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Flow Cytometry on Microfluidic Systems

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Microfluidic devices are capable of performing a variety of chemical and biological assays. We are developing microfabricated instrumentation to analyze particles and cells using flow cytometric techniques. In the case of cell analysis, *E. coli* cells were transported electrophoretically through channels which were coated to inhibit electroosmotic flow and minimize cell adsorption. The sample stream was focused at a cross intersection to enable light scattering and fluorescence detection of single cells. The samples were evaluated using membrane permeable and impermeable nucleic acid stains and an *E. coli* antibody.

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