Supporting Information

Patterns from Drops Drying on Inclined Substrates

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1. Distribution of 20 nm particles in the patterns formed on highly wetting glass substrate



Figure 1: The distribution of particles in the evaporative patterns, quantified as volume fraction of the particles deposited in the lower half, VF_A , resulting from drying drops of 1 μl volume containing 1 wt% (i) 0.06 μm diameter particles drying on substrates of lower wettability ($\theta \approx 45 \pm 2^{\circ}$ and $\theta \approx 85 \pm 3^{\circ}$) and (ii) 0.02 μm diameter particles (amidine functionalized polystyrene latex) drying on highly wetting substrate ($\theta \approx 19 \pm 1^{\circ}$) are compared.

The evaporative patterns resulting from drying drops of 1 μl volume containing 1 wt% (i) 0.06 μm diameter particles drying on substrates of lower wettability ($\theta \approx 45 \pm 2^{\circ}$ and $\theta \approx 85 \pm 3^{\circ}$) and (ii) 0.02 μm diameter particles (amidine functionalized polystyrene latex) drying on highly wetting substrate ($\theta \approx 19 \pm 1^{\circ}$) are considered to quantify the deposition of particles in the lower half of the deposit pattern. The distribution of particles in the evaporative patterns quantified as volume fraction of the particles deposited in the lower half VF_A is plotted in figure 1. Analysis of the results pertaining to deposits consisting of 0.06 μm diameter particles can be found in the research article. On a highly hydrophilic substrate ($\theta = 19 \pm 1^{\circ}$), drying of drops containing 0.02 μm diameter particles in sessile and pendant drop mode always result in symmetric coffee ring patterns, which can be inferred from the fact that $VF_A \approx 0.5$ Although, VF_A is slightly higher at intermediate substrate orientation, within the experimental uncertainty, the distribution of particles across the two halves appears similar, a result identical to that obtained for the case of 3 μm and 0.5 μm particles (see Figure 5 in the article).

2. Side view of drying drops:



Figure 2: The side view of the drops (of 1 μl volume) placed on substrates of different wettabilities at various inclinations at the start of evaporation experiments (t=0) are shown. Such images are recorded during the course of evaporation to monitor the temporal evolution of geometrical parameters such as drop height, radius of the contact line, contact angle at the advancing side and receding side.