Study on the effect of pore-scale heterogeneity and flow rate during repetitive two-phase fluid flow in microfluidic porous media

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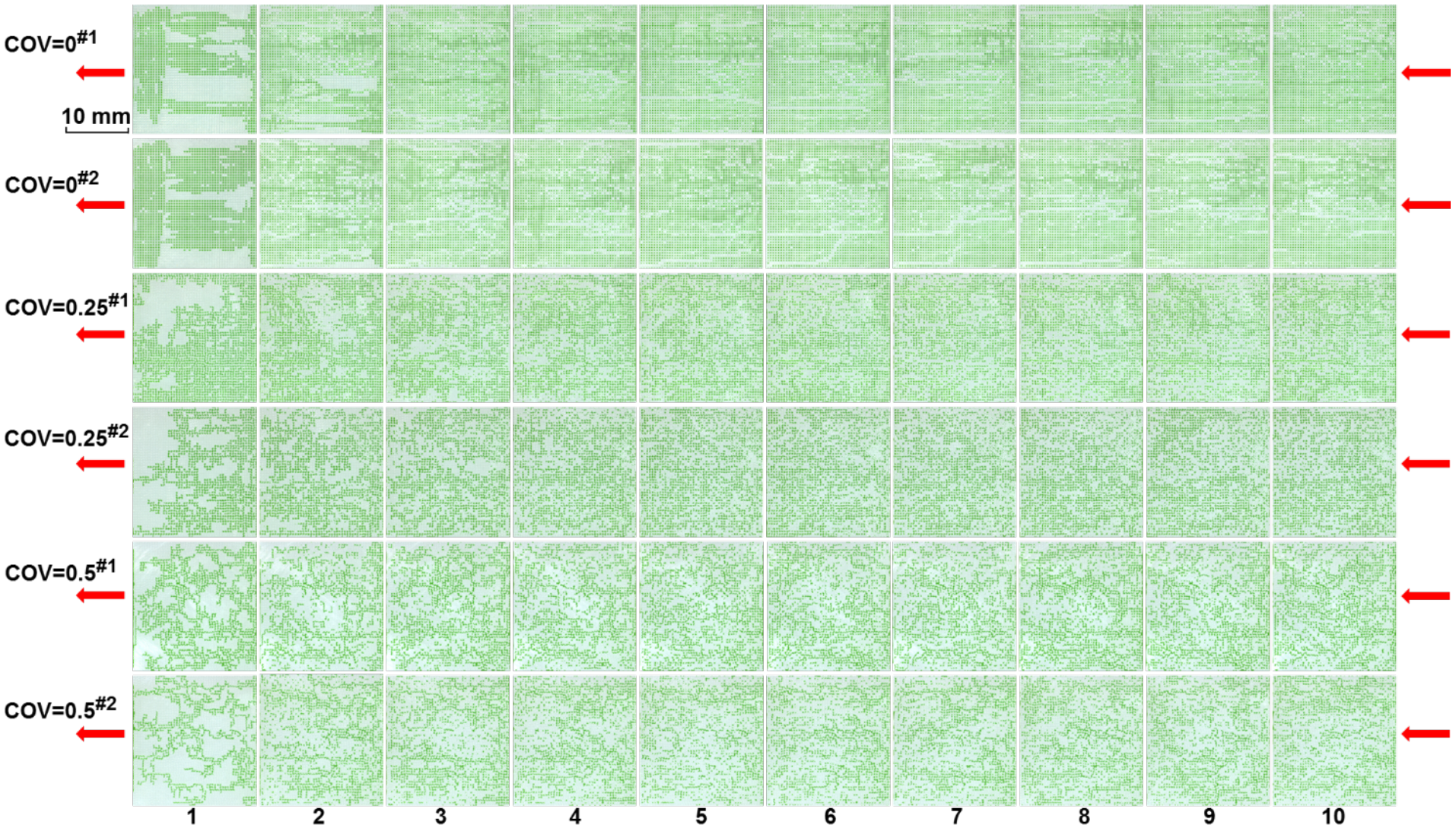
Supplementary Documents – Figures S1 and S2

