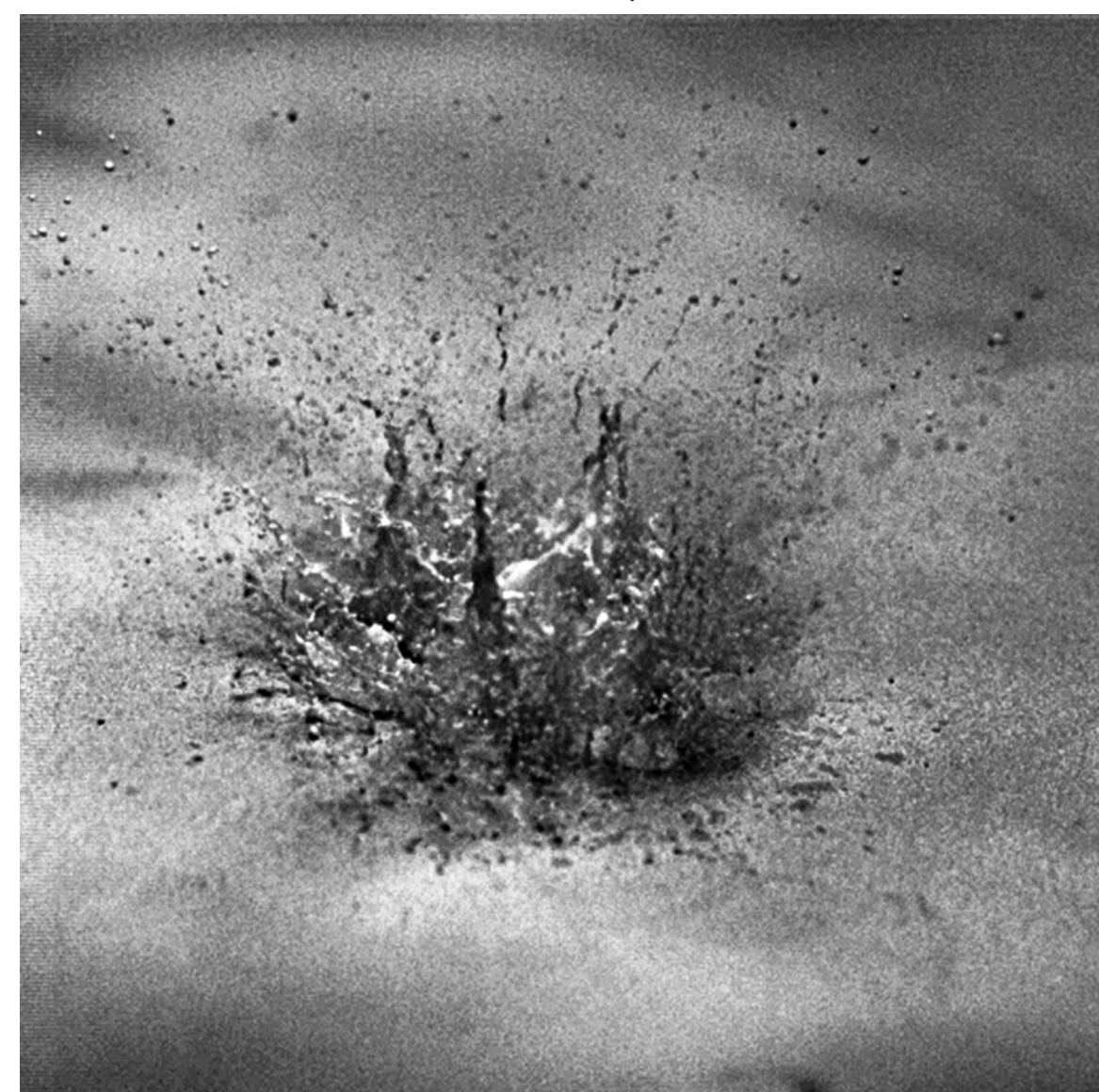

(a) 1896 μs (brown marks are the wetted areas on a metal substrate)
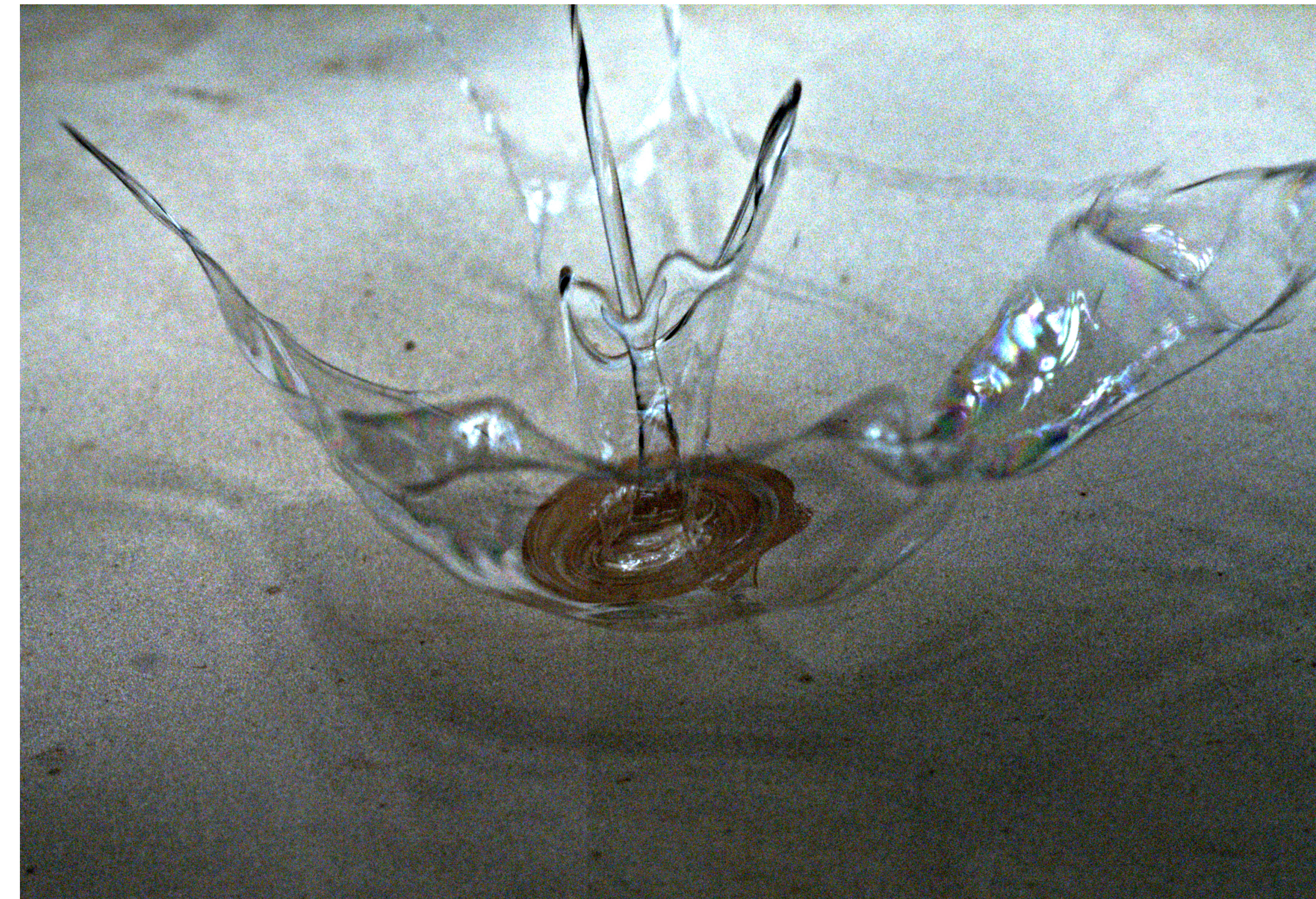

(b) 632 μs

(c) 948 μs

(d) 1580 μs

(e) 1896 μs

Figure 1 : Disintegration of a 0.05 ml droplet; time stamps are given from the electromagnetically-induced shock impact; in the photos (c-e) TiO_2 was added.

