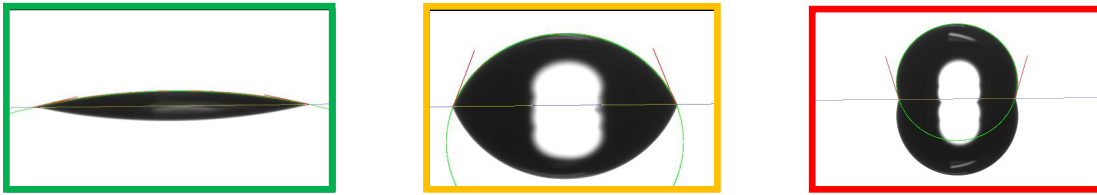


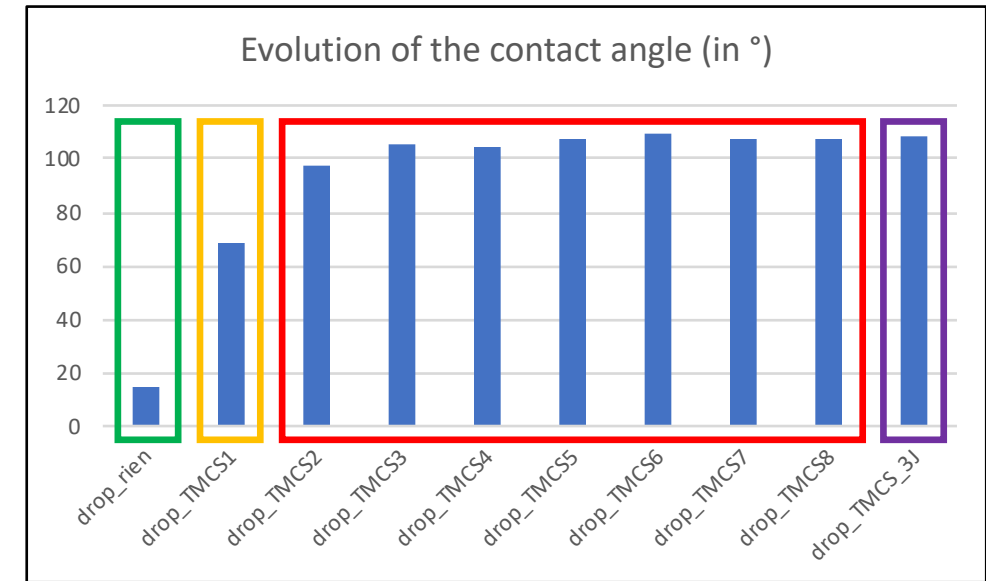
Evolution of TMCS quality

The goal is to characterize the evolution of the TMCS deposition hydrophobicity on a blanket Silicon wafer when subject to multiple PDMS depositions and removals.

For each test, we measure the hydrophobicity by reporting the contact angle of a water droplet.



- We observe that successive PDMS depositions do not harm the TMCS layer.
- We also note that the hydrophobicity has increased and reach an equilibrium higher than TMCS alone.
- Finally, the TMCS surface treatment can undergo a few days without being affected when stored in standard cleanroom environment.
- A 5min plasma O₂ cleaning removes all the TMCS and gives a <10° contact angle



- Measure without TMCS deposition
- Measure after first TMCS deposition
- Measure after consecutive PMDS layers (7)
- Measure after a 7-days storage (PDMS-free)

Machines used :

- Z12 PDMS line (wet bench dessicator, PDMS dispenser, mixer)
- Z16 Kruss DSA-30 Drop shape Analyzer
- Z11 Tepla 300