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What controls the wettability of bidisperse sphere packings? ROBABEH MOOSAVI, Max Planck Institute of Dynamics and Self-Organization, Göttingen, Germany, JULIE MURISON, Clari- ant Produkte GmbH, Competence Center Interface and Formulation Technology, Frankfurt, Germany, THOMAS HILLER, Max Planck Institute of Dynamics and Self-Organization, Göttingen, Germany, MARTIN BRINKMANN, Universität des Saarlandes, Saarbrücken, Germany, MATTHIAS SCHRÖTER, Max Planck Institute of Dynamics and Self-Organization, Göttingen, Germany — We report experiments on liquid two-phase flow in bidisperse sphere packings. The bidisperse bead pack consists of small and large beads which are either oil wetting or water wetting. Aim of our work is to understand what determines the average wettability of the sample and what affects the amount of remaining oil trapped in the bead pack invaded by water. The method is to measure the capillary pressure saturation curves (CPSC). The data indicates that segregation plays a role. Moreover, we compare the experimental results obtained using x-ray tomography and CPSC measurement with the multi-particle collision dynamics numerical results.

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