Abstract Submitted
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Colon Cancer Cell Separation by Dielectrophoresis[1] FANG YANG, XIAOMING YANG, H. JIANG, P. WOOD, W. HRUSHESKY, GUIREN WANG, NANO/MICRO FLUIDICS LAB, DEPT. ME UNIVERSITY OF SOUTH CAROLINA TEAM, CENTER FOR COLON CANCER RESEARCH, UNIVERSITY OF SOUTH, CAROLINA TEAM, GRACEFLOW TECHNOLOGY TEAM — Separation of cancer cells from the other biological cells can be useful for clinical cancer diagnosis and cancer treatment. In this presentation, conventional dielectrophoresis (c-DEP) is used in a microfluidic chip to manipulate and collect colorectal cancer HCT116 cell, which is doped with Human Embryonic Kidney 293 cells (HEK 293). It is noticed that, the HCT116 cell are deflected to a side channel from a main channel clearly by apply electric field at particular AC frequency band. This motion caused by negative DEP can be used to separate the cancer cell from others. In this manuscript, chip design, flow condition, the DEP spectrum of the cancer cell are reported respectively, and the separation and collection efficiency are investigated as well. The sorter is microfabricated using plastic laminate technology. -/abstract- This work has been financially supported by the NSF RII funding (EP

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