

Abstract Submitted
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Imbibition in porous media BERTRAND LEVACHE, DENIS BARTOLO, Laboratoire PMMH ESPCI ParisTech, CNRS UMR 7636, MAURICE BOURREL, Total Petrochemical France, Pôle d'Etudes et de Recherche de Lacq — We study imbibition of wetting fluid into a uniform porous media made using microfluidic's techniques. We first revisit each phase of the diagram proposed by Lenormand. We then identify an invasion process that has not been seen until now where the invading fluid progress as thin films along the walls of the media. This modifies the problem by changing flows from two to three dimensions. Finally, we focus on this new phase, giving clues for the understanding of its dynamics and characterize it from a morphological point of view.

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