Glycerol droplet

(a) 1896 μs
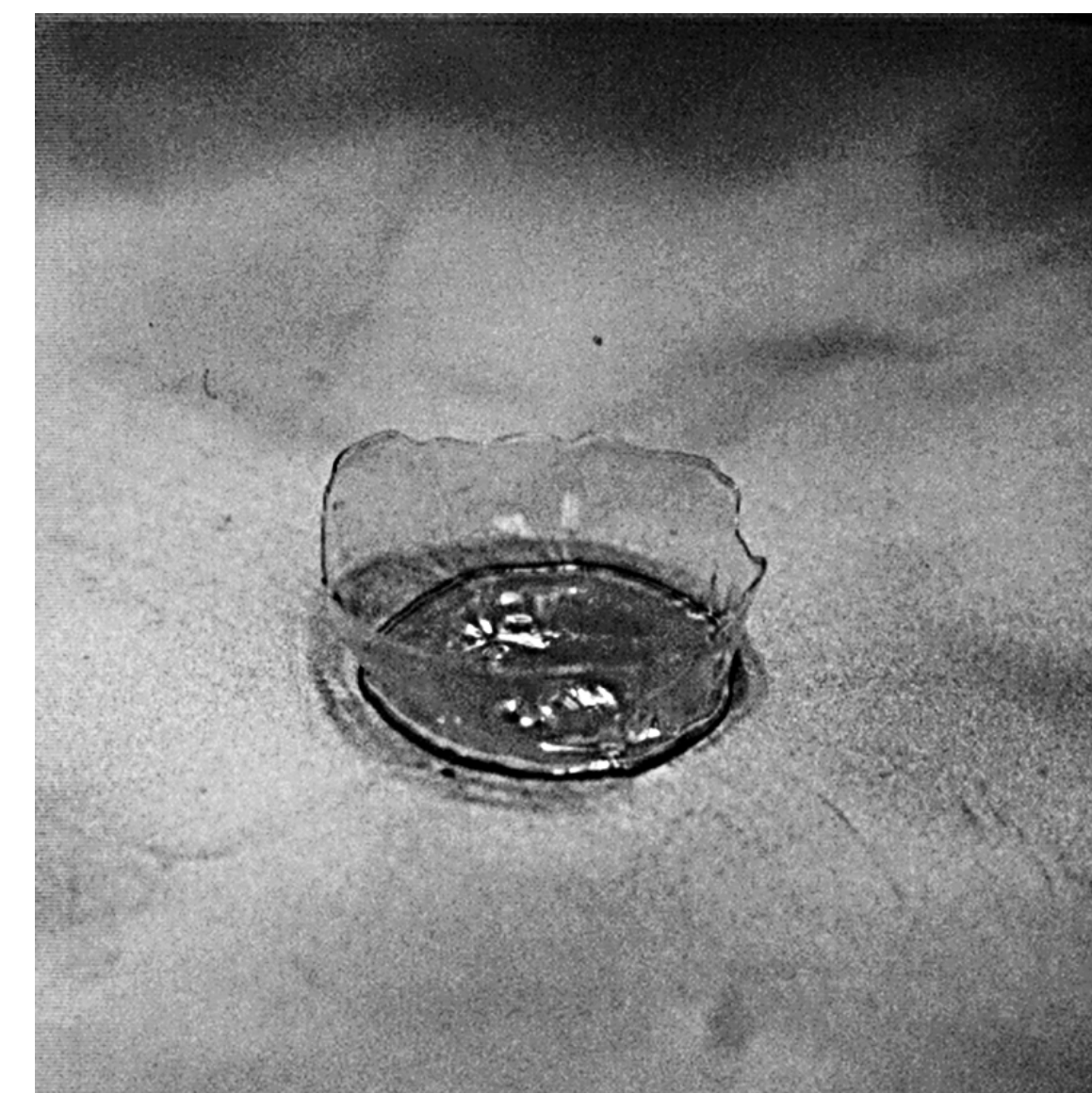

(b) 632 μs

(c) 2212 μs

(d) 632 μs

(e) 1896 μs

