# Article information:

Mapping coalescence of micron-sized drops and bubbles - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S0021979716308074?via%3Dihub>

# Article summary:

1. This article discusses the conditions under which micron-sized drops or bubbles coalesce in the presence of colloidal forces and hydrodynamic effects.

2. It provides an understanding of how equilibrium surface forces vary with film thickness, and how hydrodynamic effects can stabilize collisions that are unstable at equilibrium.

3. The article also examines conditions for which drop or bubble collisions become unstable upon separation, caused by negative hydrodynamic pressure in the film.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy, as it is based on a previously validated numerical model and provides detailed information about the conditions under which micron-sized drops or bubbles coalesce in the presence of colloidal forces and hydrodynamic effects. The article also provides an understanding of how equilibrium surface forces vary with film thickness, as well as examining conditions for which drop or bubble collisions become unstable upon separation due to negative hydrodynamic pressure in the film.

The article does not appear to be biased or one-sided, as it presents both sides of the argument equally and does not make any unsupported claims. Furthermore, there is no promotional content present in the article, nor any partiality towards either side of the argument. The article also notes possible risks associated with its findings, such as when scaling analyses are not applicable for constant force collisions where the approach timescale is comparable to the coalescence timescale.

In terms of missing points of consideration or evidence for claims made, there does not appear to be anything missing from this article; all relevant points have been discussed thoroughly and supported by evidence from previous studies. Additionally, all counterarguments have been explored adequately and no unexplored counterarguments remain unaddressed.

# Topics for further research:

* Colloidal forces and hydrodynamic effects
* Equilibrium surface forces
* Film thickness and coalescence
* Scaling analyses for constant force collisions
* Approach timescale and coalescence timescale
* Negative hydrodynamic pressure in films

# Report location:

<https://www.fullpicture.app/item/5207097aa6a7317135a0507134e88b21>