

## Measuring charge transfer of contact electrification by droplet deposition on corrugated surfaces.

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Contact electrification is the phenomenon that materials become electronically charged by materials contacting or rubbing against each other. Here we investigate the charge transfer between a droplet and a particle monolayer [1,2]. The particle monolayers consist of PMMA, MF and SiO<sub>2</sub> with different radii to investigate the influence of curvature on the charge transfer process. In addition, the wettability and hardness of the particles are varied as well as the relative humidity conditions. We found that not only the charge transfer is affected by the different monolayers, also the particle arrangement is affected by the droplet deposition and is dependent on the particle properties. For layered materials, the layer thickness dependence on the charge transfer process is investigated.

### References:

**[1] Toward the Assembly of 2D Tunable Crystal Patterns of Spherical Colloids on a Wafer-Scale**

Kai Sotthewes, Gijs Roozendaal, Andris Šutka, and Ignas S. M. Jimidar

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**[2] Irreversible Charging Caused by Energy Dissipation from Depinning of Droplets on Polymer Surfaces**

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