

Projet H2020

DEW



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Detachment of water: Light triggered water droplet release from biomimetic honeycomb-structured polymer surfaces



Inspired by the *Stenocara* beetle, the long term vision for this project is the development of biomimetic smart polymer surfaces which can capture water from humid night air and release it upon exposure to the morning sun through a light triggered mechanism.



In moving towards this goal, this project will synthesise new honeycomb structured porous films from light sensitive block copolymers. Their unique hierarchical structure on both the micro- and nano-scales will be exploited for the adhesion of water droplets to the surface, and the light sensitive entities will allow switching of the surface properties to trigger droplet detachment.