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# CO<sub>2</sub> mass flux from a levitating carbonated droplet

Hugo Delrieu<sup>\*1</sup>, Philippe Bourriane<sup>2</sup>, Laurent Duchemin<sup>1</sup>, and David Quéré<sup>1</sup>

<sup>1</sup>Physique et mécanique des milieux hétérogènes – Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris, Sorbonne Université, Centre National de la Recherche Scientifique, Université Paris Cité – France

<sup>2</sup>Physique et mécanique des milieux hétérogènes – PMMH, CNRS, ESPCI Paris, Université PSL, Sorbonne Université, Université Paris Cité – France

## Résumé

A droplet placed on a superhydrophobic surface stays on the top of the textures, resulting in a quasi-spherical shape, a highly diminished adhesion and high mobility. When a carbonated droplet is placed on such surface, the emission of gas creates a cushion on which the drops sits, achieving a state of levitation. This system is analogous to the well known Leidenfrost effect, but in an athermal form. We aim to study the conditions of stability required for the onset of this phenomenon. Here, we use interfero-microscopy to reconstruct the water-gas interface beneath the drop, and we present a new method based on a numerical determination of static leidenfrost drop shapes that allows us to extract the corresponding emitted gas flux underneath the drop.

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\*Intervenant