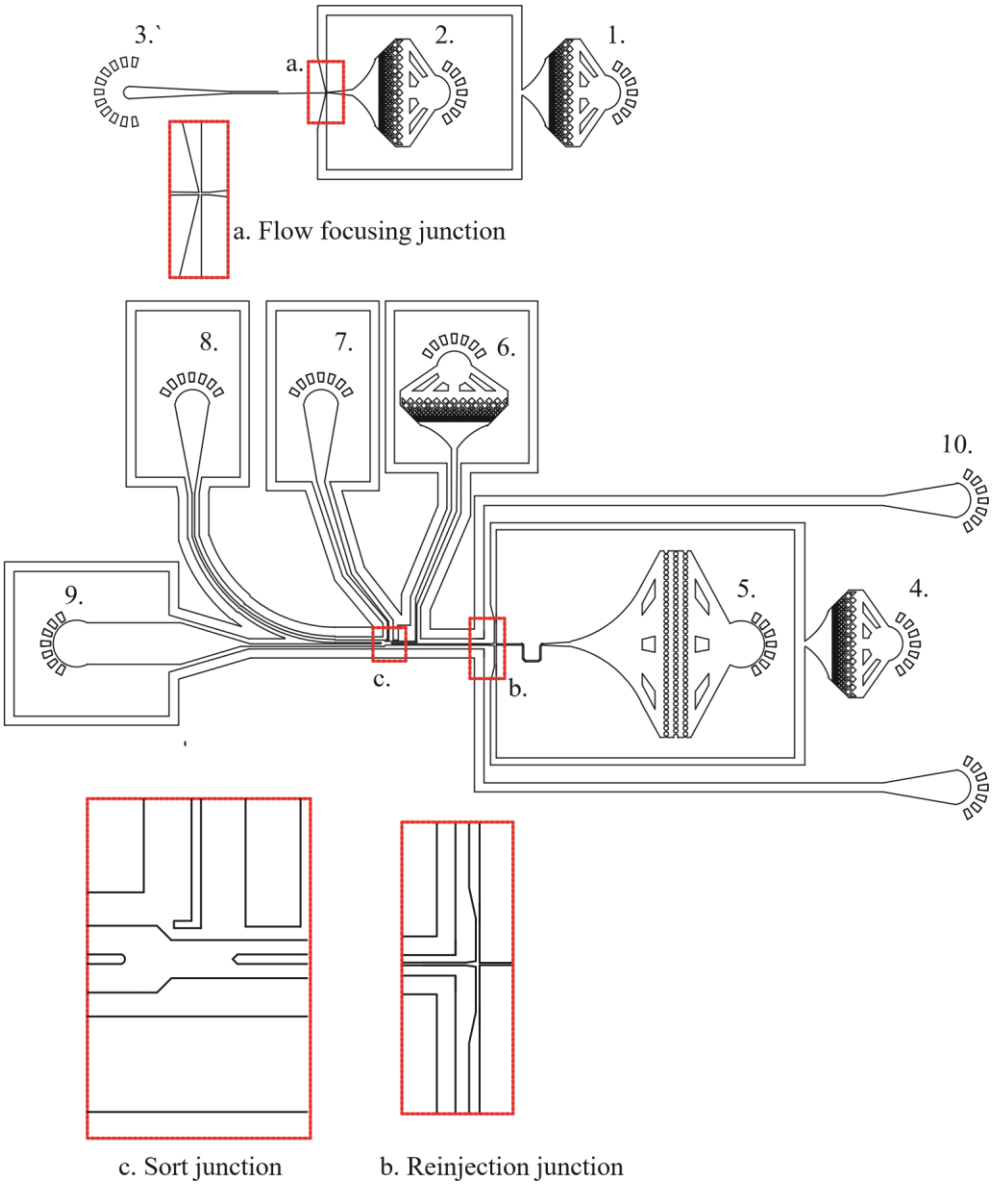
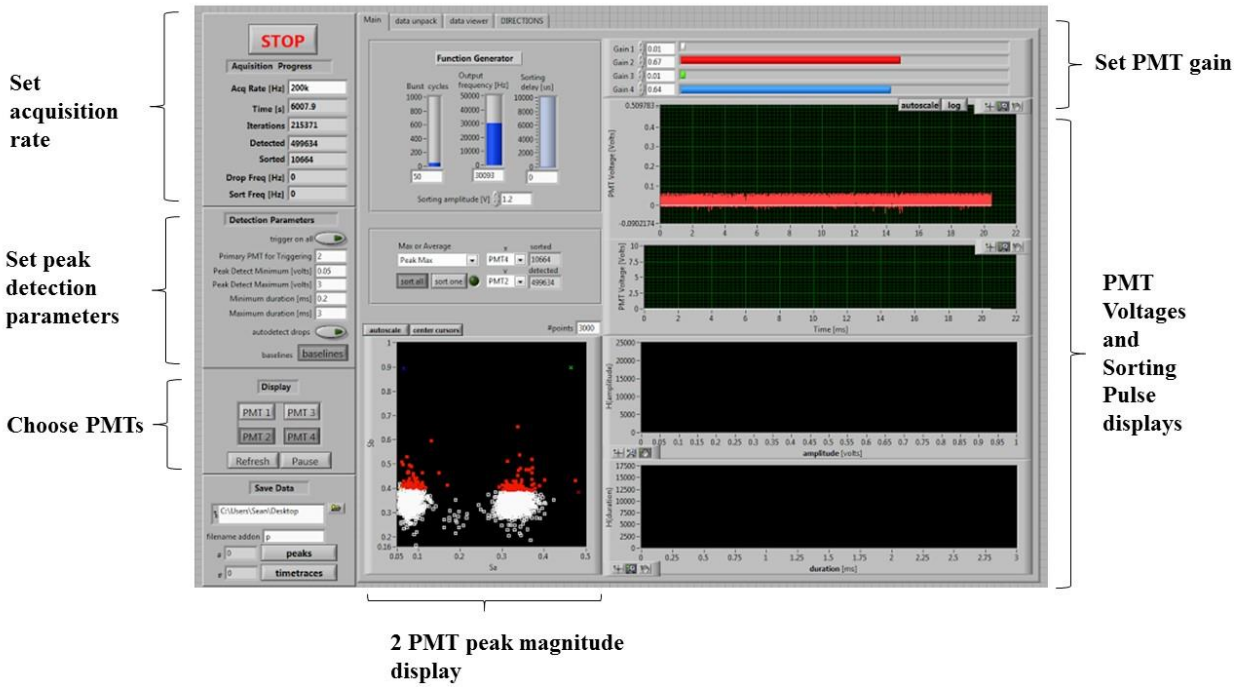
Primers for Taqman droplet PCR	**Sequence**
T4 probe	5'-/56-FAM/TCGCATTCT /ZEN/TCCTCTGATGGAGCA /3IABkFQ/ -3'
T4 FWD	5’-CCACAACTAACCGAGGAAGTAA-3’
T4 REV	5’-TGCGATATGCTATGGGTCTTG-3’
PhiX174 probe	5’-/56-FAM/ATG GAA CTG /ZEN/ACC AAA CGT CGT TAG GCC A/3IABkFQ/-3’
PhiX174 FWD	5’- GCGCTCTAATCTCTGGGCAT-3’
PhiX174 REV	5’- CAAAGAAACGCGGCACAGAA-3’
Lambda probe	5’- /56-FAM/AT ACT GAG C/ZEN/A CAT CAG CAG GAC GC/3IABkFQ/-3’
Lambda FWD	5’- GCC CTT CTT CAG GGC TTA AT-3’
Lambda REV	5’- CTC TGG CGG TGT TGA CAT AA-3’
Primers for qPCR	**Sequence**
E coli C FWD	5’-ACG CAG GGA TTT ACA GCA TAT AG-3’
E coli C REV	5’-GGG TGC TAT ATA ACG GTG TAC TG-3’
E coli BW25113 FWD	5’-GACTACTTGAAGCTGTCCTTCC-3’
E coli BW25113 REV	5’-CGCAGCTTCACCTTGTAGAT-3’

