

Abstract Submitted
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Research of surface modified microbubbles generated by microchannel for selective adsorption REI MASUDA, TAKUYA ARIYOSHI, Univ of Tokyo, MTSUHISA ICHIYANAGI, Sophia University, SHU TAKAGI, YOICHIRO MATSUMOTO, Univ of Tokyo — Microbubbles have been already used as ultrasound contrast agents to visualize microcirculation system. They are also expected to be used as drug delivery agents. For these bubbles, one of the important requirements is functionality of adsorption to the targeted area. In order to qualify this requirement, it is expected to modify microbubbles with ligand which has ability of specific adsorption to receptor. Biotin as ligand has very high affinity to avidin as receptor, therefore using these materials is supposed to be proper for the first experimental model to satisfy the requirement. In the present study, microbubbles are generated using T-junction type microchannel, because this system has the advantages to control the size and its monodispersity with the wide variety of choice in both liquid phase and gas phase and the capability of surface coating. Polystyrene-dish is confirmed to be coated with avidin. Furthermore, to confirm microbubbles' selective adsorption, microbubbles generated with liquid containing biotinylated lipids are tried being put on avidin-coated polystyrene-dish. The results will be discussed in the presentation.

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