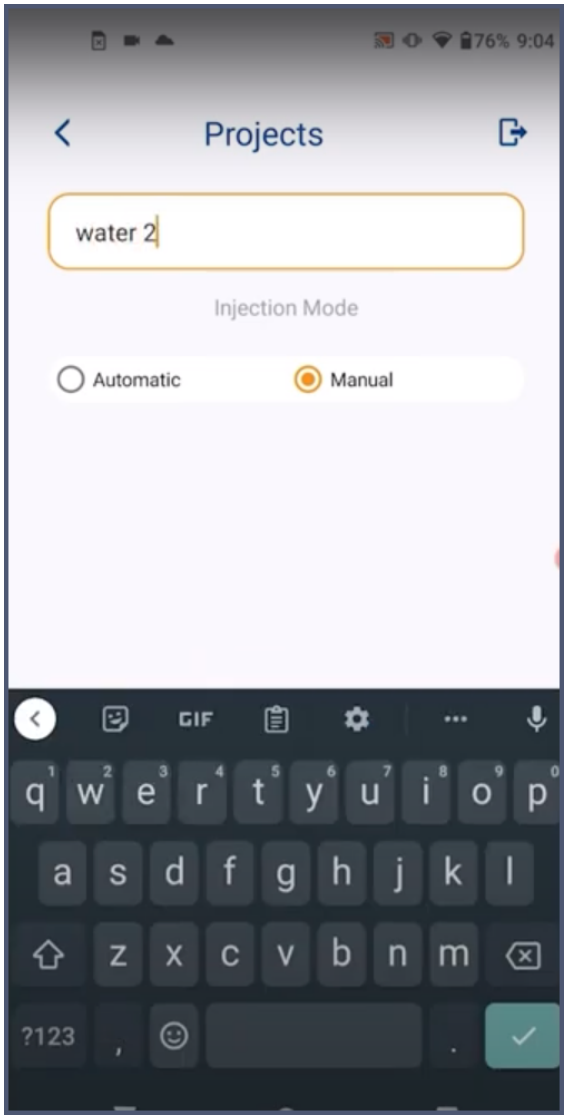
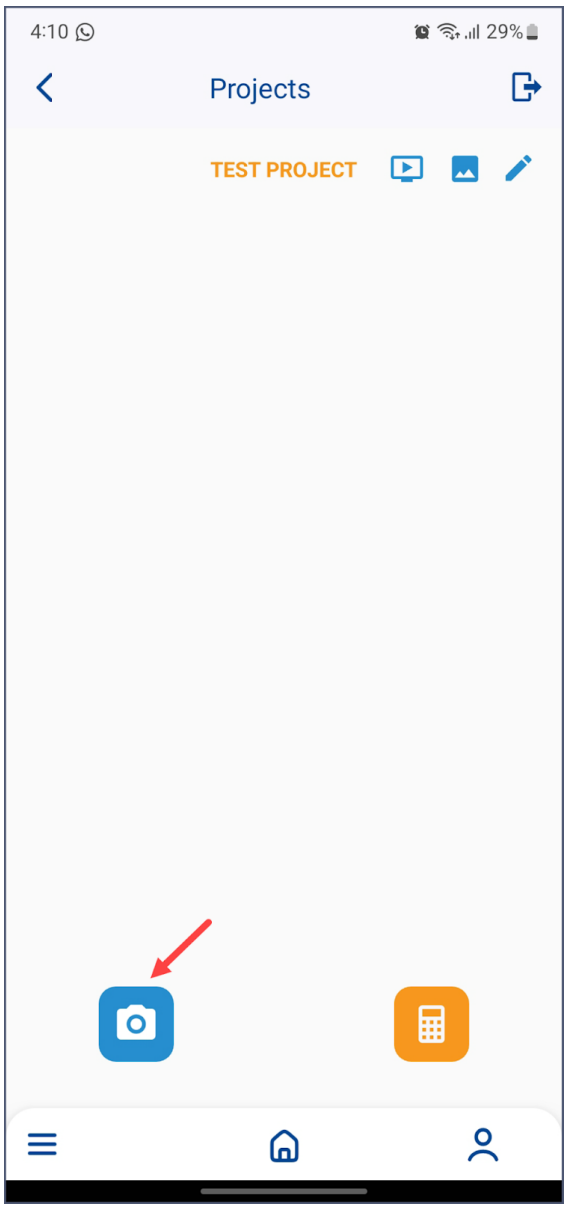
How does the Sliding Angle Measurement Work?

