

A 3D front-tracking approach for simulation of a two-phase fluid with ferrofluid and an insoluble surfactant

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Resumo

Understanding the interfacial dynamics of two-phase flows dominated by surface tension forces and or controlled by a magnetic field allows to predict the flow properties in many important practical applications such as drug delivery in a living organism, or the Magnetic Fluid Hyperthermia (MFH) in the treatment of localized cancerous tumors, and for the treatment of retinal detachment. Surfactants and ferrofluids play an important role in controlling these flow modifying