

The authors would like to dearly thank the referee for their kind comments as well for their time spent reviewing our work. For each comment of improvement that was made by the referee, we as authors present our response (*comment shown in italics*).

- *Please make your abstract rather short and condensed. Throughout it, you should briefly summarize the major aspects of the entire study. In few abstracted sentences, feel free to single out a sequence of (for example): the key findings, cardinal design of the study, as well as the overall purpose of the educational problem you have investigated to find the answer to.*

We consider this comment as well pointed out since the abstract was rather extended. Therefore, we simplified and condensed the abstract making sure all the key elements of the work were still mentioned but without the unnecessary wording.

- *If by any chance there exists a borrowed copyrighted image not generated by the authors themselves or published somewhere else even in one of the cited references, please pay attention that this might raise copyright issues on using images on one's own in the publication. If this be the case, I recommend that the authors address this question to the editor as soon as possible; otherwise, feel free to disregard the subject. Moreover it is uncertain in what manner websites, such as [http://www.ginfab.com/feeds/angle\\_measurement/](http://www.ginfab.com/feeds/angle_measurement/), are permitted by the publisher. Thus, you are kindly referred to the editor, as well.*

In order to avoid any copyright issues with the imagery used in our work, there were 3 different approaches used. In the first case, the image was replaced and an image of our own was used in its place (ex. Figure 1 b)). In the second case, changes were made to the image itself in order to be considered an adaptation from the original work, thus not being issues with copyright. The third and final case was with imagery used for didactics purposes. Using copyrighted images for teaching and education is generally considered fair use, which does not violate copyright laws and is allowed under fair use exemptions (U.S. Code, Title 17, Chapter 1, Section 107).

As for the usage of the website in our work, the link itself has been removed in order to elude by copyright infringements.

- *Graphs in the figures must not jeopardize their clarity and they should be presented in such a way to save readers time and energy, as well as to help them understand the manuscript contents. That is why the label font should be large enough to be readable. Some of the graphs should of rather enhanced quality (they are very poor and distorted at this stage) to higher resolutions. Please improve this.*

The graph in question (Figure 5) was "tempered with" in order to improve its readability as well as make it more easily understandable for the reader.

- *Adhesive and cohesive (intermolecular) forces define the degree of wettability. Cohesive forces affect in-between the same type of molecules, whereas the adhesive interaction is between unlike molecules. The balance between these forces is what defines the degree of wettability. Please stress/discern these subtleties somewhere in the manuscript because certain rose petals are known to be superhydrophobic with high adhesion. On the other hand, there are rose petals which are superhydrophobic with low adhesion similar to the lotus leaf.*

The reason we, as authors, never addressed this is because the scientific content as well as the corresponding teaching activities were focused on two specific rose petal variants (Bairage and Showtime) for which the

wettability is not extensively analyzed, whereas the adhesion is heavily studied and experimented on in the teaching activities. Despite that, an addition was made in page 3 regarding the adhesive and cohesive forces.

- *Please devote a (sub)section to contact lines in motion at infinitesimally small velocities under quasistatic conditions. Even when the motion is extremely slow, we observe that there is a difference between the contact angles of a liquid with the substrate, depending on the direction of the motion of the contact line. This effect is due to the presence of surface roughness or chemical inhomogeneity on the solid surface. There is an advancing  $\theta_A$  contact angle (more air across the rough surface in front to traverse; thence less wetting,  $\theta_A > \theta_Y$ ) and a receding  $\theta_R$  contact angle (more water across the rough surface left behind by the heading part; thence more wetting,  $\theta_Y > \theta_R$ ), where  $\theta_Y$  is contact angle contained in Young's formula when we place a liquid drop on a clean, planar solid surface (thoroughly static case).*

Contact lines were initially dismissed by us since only pictures and images were used in the experimental process by the students. Still though, it is an important addition in the scientific content part of the work (page 5). Despite the importance of the contact lines in the full understanding of the phenomenon, as authors we considered to be rather complicated and intricate for the students to be studying and experimenting upon, therefore no didactic transformation through the MER Model was made for a teaching activity to be created.

- *Contact angle hysteresis,  $\Delta\theta = \theta_A - \theta_R$ , can be perceived as beneficial and/or detrimental. It is thus important to understand it. Please, explore these intriguing aspects. I recommend D. Quéré, *Wetting and Roughness*, *Annu. Rev. Mater. Res.* **38**, 71 (2008) for further reading.*

This is an important part for the students to have a complete idea of the contact angle hysteresis and how it functions. Therefore it was crucial addition to the "characterizing the water droplet" activity in page 10. Unlike the previous comment, this was more important to be added in the teaching activity itself.