

Transport of emulsions in heterogeneous environment

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We are studying the transport of emulsions through disorder media. Taking advantage of the microfluidic stickers technique, we can produce model emulsions and investigate their transport in heterogeneous environment with controlled geometries. This powerful toolbox allows us to quantitatively address the mobilisation of fluid ganglia in porous media in high content experiments. We combine concepts and tools from fluid mechanics, capillarity and depinning physics to elucidate the intrinsically non-linear response of trapped interfaces in random environments.

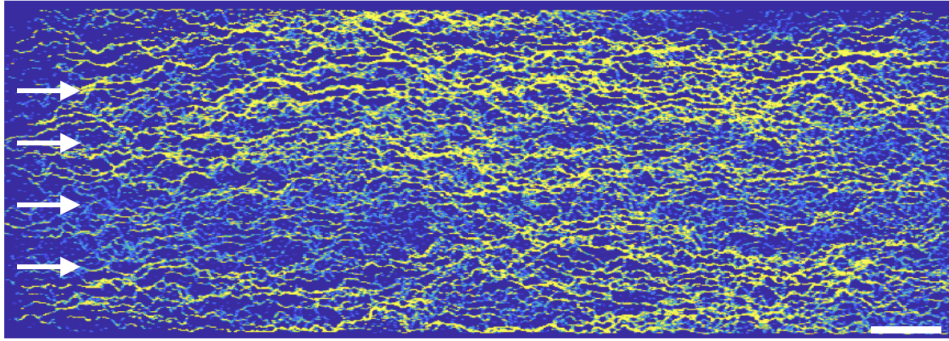


Figure 1: Mean velocity field of a typical experiment, the white arrows indicate the direction of the flow. Scale bar: 1mm.