

Abstract Submitted
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Transport of Gas in Steady State Aqueous Foam KLEBERT FEITOSA, DOUGLAS J. DURIAN, University of Pennsylvania — An experiment is performed to investigate the transport of gas in a column of aqueous foam. The foam is maintained in steady state by a constant flux of gas at the bottom. The bubble velocity, liquid-fraction and bubble-size vertical profiles are measured in the sample. The results show that in steady state the bubble velocity is constant, the liquid-fraction profile is set predominantly by the viscous drag, and the coarsening rate depends on the inverse of the square root of liquid fraction. These findings provide a simple description of steady state foams via the drainage and coarsening equations.

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