Supplementary Table 1. Primers used for qPCR and Taqman droplet PCR

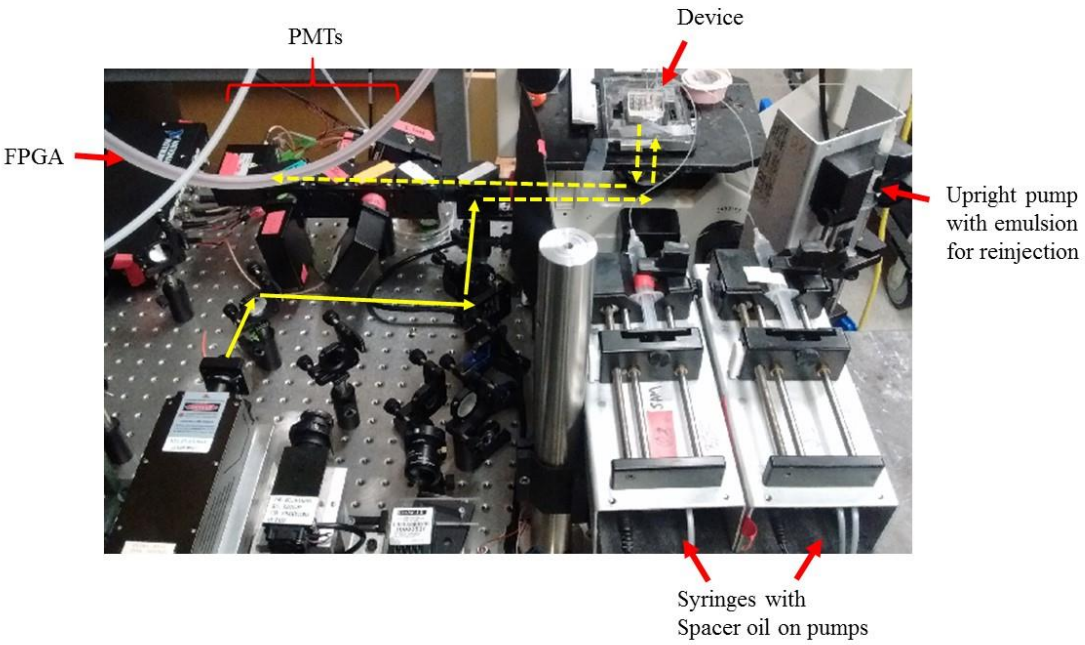


Supplementary Figure S3. Device schematic for flow focus drop maker(top) and sorter (bottom). The numbers correspond to input/outputs for the device— (1) oil input (2) aqueous input (3) output (4) oil input drop spacer (5) drop reinjection (6) oil input drop spacer (7) salt electrode (8) positive sort output (9) negative sort output (10) salt moat input.



Supplementary Figure S4. LabVIEW interface

Data acquisition was handled by a FPGA Card (National Instruments Corporation) controlled by a custom program written in LabVIEW (National Instruments Corporation). Droplet fluorescence levels are detected by photomultiplier tubes (PMTs) and converted into corresponding levels of signal output voltages. The LabVIEW program receives the fluorescence signals from the optical setup in real time and combines a peak detection algorithm together with user-defined ranges of fluorescence amplitude and width to determine droplet-associated peaks. The data acquisition rate was set at 200 kHz. The software directs the FPGA to output sorting pulses that are amplified by a high-voltage amplifier (Trek). The salt electrode on the sorting device then effects a dielectrophoretic force on any drop that has a desired fluorescence level. The software allows for manipulation of various sorting parameters, such as fluorescence peak level, PMT gain, data acquisition rates, length and magnitude of sorting pulse, etc. Each sorting attempt may require adjustment of aforementioned parameters for optimal sorting. The Abate lab welcomes any interested parties to contact us for information about the sorting hardware or software.



Supplementary Figure S5. Optical setup of sorter. The yellow line depicts the path of photons travelling from the output source(laser) to the device, where it excites the Taqman fluorophore which in turn emits fluorescence that goes to the end-most PMT, where it is detected. Dashed lines represent the path of light that is internal to the setup.