Measurement Process · https://dropletlab.com/knowledge-doc/how-does-the-sliding-angle-measurement-work/

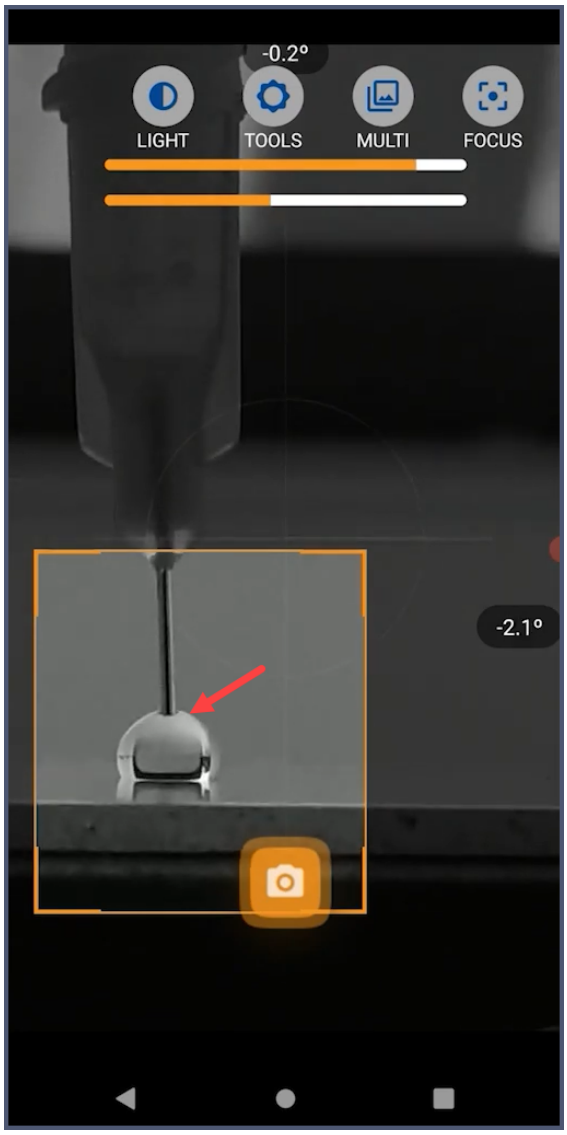
1. Sliding angle measurement is best-suited when there is a need to slide the stage and capture multiple images as the droplet slides on the surface.
2. Like the other types of measurement, the process for project creation is similar.



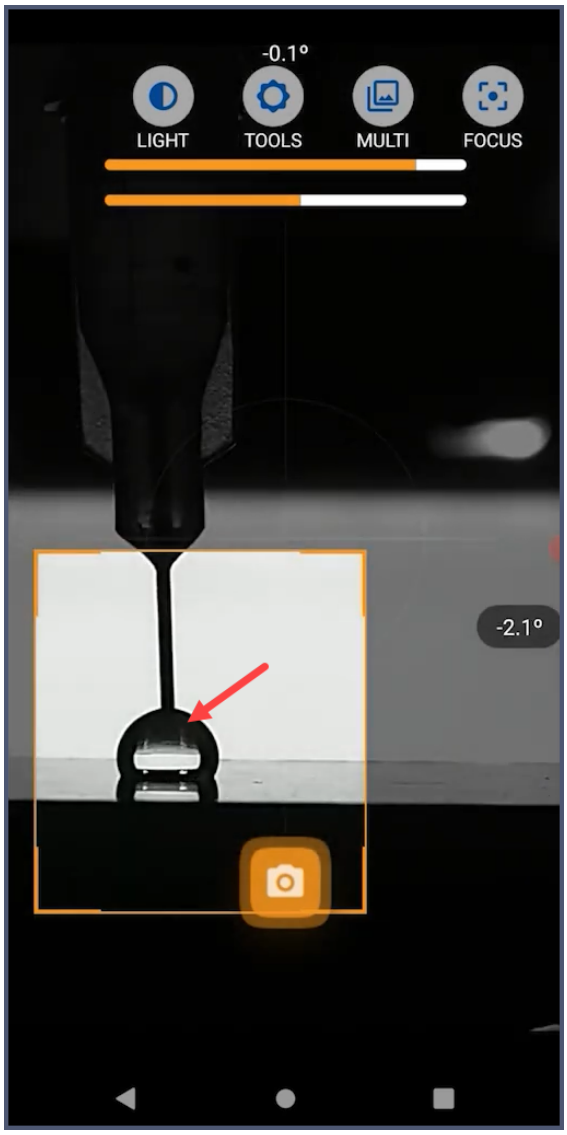
3. Once a project is created, select the project and tap the blue image capture button located at the bottom-left corner of the screen.



