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# Effect of grain shape on quasi-static fluid-fluid displacement in porous media

Wednesday, 2 June 2021 14:00 (15 minutes)

We study how grain shapes impact multiphase flow in porous media in the quasi-static regime. An extended pore-network model with interface tracking algorithm is presented, which considers menisci pinning at sharp edges of grain. Our results show that the effective contact angle distribution during displacement widens as the grain becomes more angular, which consequently modifies the macroscopic fluid invasion morphology. By analyzing various characteristic metrics during displacement, including capillary pressure signal, Haines jump size distribution, and fractal dimension, our results highlight the profound influence of particle shape on the multiphase flow.

## **Time Block Preference**

Time Block B (14:00-17:00 CET)

#### References

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Session Classification: MS6-B

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