Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Superhydrophobic surfaces obtained by positive and negative replication of microstructures in PDMS MÁRCIO R.S. OLIVEIRA, Polytechnic School of the University of São Paulo, MARIA C.B.S. SALVADORI, Institute of Physics of the University of São Paulo — Until today, researchers have based themselves on nature to choose the best morphology for obtaining superhydrophobic surfaces. In this context, the morphology of a number of hydrophobic plants have been replicated in a variety of materials in order to reproduce their water repellency. Presently, the literature has presented microstructures in the form of tower and pin patterns or other morphologies in the form of protrusions. Contrarily, in the surfaces presented here, the structures contain microcavities that are negative replicas of the morphology that has been explored so far in the literature. In this essay, determination of the wettability of microstrucutured surfaces with positive and negative replicas of three geometries: parallelepiped, cylindrical and hexagonal.

Márcio R. S. Oliveira
Polytechnic School of the University of São Paulo

Date submitted: 30 Dec 2009 Electronic form version 1.4