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**Effective slippage on superhydrophobic trapezoidal grooves** JIAJIA ZHOU, University Mainz, EVGENY ASMOLOV, Russian Academy of Science, FRIEDERIKE SCHMID, University Mainz, OLGA VINOGRADOVA, Russian Academy of Science — We study the effective slippage on superhydrophobic grooves with trapezoidal cross-sections of various geometries (including the limiting cases of triangles and rectangular stripes), by dissipative-particle-dynamics simulations. Our results demonstrate that the effective slippage depends strongly on the area-averaged slip, the amplitude of the roughness, and on the fraction of solid in contact with the liquid. The simulation results are compared with numerical solutions to the Stokes equation, and show excellent agreement.

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