(a)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(b)

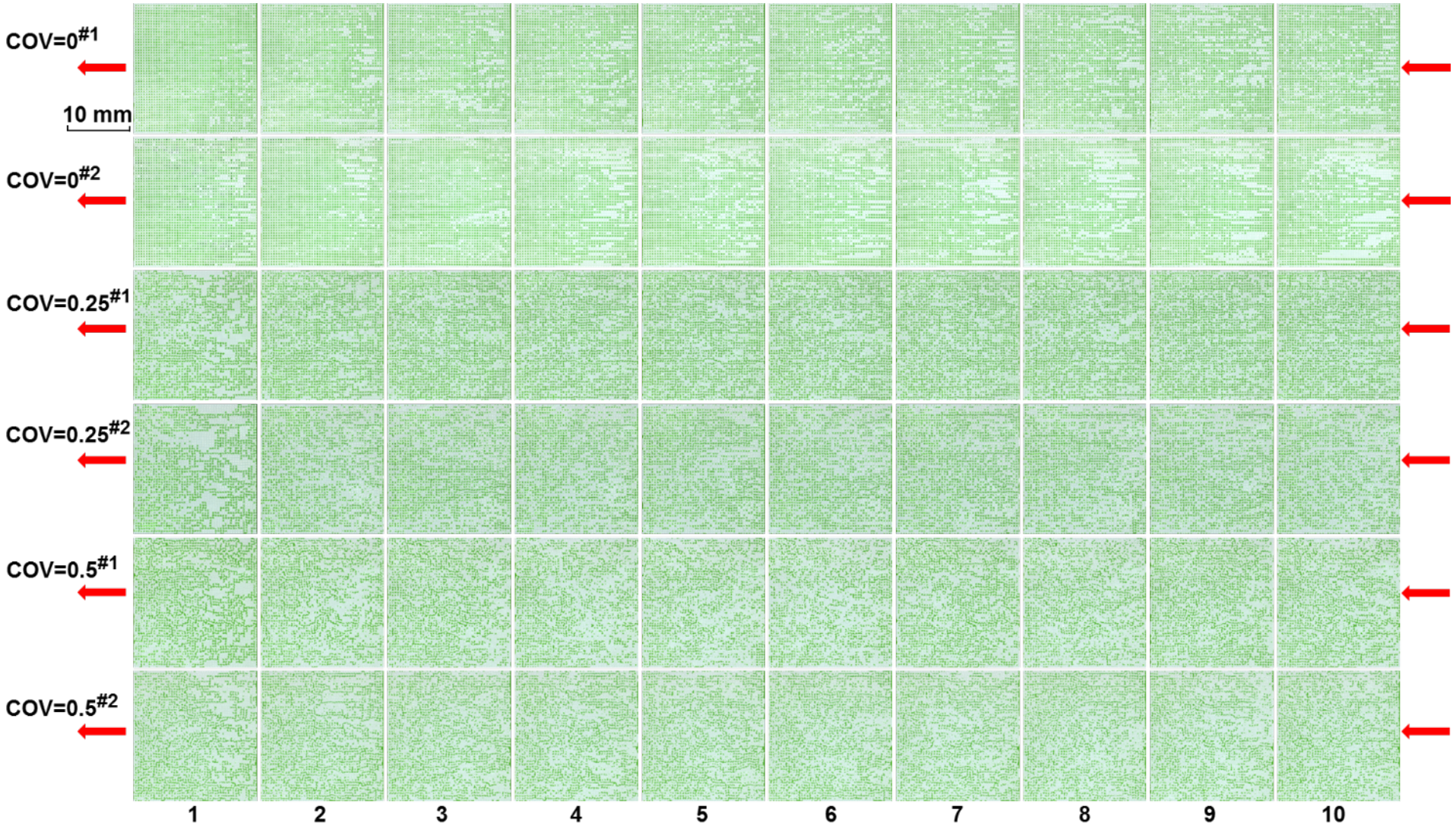
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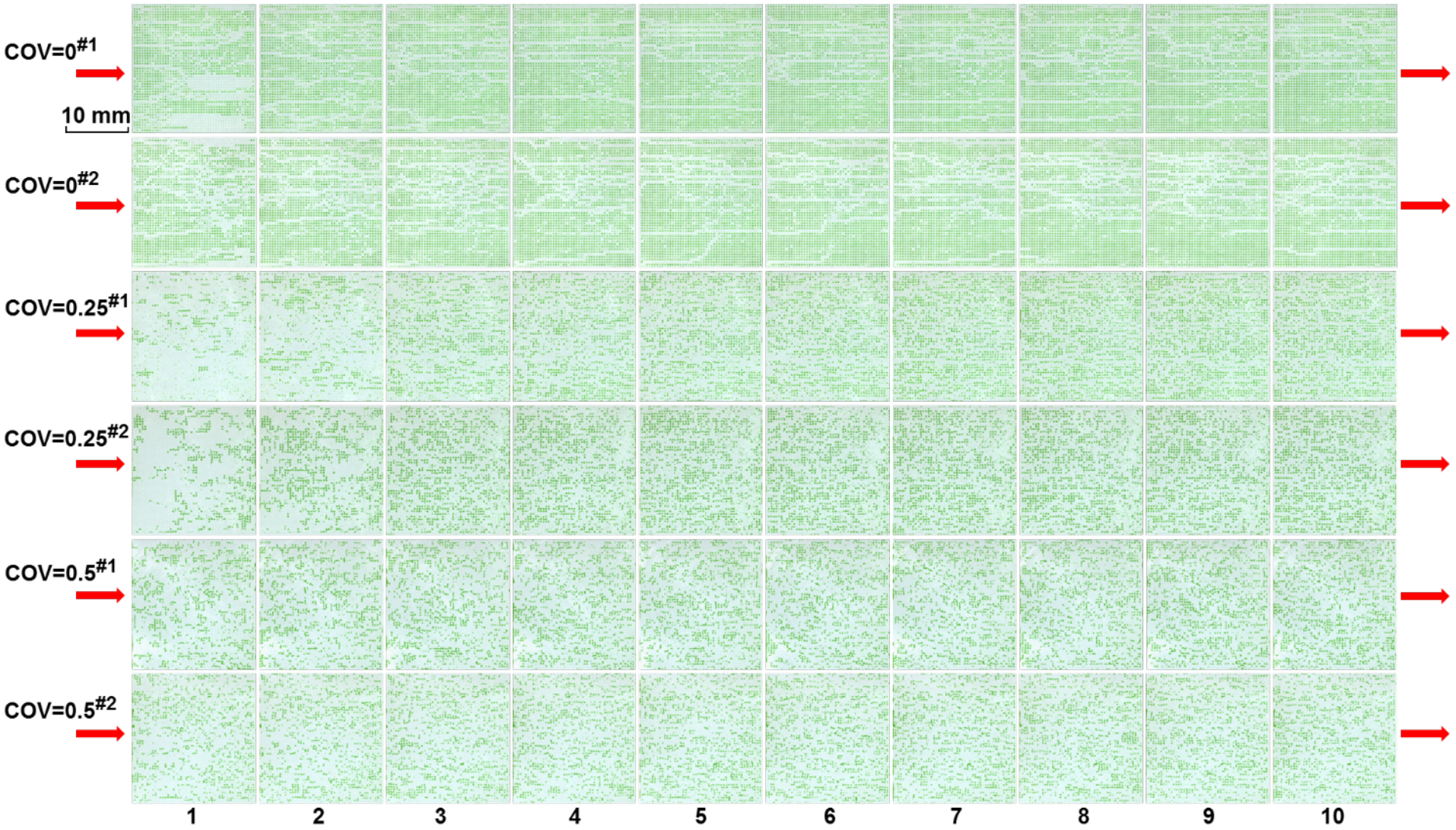
Figure S1. Distribution of water (the green non-wetting fluid) at the end of each drainage step in different microfluidic pore-network models for (a) volumetric flow rate Q = 0.01 ml/min and (b) 0.1 ml/min (the number below each column of images indicates the turn of cycles). Red arrows: water injection direction. There was an imbibition of the wetting fluid (colorless oil) between drainage cycles.

