

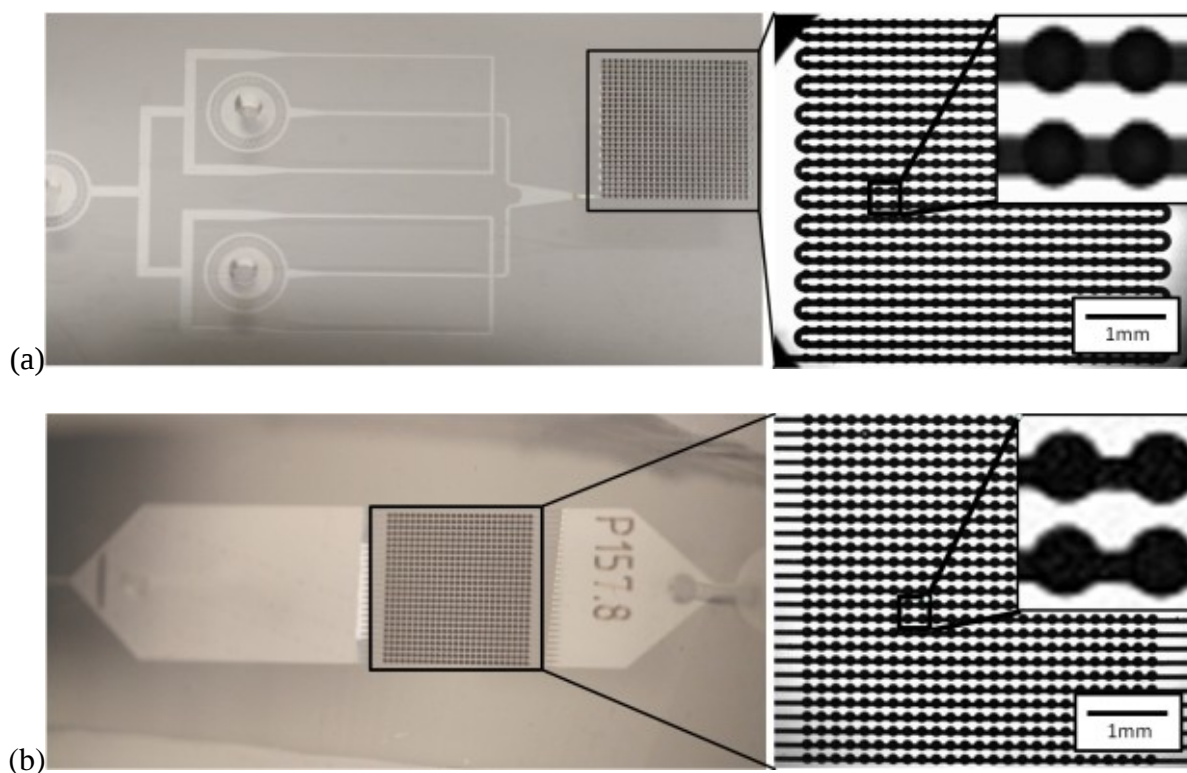
Lab on a Chip

Supplementary Information

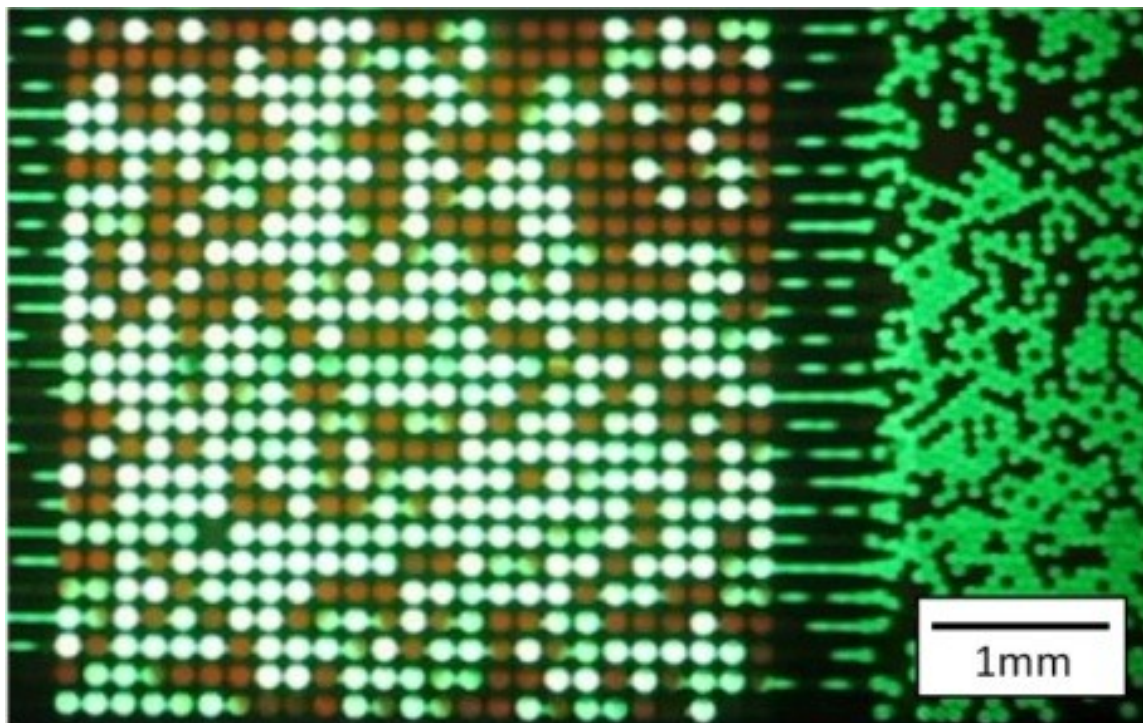
Micro-optical lens array for fluorescence detection in droplet-based microfluidics

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Supplementary Figure 1: Photograph and microscopic image at the microoptical region of interest for the Two different types of droplet-based microfluidic chips we designed and fabricated: a device composed of a 10 cm delay line structure (a) and a 25 parallel channel structure for re-injection (b).



Supplementary Figure 2: Imaging through the microscope eyepiece with two different fluorescent dyes (100 mM of resorufin and 100 mM of fluorescein – see supplementary movie 033). Droplets flow from right to left. The droplets containing resorufin can only be detected in the presence of microlenses. See also **Supplementary movie 03**.



Supplementary Movies:

Supplementary movie 01:

movie of droplet flowing under the lense array recorded by a high speed camera without backlight illumination.

Supplementary movie 02:

movie recorded under similar conditions as movie 01 with backlight illumination.

Supplementary movie 03:

movie captured using a standard camera through the eyepiece of the microscope at a frame rate of 23 fps.