

Abstract Submitted
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Watching the Paint Dry: Dynamics of Drying in Porous Media LEI XU, Harvard University, SIMON DAVIES, ICI, ANDREW SCHOFIELD, the University of Edinburgh, DAVID WEITZ, Harvard University — What is the dynamics of drying in porous media? It has been difficult to visualize due to the non-transparency of the media. We study this phenomenon in an optical index matched colloidal system with confocal microscopy. We observe abrupt air invasions which result from the strong flow from menisci in large pores to menisci in small pores. The size and structure of the air invasions are in accord with 3D invasion percolation. By varying the particle size and contact angle we unambiguously demonstrate that capillary pressure dominates the drying process.

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