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Microfluidic device for label-free quantitation and distinction of bladder cancer cells from the blood cells using micro machined silicon based electrical approach; suitable in urinalysis assays

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Highlights

- A microfluidic chip has been fabricated for bladder cancer detection based on urinalysis.
- Bladder cancer cells and float leukocytes in the urine have been trapped by the micro channels of the chip.
- Bladder cancer cells have been distinguished from leukocytes due to their different electrical capacitance

Abstract

This paper introduces an integrated microfluidic chip as a promising tool to measure the concentration of bladder cancer cells (BCC) in urine samples. Silicon microchannels were used as