

Abstract Submitted
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Wicking within forests of micro-pillars MATHILDE REYSSAT, ESPCI-PMMH, CHIEKO ISHINO, Ochanomizu University, ETIENNE REYSSAT, ESPCI-PMMH, KO OKUMURA, Ochanomizu University, DAVID QUERE, ESPCI-PMMH — We describe how a wetting liquid brought into contact with a forest of micro-pillars impregnates this forest. Both the driving and the viscous forces depend on the parameters of the texture (radius b and height h of the pillars, pitch p of the network) and it is found that two different limits characterize the dynamics of wicking. For small posts ($h < p$), the film progresses all the faster since the posts are high, allowing a simple control of this dynamics. For tall pillars ($h > p$), the speed of impregnation becomes independent of the pillar height, and becomes mainly fixed by the radius of the posts.

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