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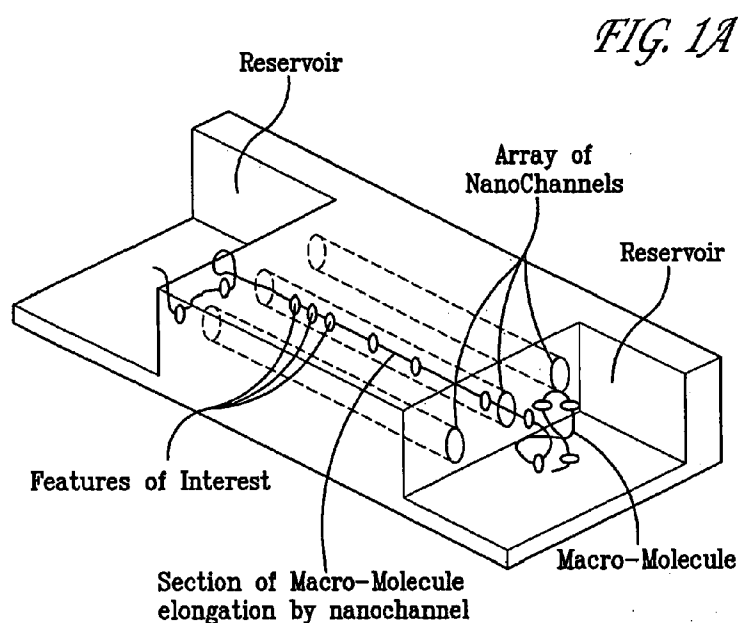
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(54) Title: METHODS OF MACROMOLECULAR ANALYSIS USING NANOCHANNEL ARRAYS



(57) Abstract: Methods of analyzing features such as the physical size of macromolecules or biomarkers along large genomic DNA molecules were disclosed as well as the devices for carrying out such high throughput analysis in a massively parallel fashion. Methods of fabricating such devices are also disclosed. The sample embodiment shown in the figure illustrates detection of a macromolecule flowing through a nanochannel device where passage of the macromolecule through the nanochannel is recorded by exciting features of interest to fluoresce with an excitation source, and then sensing the fluorescence with a photon detection device, the resulting fluorescent signal being correlated along the length of the macromolecule.

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