

Abstract Submitted
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Ant Tower NATHAN MLOT, SHO SHINOTSUKA, DAVID HU, Georgia Institute of Technology — Ants walk via adhesive drops of fluid extruded by their feet. They also use these drops as mortar to build structures such as rafts, bridges and towers, each composed of thousands of ants linked together. We investigate experimentally the construction of triangular ant towers braced by hydrophobic walls. Particular attention is paid to the relationship between tower height and contact angle hysteresis of the wall. We rationalize tower height according to ant adhesion, and tower shape according to the constraints on a column of constant strength.

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