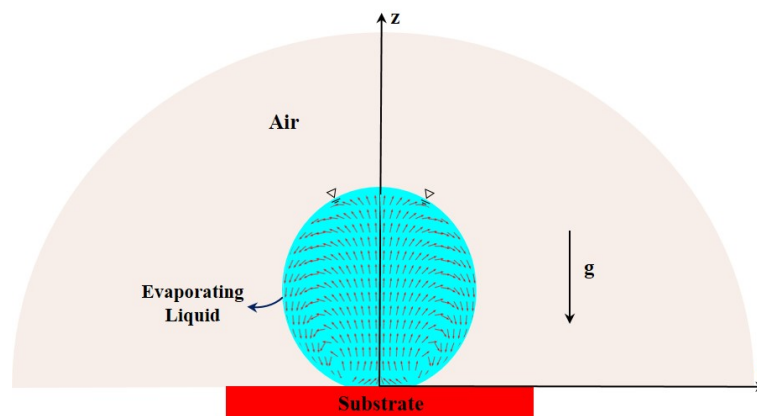


# The effect of Gravity on the Evaporating Droplet on a Superhydrophobic Surface for European Project nanoPaint

Master/Bachelor student  
From now on  
23 May 2023



## Motivation

The fluid flow within the evaporating drop containing small particles is of great importance in many real life applications. Several investigations have been done coping with the droplet placed on hydrophilic and hydrophobic surfaces. Recently, meticulous investigation has been implemented using the superhydrophobic substrate. Therefore, the evaporation behavior and the internal convection for difference scenarios have already been modeled with the help of COMSOL Multiphysics software. However, one missing link is the extent to which the gravity can influence the results. Are you interested in filling this gap?

## Tasks

Within the scope of this job, the already CFD set-up is expected to be further developed focusing on the gravity impact on the internal convection. The results of this work will be validated by the available experiments under the nanoPaint European Union project. The tasks are as follows

- Adding the gravity in the related equation
- Implementing parametric analysis
- documentation of the results

## Requirements

- Experience on performing simulation
- willingness to develop new skills
- Structured way of working

## Contact

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