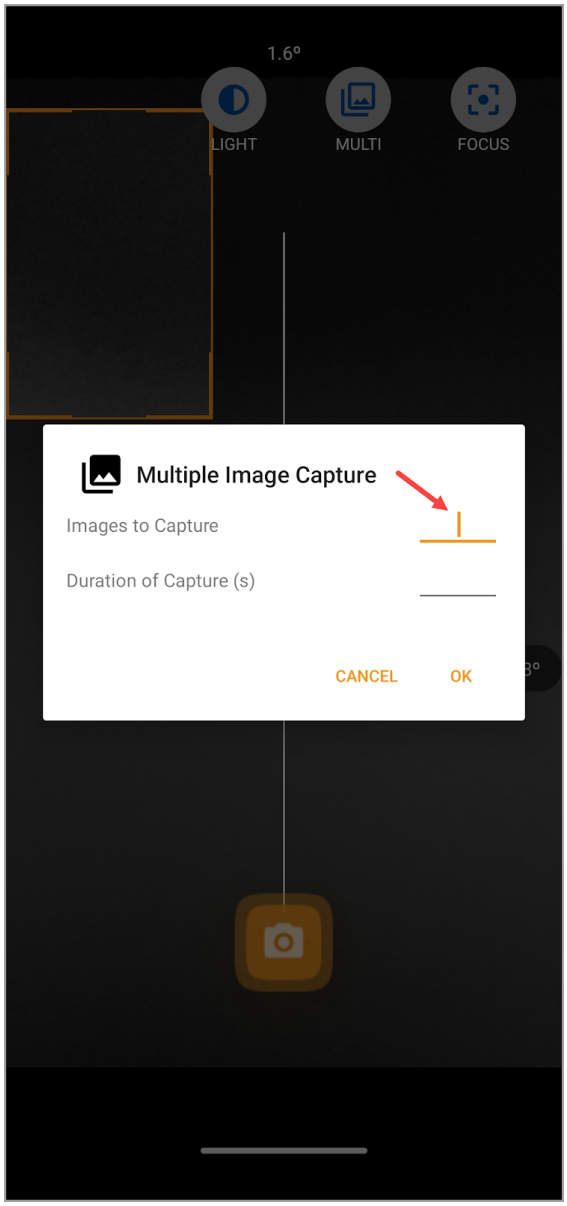
4. Doing so opens the camera for you to capture the distance from the needle.
5. Here, adjust the orange box to define the area of interest.



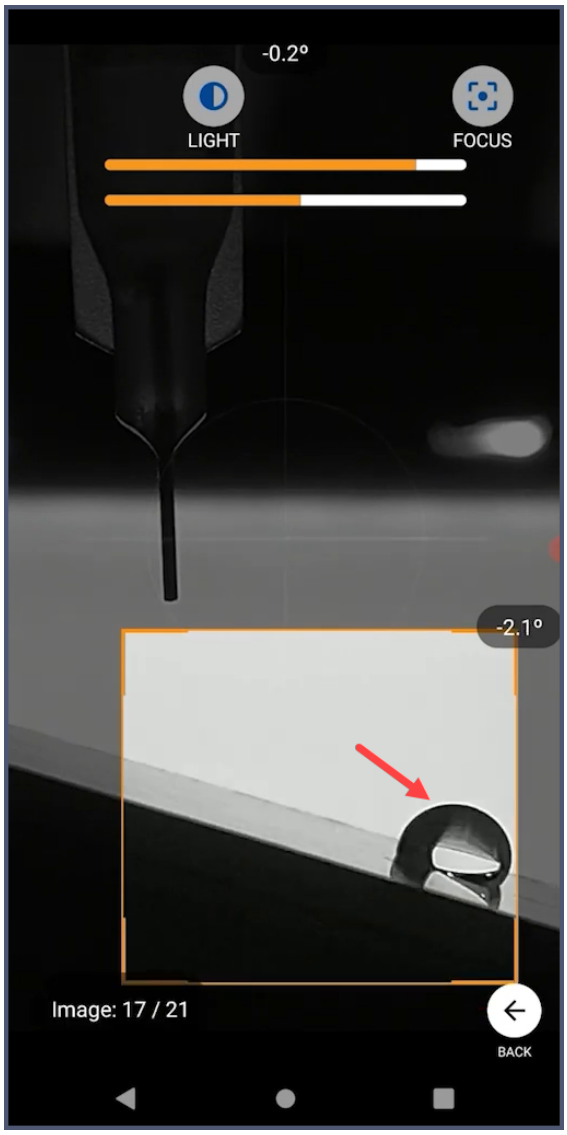
6. Once the area is defined, use the focus slider to focus on the droplet.
7. After that, adjust the LED light to ensure the best possible contrast between the droplet and image background is achieved.



