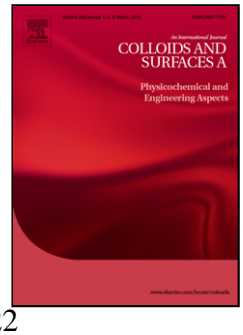

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Sessile Drop Evaporation under an Electric Field

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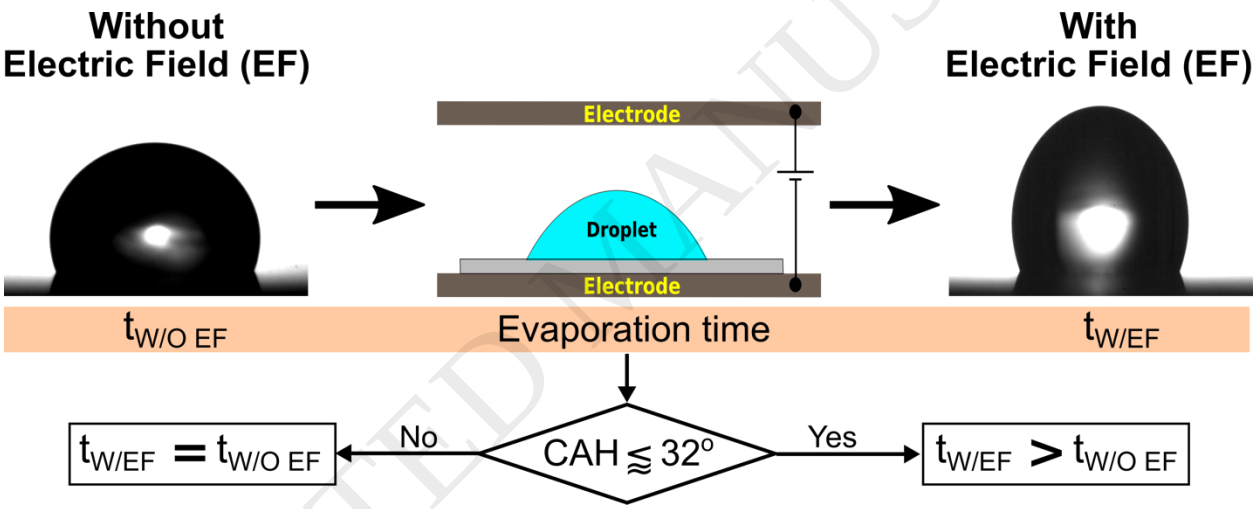
Graphical Abstract



Abstract

In this study, for the first time, the natural (diffusion-limited) evaporation of a sessile drop under an electric field was experimentally examined. A sessile drop natural evaporation is affected by the geometry of the drop, e.g. baseline, contact angle, and surface area, which all can be changed in the presence of an electric field. As such, first, the effect of electric field on sessile water droplet geometry was studied, together with how it differs for surfaces with various contact angle and contact angle hysteresis (for both hydrophilic and hydrophobic