



Contribution ID: 494

Type: **Poster Presentation**

2D Particle Tracking Velocimetry in Multiphase Flow in Porous Media

Tuesday, 31 May 2022 15:20 (1h 10m)

Flow in porous media is ubiquitous in many engineering and natural systems, many of which occur in the geosphere and are intimately linked to energy, environment, and water resources. Transport phenomena in a porous domain is closely linked to the pore-scale velocity structures, thus an important ingredient in development of transport models is having reliable pore-scale experimental velocity data. Presence of a second immiscible fluid phase in the porous medium can profoundly impact flow and transport phenomena. In this work we present results from 2D particle tracking velocimetry (PTV) experiments of multiphase flow in 2D microfabricated porous media, also known as micromodels. Lagrangian particle trajectories in the continuous flowing phase are obtained and velocity and acceleration statistics are presented. The results highlight the similarities and differences between single and multiphase flow. The implications for transport models are discussed.

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References

Time Block Preference

Time Block C (18:00-21:00 CET)

Participation

Online

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Session Classification: Poster

Track Classification: (MS06-B) Interfacial phenomena in multiphase systems