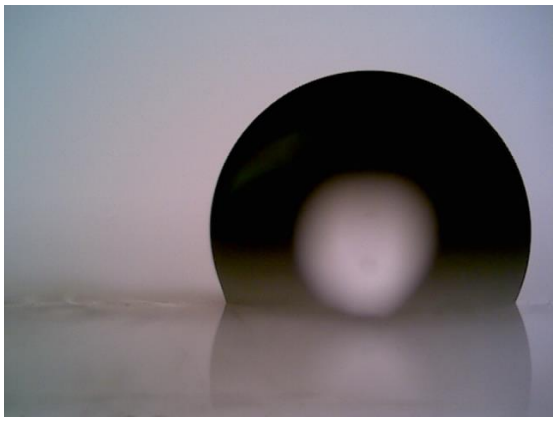
Surface wetting properties

The contact angle between the fluid and the droplet generator surface is key for defining the stability of the wetting of the continuous phase. If the wetting is more preferential for the dispersed phase, pinning of the droplets to the channel can occur. The standard uncoated droplet generators of Micronit are glass based, thus hydrophilic and are suitable for making organic droplets in an aqueous phase (oil-in-water droplets). It is possible for Micronit to provide a coating which renders the surface of the droplet generators hydrophobic, thus suitable for making aqueous droplets in an organic phase (water-in-oil droplets). This coating is based on a fluorinated polymer and ensures the coated surface has a contact angle of more than 90° with water.



Hydrophobic surface coating