

Abstract Submitted  
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**Particle agglomeration through Marangoni Bursting**<sup>1</sup> CAROLA SEYFERT, BRYAN VERVELD, ALVARO MARIN, Univ of Twente — Marangoni Bursting occurs when a two-component drop, containing water and alcohol, is deposited on an oil bath (Keiser et al. PRL 118.7 (2017): 074504). The two miscible components water and alcohol have different volatilities and surface tensions, leading to a Marangoni flow from the drop center outwards. The thickened rim of the drop becomes unstable and ejects a myriad of tiny droplets, which evaporate further on top of the oil bath. The alcohol concentration in the initial water-alcohol mixture tunes the droplet size distribution of the bursting, with higher alcohol concentrations leading to smaller droplets. In this work, we add colloidal particles in diluted concentrations to the mother drop. Following the Marangoni Bursting, the tiny droplets dissolve and evaporate, turning into small particle clusters, which sit on top of the oil bath. We elaborate on the influence of parameters like alcohol and particle concentration, as well as particle size, on the final particle clusters.

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Carola Seyfert  
Univ of Twente

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