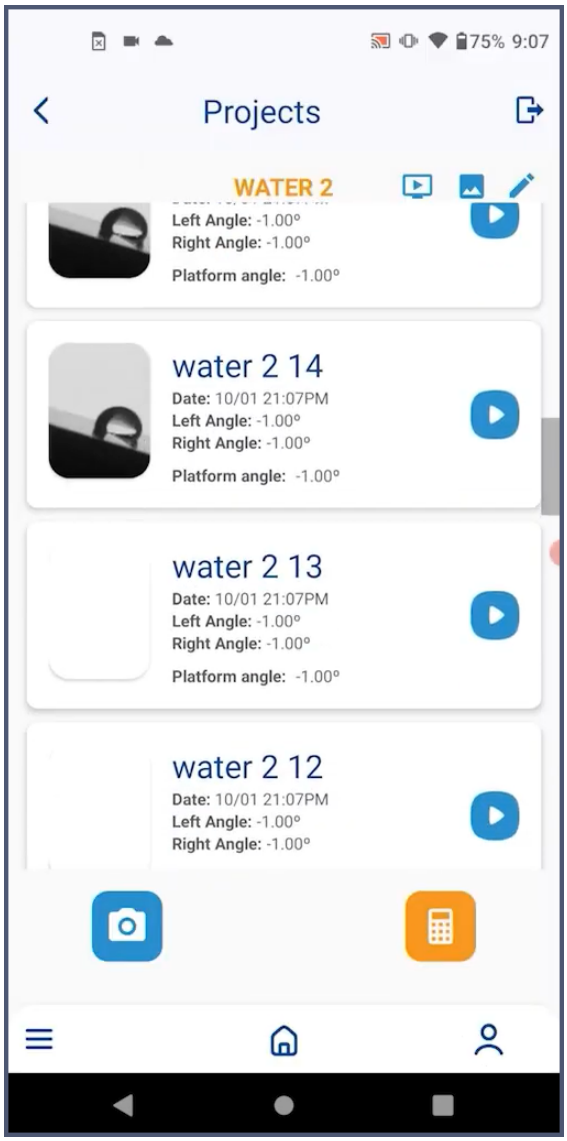
8. For this type of measurement, it is recommended to use the multi-capture feature when the droplet is close to the roll-off angle. You can learn how it works by reading How to Capture Multiple Images? article.



