

## Invitation to Bath-Bomb earth sciences

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One of the essences of flow phenomena in earth and planetary sciences is the nature of multiphase flow coupled with phase transition of the constituent components. In partially molten flow dissolution and precipitation during the fluid migration critically control evolution of the chemical composition. In the volcanic conduit vesiculation of volatile components controls the flow behavior. Since the phase transition is associated with drastic change of physical properties, it sometimes exhibits spectacular phenomena.

To simulate this effect in laboratory, we utilize Bath-Bomb TM as a phase changing agents in viscous flow system. Bath-Bomb is a new type of bath salt composed of sodium hydrogen-carbonate and citric acid. During the dissolution process it emanates CO<sub>2</sub> gas we observe the flow behavior of mixture of Bath-Bomb and aqueous viscous fluid. We particularly focus on the effects of fluid viscosity on the development of vesiculation.