

ESPCI

Laboratoire PMMH 10 rue Vauquelin, 75231 Paris Cedex 05



Séminaire café - PMM

Bureau d'Études, Batiment L, 2 ème étage Jeudi 18 mai 2017, 13h30

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Drop trampoline

Superhydrophobic substrates inspired from the lotus leaf have the ability to reflect impacting water drops. They do so very efficiently and contact lasts typically 10ms for millimetric droplets. Yet unlike a lotus leaf most synthetic substrates are rigid. Focusing on the interplay between substrate flexibility and liquid repellency might allow us to understand the dynamic properties of natural surfaces. In our experiment, we perform liquid marbles (a model for non-wetting drops), impacts at velocity V onto thin $(20\mu m)$ stretched circular PDMS membranes. The bouncing mechanism is drastically modified compared to that on a rigid substrate : the marble is shot upwards as it is spread in a disk shape.

Prochain séminaire : jeudi 08 juin 2017 à 13h30, À déterminer.