

Control dynamics of miscible viscous fingering

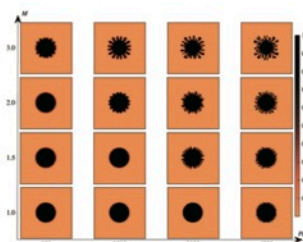
Wednesday, March **18** 2020,
15:00~16:00



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Viscous fingering (VF) is one of hydrodynamic instabilities, which is observable while displacing a less-mobile fluid by another more-mobile fluid through porous media, and it is ubiquitous to the transport phenomena in several porous media flows application. Moreover, instabilities at the interface of two distinct fluids remain a major challenge for enhanced oil recovery processes such as polymer flooding, On the other hand, this instability is likely to be detrimental to the separation efficiency in chromatographic separation process and can improve mixing in non-turbulent systems and micro-fluidic devices. The fact that depending on the application either a stable or an unstable interface is desirable makes the ability to control interfacial fingering instabilities. essential in design and technology. Such control mechanism of instabilities in fluid-fluid systems can be achieved by manipulating the various physio-chemical properties of the underlying fluids as well as the porous medium. This talk will be based upon the following three aspect, the possibilities of the liquid adsorption on the porous medium, the competition between advection and diffusion, as well as the chemical reaction, to control the VF.



開催場所/Venue

東京農工大学 小金井キャンパス

工学部講義棟 L0012室

Lecture Hall Building for the Faculty of Engineering


Koganei Campus, TUAT




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