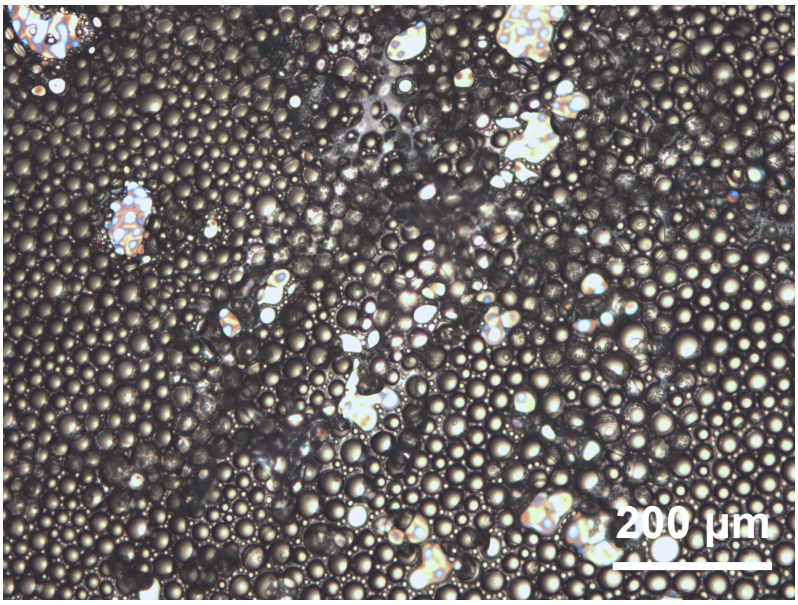


**Figure S1.** Optical microscope image of PDMS dielectric film in sensor from Figure 4(c) at lower magnification (100x).

A lower magnification image of the PDMS dielectric in the sensor from Figure 4(c) reveals some defects in the film, in particular unpatterned patches. Such patches could either contain unpatterned PDMS or exposed electrode with no PDMS. Unpatterned PDMS would contribute to greater hysteresis, as it would cause the film to behave slightly more like a completely unpatterned PDMS film dielectric, and likely results from PDMS not fully filling the pores in those areas. Exposed electrode, on the other hand, would reduce hysteresis due to the removal of compressible material and the compression of air instead of PDMS in those regions. Such empty patches can be due to poor transfer of the PDMS to the electrode.

The presence of some structures in the patches in Figure S1 and their iridescent appearance indicates that the patches likely contain unmolded PDMS, which would justify its having greater hysteresis than the sensor in Figure 4(b) despite its having domes with seemingly high aspect ratios (10.45 kPa compared to 7.85 kPa).