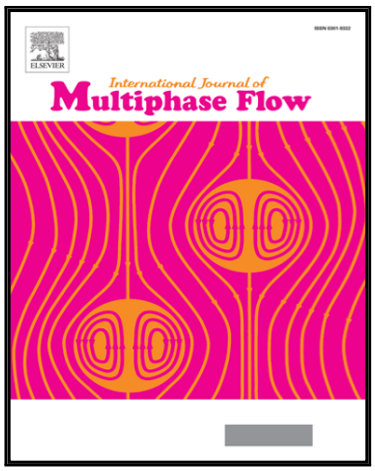

On the stability of Taylor bubbles inside a confined highly porous medium

Marion Serres, Marie-Line Zanota, Régis Philippe, Valérie Vidal

PII: S0301-9322(16)30041-6
DOI: 10.1016/j.ijmultiphaseflow.2016.06.003
Reference: IJMF 2411

To appear in: *International Journal of Multiphase Flow*

Received date: 28 January 2016
Revised date: 6 May 2016
Accepted date: 7 June 2016

Please cite this article as: Marion Serres, Marie-Line Zanota, Régis Philippe, Valérie Vidal, On the stability of Taylor bubbles inside a confined highly porous medium, *International Journal of Multiphase Flow* (2016), doi: 10.1016/j.ijmultiphaseflow.2016.06.003

Highlights

- Gas-liquid flow crossing an innovative porous medium of high porosity is analyzed.
- A modified Weber number controls the hydrodynamic regime of the two-phase flow.
- The bubble length entering the open cell solid foam controls the transition.
- A scaling model predicts the critical bubble length in agreement with experiments.