

3D Imaging of Water-Drop Condensation on Hydrophobic and Hydrophilic Lubricant-Impregnated Surfaces

Tadashi Kajiya, Frank Schellenberger, Periklis Papadopoulos†, Doris Vollmer and Hans-Jürgen Butt*

Legends of the supplemental movie files S1-S4.

S1. 3D movie of water drops condensing on an ionic liquid impregnated surface consisting of hydrophobic rectangular micropillars ($w = 20 \mu\text{m}$, $s = 20 \mu\text{m}$, $h = 10 \mu\text{m}$). The movie proceeds 20 times faster than the real time. Note that the 3D image is tilted for a clear visualization. In reality, the substrate is placed horizontally.

S2. Movie of three cross sections obtained from the 3D data in S1. A x-y movie cross section at the height of the pillars' top faces ($z = 10 \mu\text{m}$), two x-z cross sections at the purple lines A and B. The movie proceeds 20 times faster than the real time.

S3. 3D movie of water drops condensing on an ionic liquid impregnated surface consisting of hydrophilic rectangular micropillars ($w = 20 \mu\text{m}$, $s = 20 \mu\text{m}$, $h = 10 \mu\text{m}$). The movie proceeds 20 times faster than the real time.

S4. Movie of three cross sections obtained from the 3D data in S3. A x-y cross section at the height of the pillars' top faces ($z = 10 \mu\text{m}$), two x-z cross sections sliced at the purple lines A and B. The movie proceeds 20 times faster than the real time.