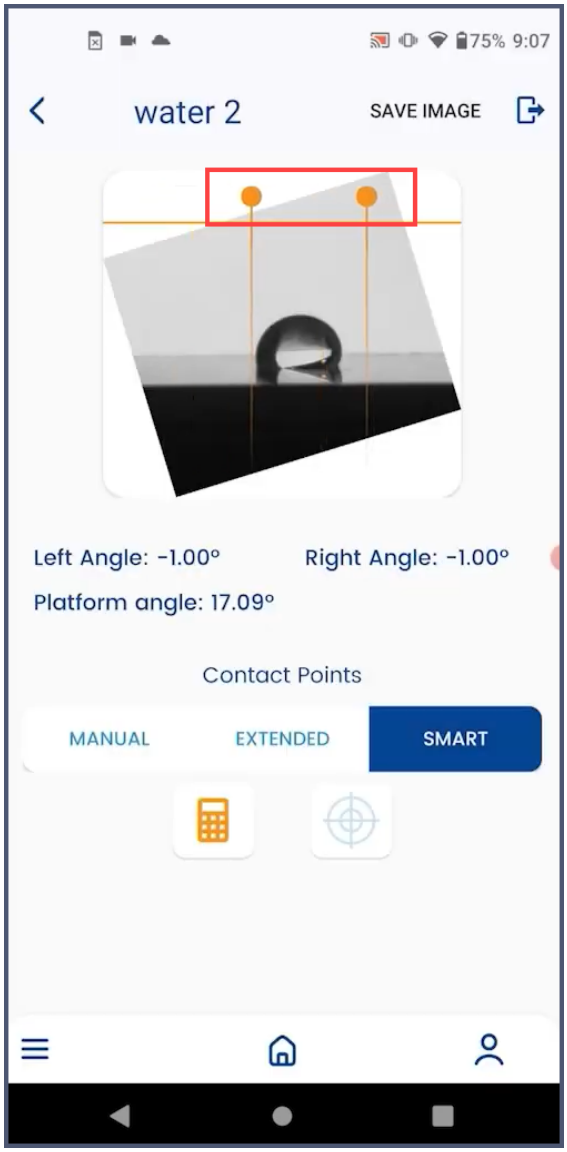
9. Upon doing that, start tilting the stage to get the sliding angle. Hit the capture button to capture the images.
10. Continue tilting the stage until the droplet starts sliding off.



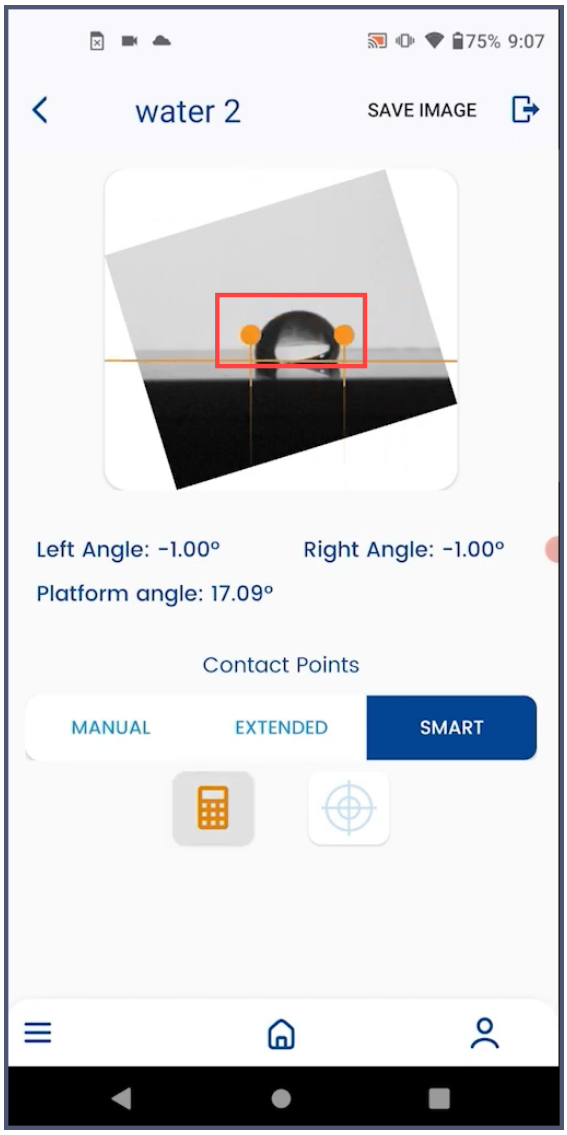
11. As the images are captured, tap one of the images to take measurement. Doing so opens the measurement details screen.



