



Showcasing work from research groups of Professors Emilie Sauret and Yi-Chin Toh, School of Mechanical, Medical and Process Engineering, Queensland University of Technology (QUT), Australia. Artist: Louis Ong.

PoroFluidics: deterministic fluid control in porous microfluidics

This study presents a design framework for microfluidic devices with porous architectures, termed “poroFluidics”, for controlling multi-phase fluid transport processes. By analyzing gas-liquid-solid interfaces and incorporating key properties of fluids and solids, the researchers demonstrate how to achieve consistent and desired flow patterns in porous media. The framework allows for precise control of spatial and temporal fluid invasion sequences through manipulation of solid geometry, flow conditions, and fluid/solid properties. This approach enables the development of multifunctional and dynamic porous media with potential applications in various fields. Copyright holder: Zhongzheng Wang

As featured in:



See Yi-Chin Toh, Emilie Sauret *et al.*, *Lab Chip*, 2024, **24**, 4050.