

||||| 特集：落下施設を利用した微小重力実験 |||||
(解説)

落下塔を利用した流体制御実験

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Microgravity Experiments on Fluid Management Technique Using Drop Shaft Facilities

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Abstract

This paper describes gas-liquid separation and bubble removal technology using capillary, electrostatics and centrifugal force under micro-gravity condition. The authors discussed fluid behaviors in vane type surface tension tank experimentally and analytically, which has the function to separate liquid and gas using a surface tension. In addition to this, we investigated bubble movements by dielectrophoretic and centrifugal force in order to develop the bubble rejection device for microgravity condition. It was shown that these techniques are feasible to fluid management under microgravity condition.

Also we refer to some know how required to build the experimental device and to prepare and conduct microgravity experiments using drop shaft facility.