

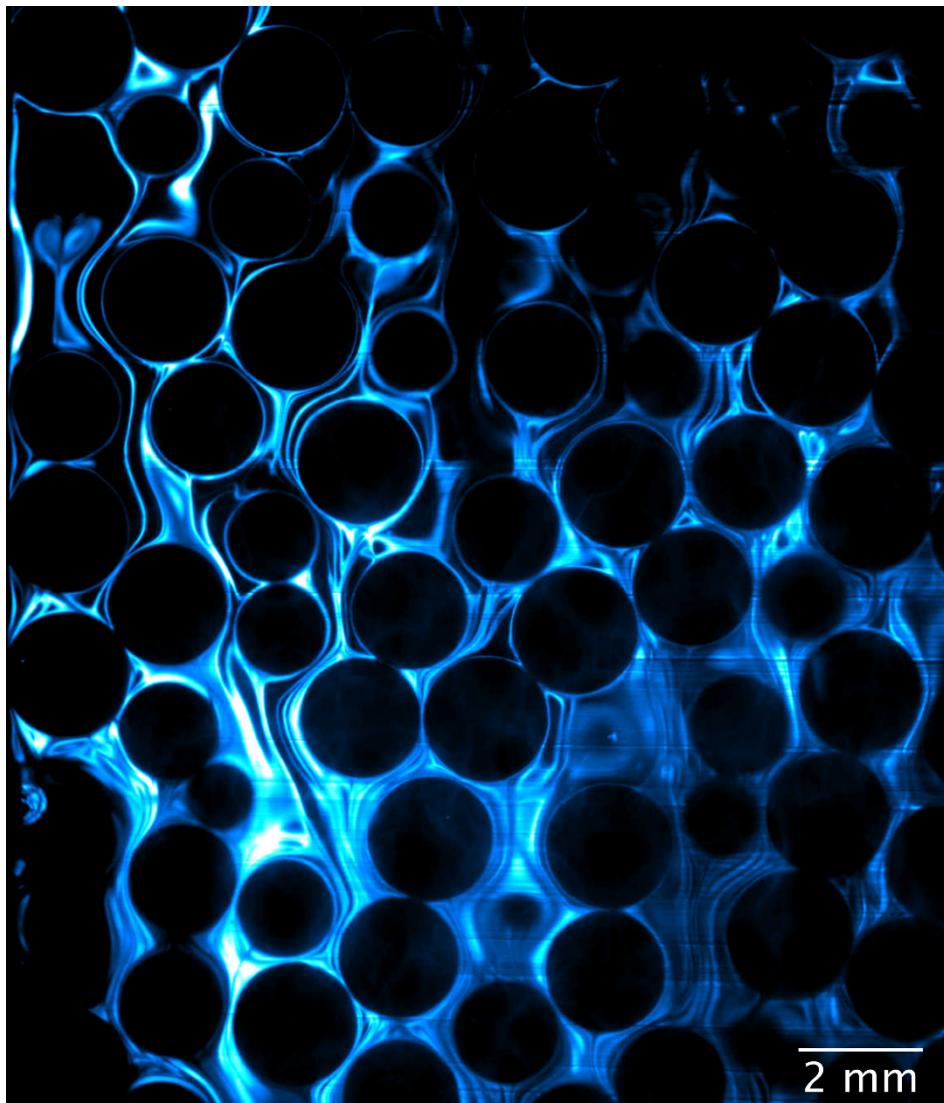


MIXING IN A 3D POROUS MEDIA

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A layer of fluorescent dye (Rhodamine 6G) is injected in a 3D transparent porous media and visualized using a laser sheet[1]. The porous media is made of a random stack of monodisperse spherical 2 mm diameter PMMA beads. Using iso-optical index matching techniques, the refractive optic index of the interstitial fluid (Triton X-100) and the PMMA beads is adjusted to the 4th digits, allowing to visualize directly in the bulk of the 3D porous media. The flow goes from up to down. These experimental measurements highlight how the blob of dye is heterogenously elongated while flowing through the pore network, leading to a complex mixing process.

1. Souzy M. et al. (2020). *J. Fluid Mech.*, 891.

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