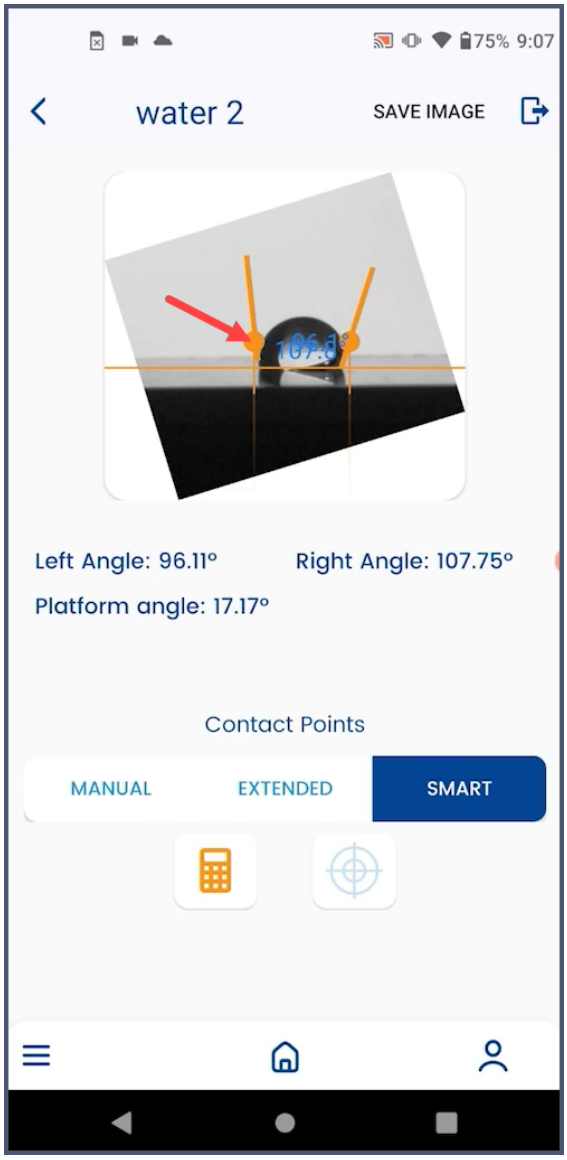
12. For sliding angle measurement, you only need to provide an estimation of baseline along with the right and left contact points.



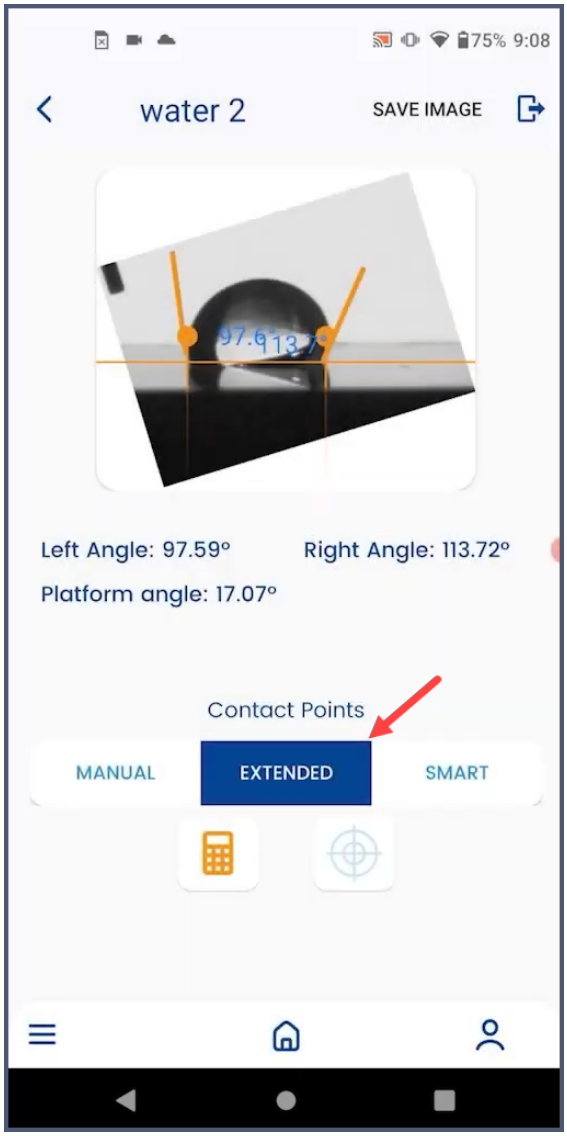
13. The exact contact points are then automatically detected by the system.



14. To complete the measurement process, tap the calculate button.
15. In some cases, a base point is not measured at the baseline. To address this issue, you can adjust the brightness during image capture. For instance, in the image below, the left contact point is not measured at the baseline.



16. Alternatively, you can also switch to manual or extended contact points methods.
17. The Extended contact point method uses the droplet profile in order to locate the exact contact angle.



18. Moreover, you can also use a pre-tilted stage for sliding angle measurement. However, you need to adjust the orange cropping window to the area around the droplet in this case.