Figure S1:

The AFM 2D image and the arbitrary hole scanning plot of sample F3 are shown in Figure S1. Obviously, the hole is approx 220 nm deep, which is similar to the thickness of the film (224 nm), indicating that the holes on the films go through the film from top to bottom.

Figure S1. AFM 2D image (a) and the arbitrary hole scanning plot (b) of sample F3 a sharp tip
Figure S2

Figure S2. The H₂ bubbles generated from the hydrolysis process of PMHS