Figure 2 : Deformation of a 0.05 ml droplet; time stamps are given from the electromagnetically-induced shock impact; in the photos (d-e) TiO_2 was added.
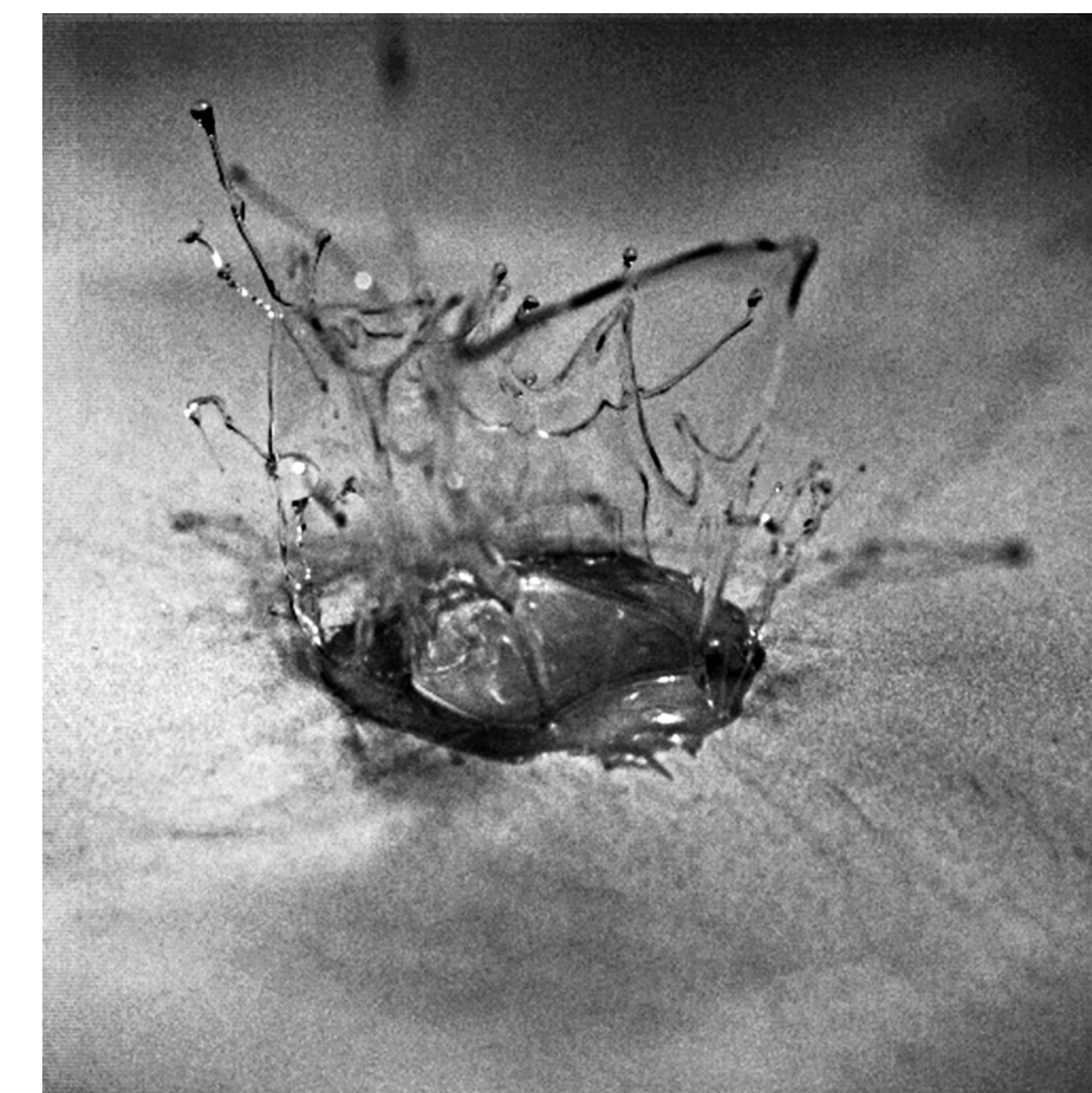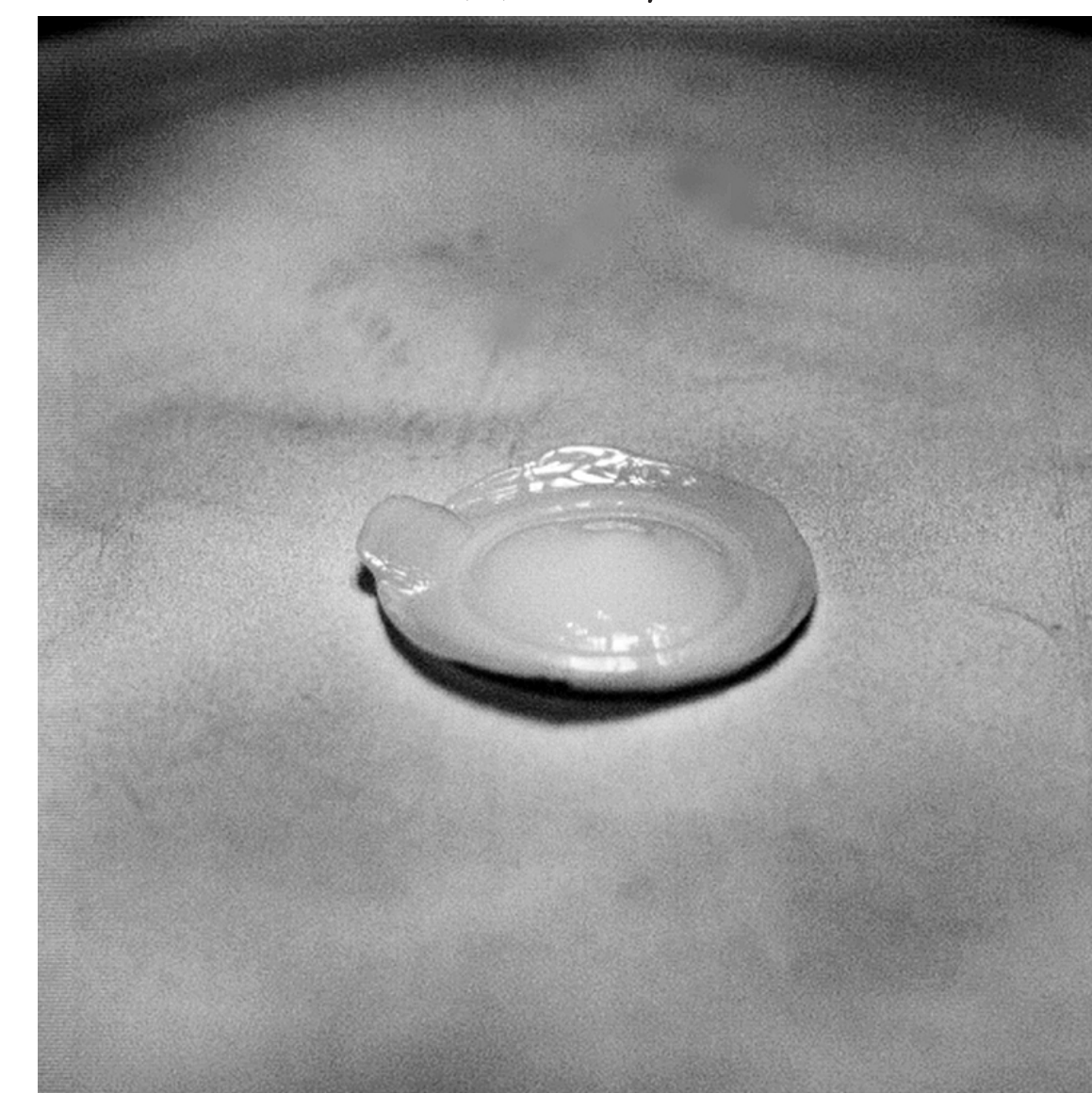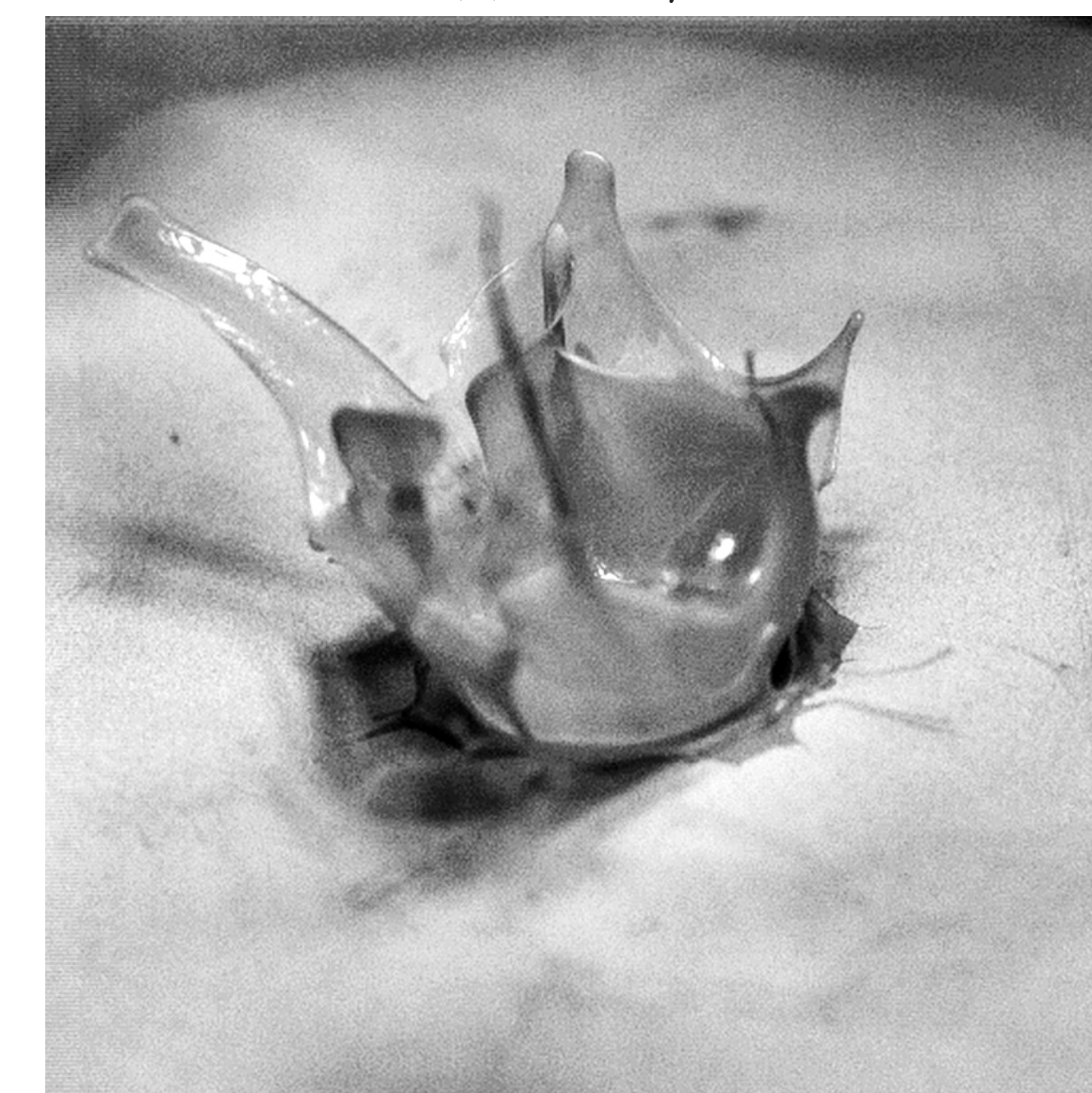