

PUBLICATIONS

1. Mingliang Qu, Jinping Yang, **Sajjad Foroughi**, Yifan Zhang, Zi-Tao Yu, Martin J. Blunt. “Pore-to-meter scale modeling of heat and mass transport applied to thermal energy storage: Investigating how local thermal and velocity fluctuations affect average thermal dispersivity.” *Energy Conversion and Management*, Under Review, 2023.
2. Lei Zhang, Gloire Imani, Martin Blunt, Dongyan Fan, **Sajjad Foroughi**, Lei Hou, Bilal Shams Memon, Yongfei Yang, Jun Yao. “Pore-scale Study of Mobilization of a Trapped NAPL Ganglion through a Three-dimensional Modified Biconical Pore.” *Chemical Engineering Science*, Under review, 2023.
3. Sepideh Goodarzi, Yihuai Zhang, **Sajjad Foroughi**, Branko Bijeljic, Martin J. Blunt. “Trapping, Hysteresis, and Ostwald Ripening in Hydrogen Storage: A Pore-Scale Imaging Study.” *International Journal of Hydrogen Energy*, 2023, [Link](#).
4. Ahmed M. Selem, Nicolas Agenet, **Sajjad Foroughi**, Martin J. Blunt, and Branko Bijeljic. “Pore-Scale Imaging of Emulsification of Oil during Tertiary and Secondary Low Salinity Waterflooding in a Reservoir Carbonate.” *Energy & Fuels*, 2023, [Link](#).
5. **Sajjad Foroughi**, Branko Bijeljic, Ying Gao, and Martin J. Blunt. “Incorporation of Sub-Resolution Porosity into Two-Phase Flow Models with a Multiscale Pore Network,” *Water Resources Research*, Under Review, 2023, DOI: [10.22541/essoar.169747432.29962889/v1](https://doi.org/10.22541/essoar.169747432.29962889/v1).
6. Li, Min, **Sajjad Foroughi**, Jiafei Zhao, Branko Bijeljic, and Martin J Blunt. “Image-Based Pore-Scale Modelling of the Effect of Wettability on Breakthrough Capillary Pressure in Gas Diffusion Layers.” *Journal of Power Sources*, 2023, [Link](#).
7. Ming-Liang Qu, Martin J. Blunt, Xiaolei Fan, **Sajjad Foroughi**, Zi-Tao Yu, Qingyang Lin. “Pore-to-mesoscale network modelling of heat transfer and fluid flow in packed beds with application to process design”, *AIChE Journal*, 2023, [Link](#).
8. Ramin Moghadasi, **Sajjad Foroughi**, Farzad Basirat, Steven McDougall, Branko Bijeljic, Martin J Blunt, Alexandru Tatmir, Auli Niemi, ”Pore-scale determination of residual gas remobilization and critical saturation in geological CO2 storage: A pore-network modelling approach”, *Water Resources Research*, 2023, [Link](#).
9. Yihuai Zhang, Branko Bijeljic, Ying Gao, Sepideh Goodarzi, **Sajjad Foroughi**, Martin J Blunt, ”Pore-scale observations of hydrogen trapping and migration in porous rock: demonstrating the effect of Ostwald ripening”, *Geophysical Research Letters*, 2023, [Link](#).
10. Guanglei Zhang, **Sajjad Foroughi**, Branko Bijeljic, Martin J Blunt. “A Method to Correct Steady-state Relative Permeability Measurements for Inhomogeneous Saturation Profiles in One-dimensional Flow.” *Transport in Porous Media*, 2023, [Link](#).
11. Abdulla Alhosani, Ahmed Selem, **Sajjad Foroughi**, Branko Bijeljic, and Martin J. Blunt, ”Steady-State Three-Phase Flow in a Mixed-Wet Porous Medium: A Pore-Scale X-ray Microtomography Study.” *Advances in Water Resources*, 2023, [Link](#).
12. Guanglei Zhang, **Sajjad Foroughi**, Ali Q. Raeini, Martin J. Blunt, and Branko Bijeljic. “The impact of bimodal pore size distribution and wettability on relative permeability and capillary pressure in a microporous limestone with uncertainty quantification.” *Advances in Water Resources*, 2022, [Link](#)
13. Gloire Imani, Lei Zhang, Martin J. Blunt, **Sajjad Foroughi**, Munezero Ntibahanana, Hai Sun, and Jun Yao. “Three-Dimensional Simulation of Droplet Dynamics in a Fractionally-Wet Constricted Channel.” *Advances in Water Resources*, 2022, [Link](#)

14. Sanchay Mukherjee, Russell T. Johns, **Sajjad Foroughi**, and Martin J. Blunt. "Fluid–Fluid Interfacial Area and Its Impact on Relative Permeability-A Pore Network Modeling Study." In *SPE Journal*, 2022, [Link](#)
15. **Sajjad Foroughi**, Branko Bijeljic, and Martin J. Blunt. "A closed-form equation for capillary pressure in porous media for all wettabilities." *Transport in Porous Media*, 2022, [Link](#).
16. Qu, Ming-Liang, Sheng-Yue Lu, Qingyang Lin, **Sajjad Foroughi**, Zi-Tao Yu, and Martin J. Blunt. "Characterization of Water Transport in Porous Building Materials Based on an Analytical Spontaneous Imbibition Model." *Transport in Porous Media*, 2022, [Link](#).
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18. Lin, Qingyang, Branko Bijeljic, **Sajjad Foroughi**, Steffen Berg, and Martin J. Blunt. "Pore-scale imaging of displacement patterns in an altered-wettability carbonate." *Chemical Engineering Science*, 2021, [Link](#).
19. Alhosani, Abdulla, Alessio Scanziani, Qingyang Lin, **Sajjad Foroughi**, Amer M. Alhammadi, Martin J. Blunt, and Branko Bijeljic. "Dynamics of water injection in an oil-wet reservoir rock at subsurface conditions: Invasion patterns and pore-filling events." *Physical Review E*, 2020, [Link](#).
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23. **Sajjad Foroughi**, Saeid Jamshidi, and Mahmoud Reza Pishvaie. "New Correlative models to improve prediction of fracture permeability and inertial resistance coefficient." *Transport in Porous Media*, 2018, [Link](#).
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25. Morshedi, S., **Sajjad Foroughi**, and M. S. Beiranvand. "Numerical simulation of surfactant flooding in Darcy scale flow." *Petroleum science and technology*, 2014, [Link](#).
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- **Sajjad Foroughi**, Bijeljic, B., and Martin J Blunt, ”Pore-by-pore modeling, calibration, and prediction of two-phase flow in mixed-wet rocks.”, IterPore, 13th Annual meeting (Online), 31 May - 04 June 2021.
- Sanchay Mukherjee, Russell T Johns, **Sajjad Foroughi**, Martin J Blunt, ”Fluid–Fluid Interfacial Area and Its Impact on Relative Permeability-A Pore Network Modeling Study.” SPE Improved Oil Recovery Conference. OnePetro, 2022.
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