(a)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(b)

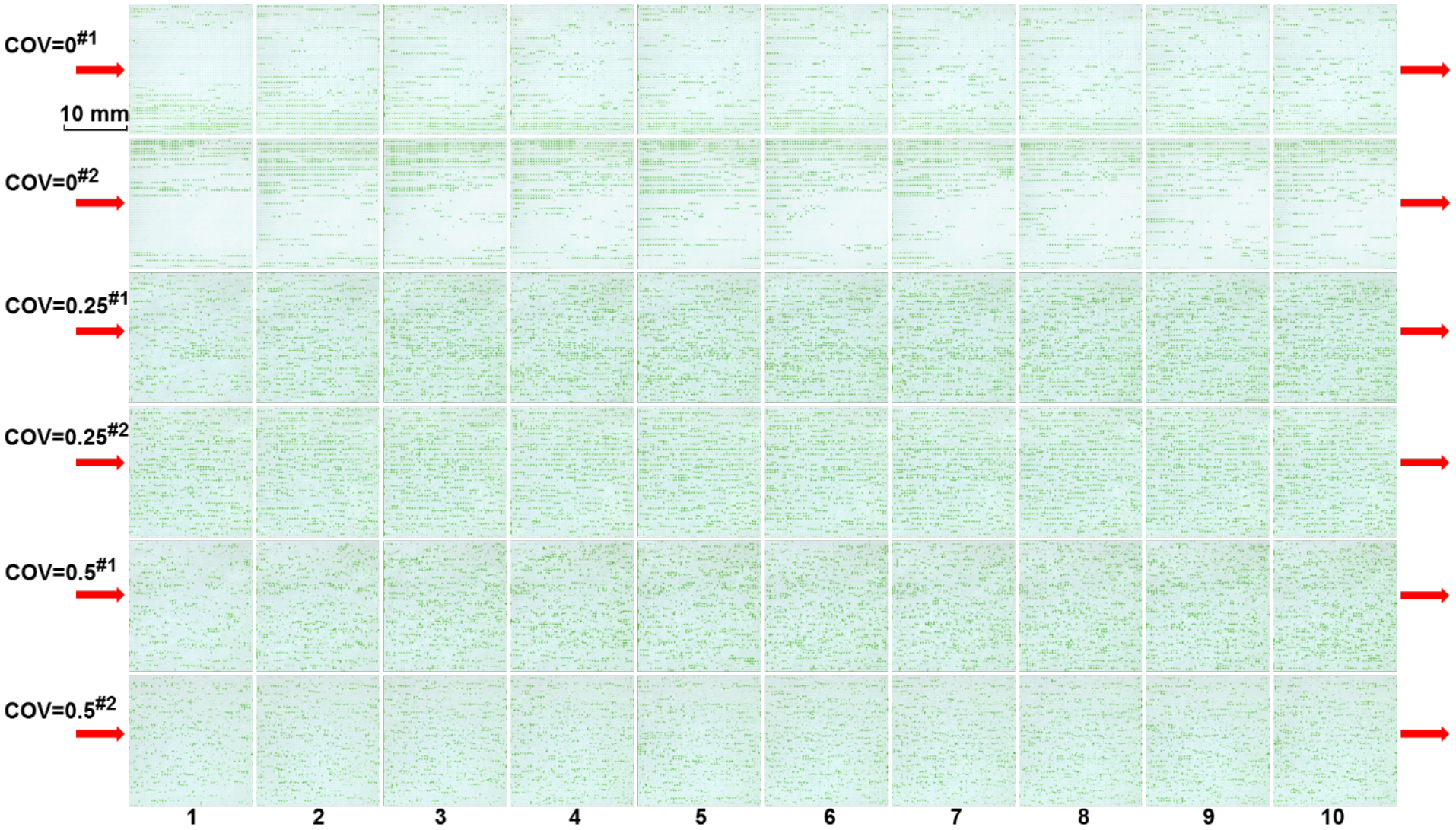
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Figure S2. Distribution of oil (colorless wetting fluid) at the end of each imbibition step in different microfluidic pore-network models for (a) volumetric flow rate $Q = 0.01$ ml/min and (b) 0.1 ml/min (the number below each column of images indicates the turn of cycles). Red arrows: oil injection direction. There was a drainage of the nonwetting fluid (green-colored water) between imbibition cycles.

End of supplementary documents.