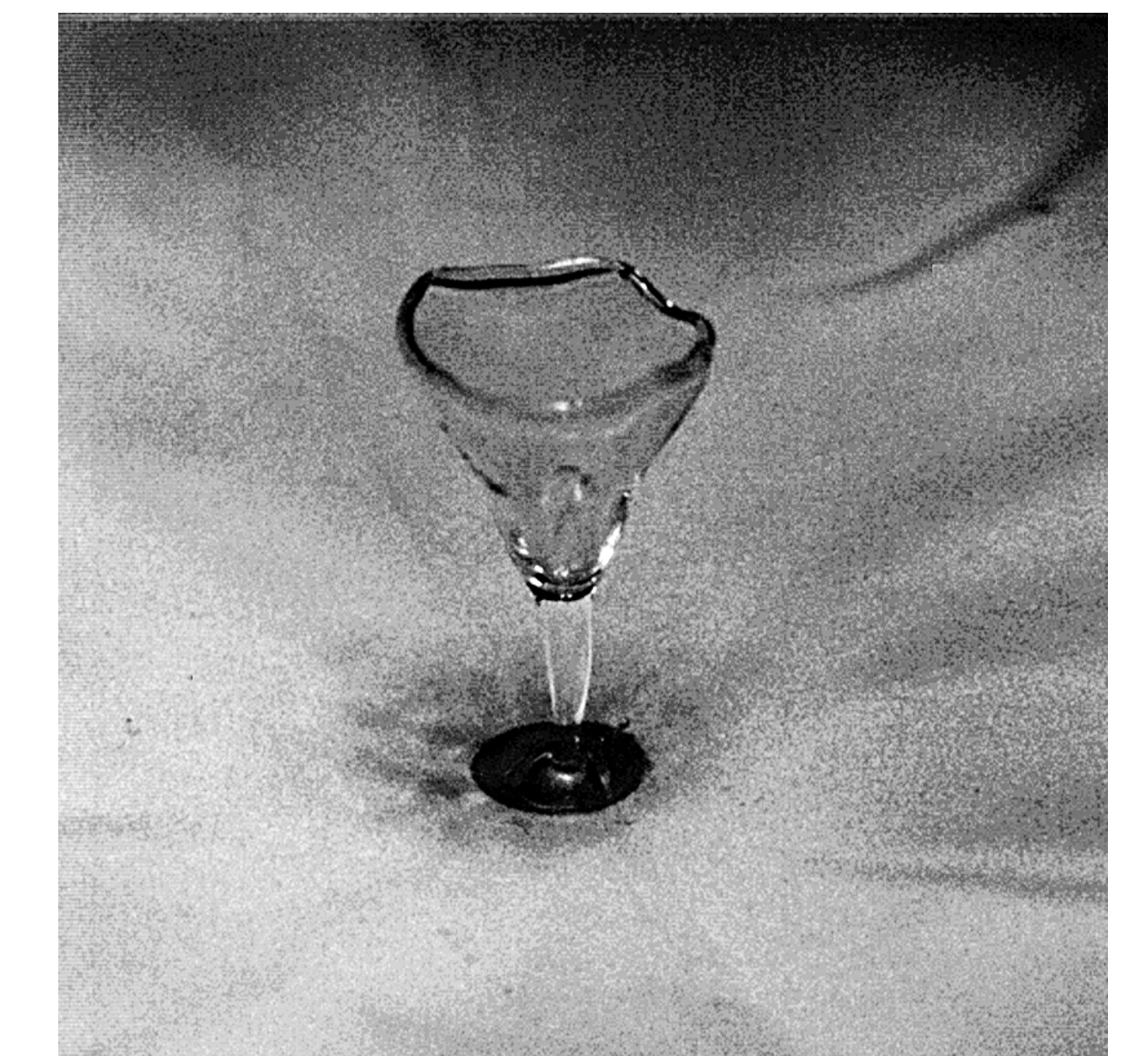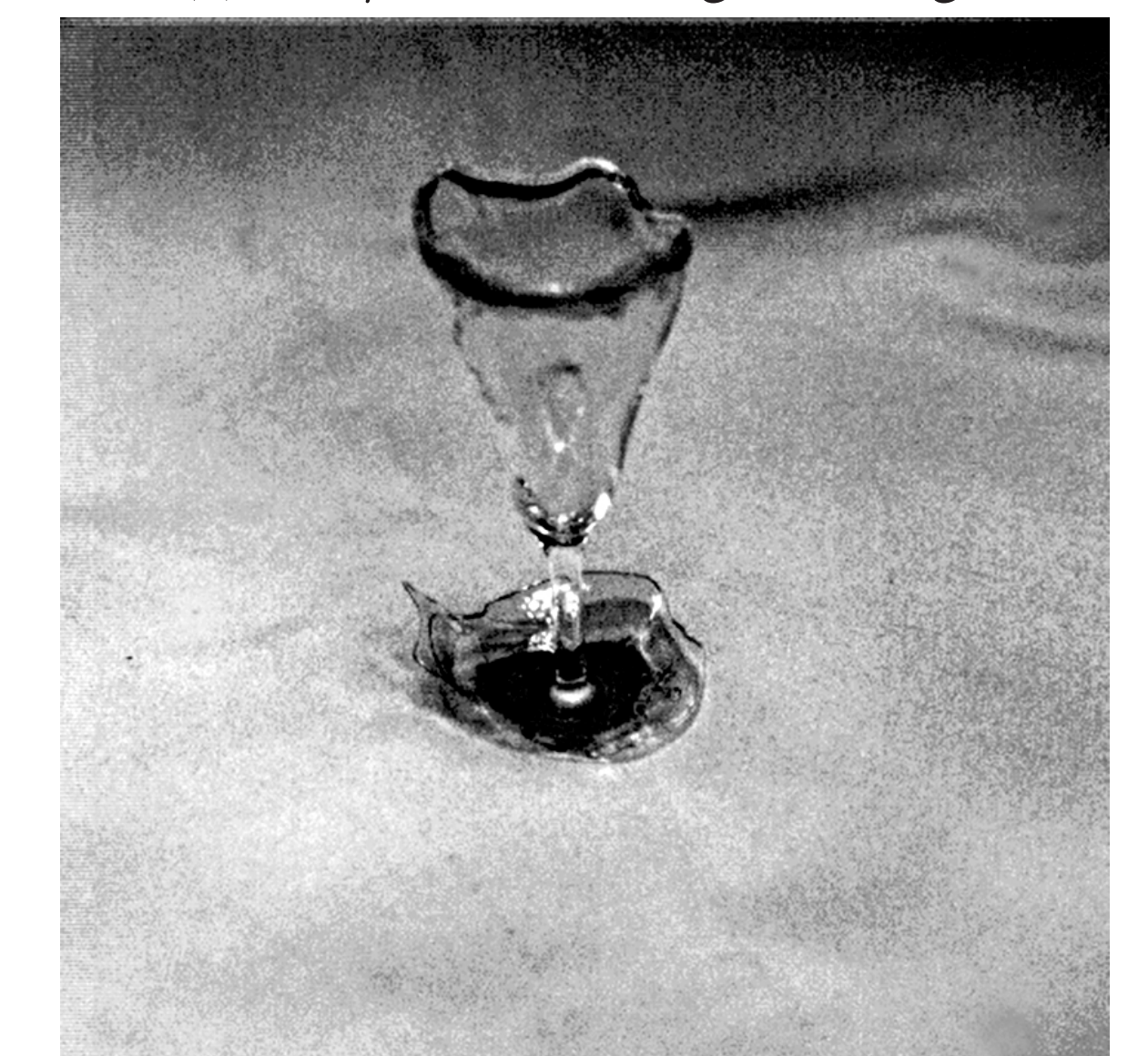
Sugar-water droplet

(a) 2258 μs

(b) 645 μs – "cocktail glass" stage

(c) 968 μs – "martini glass" stage

(d) 1264 μs – "mushroom glass" stage

(e) 1290 μs – back to "martini glass" stage

Figure 3 : Deformation of a 0.05 ml droplet; time stamps are given from the electromagnetically-induced shock impact.