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Microbubble array under ultrasound excitation and its application in cell capture JIFU TAN, ANTONY THOMAS, YALING LIU, Lehigh University — In this paper, we studied the fluid flow and particle motion induced by a microbubble array exited under ultrasound. A circulation vortex generated in spaces between microbubble array could be controlled by the spacing of the array, the amplitude and frequency of the ultrasound. We observed that particles/cells of particular size could be trapped near the microbubble surface. The microbubble array is used to enrich bimolecular concentration locally as well as capture cells. Such active attraction mechanism has advantages over traditional passive capture methods.

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