Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Control of The Morphology of Super-Hydrophobic Surfaces ROBERT WEISS, ANDREY DOBRYNIN, University of Connecticut, XUEYUAN WANG — Textured surfaces consisting of nanometer to micrometer-sized polymer particles were prepared by rapid evaporation of the solvent for a dilute polymer solution. The size and supermolecular structure of the particles and particle aggregates was controlled by the rate of the solvent evaporation. The process is believed to be a spinodal decomposition of the polymer film during casting and the morphology is dictated by pinning the spinodal decomposition process. The surfaces exhibit high water contact angles greater than 150 degrees, making them candidates for applications requiring super-hydrophobicity.

Robert Weiss
University of Connecticut

Date submitted: 17 Nov 2008 Electronic form version 1.4