Electronic supplementary information (ESI) for:

Flexible planar microfluidic chip employing a light emitting diode and a PIN-photodiode for portable flow cytometers

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Lab Chip, DOI: 10.1039/c1lc20672a

Electronic Supplementary Material (ESI) for Lab on a Chip

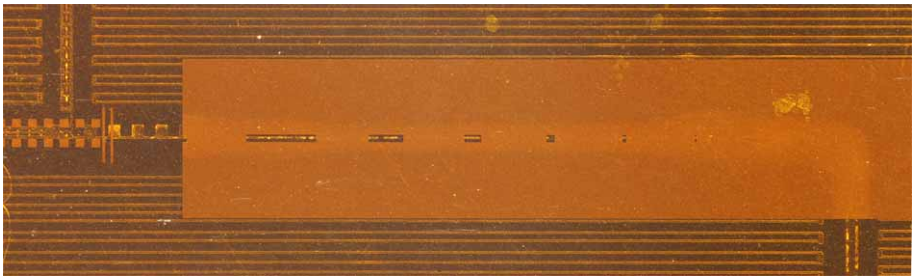

Fig. S1: Detail image of the particle focusing and measurement zone of a used chip. The focusing structure is partly obstructed by the shadow mask. The mask windows are placed on the straight microchannel after the focusing structure. Some residual liquid and solids are present in the microfluidic channels.

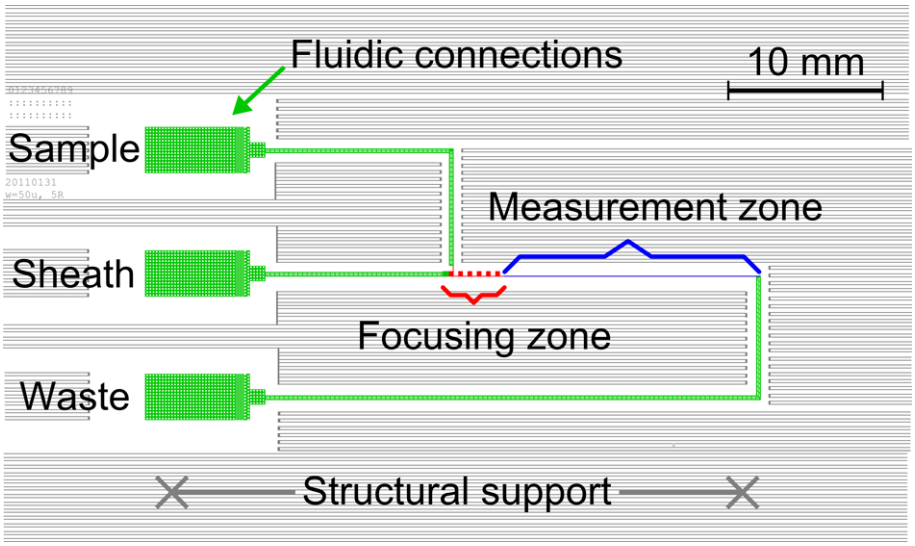

Fig. S2: Annotated diagram of the microfluidic chip structures.

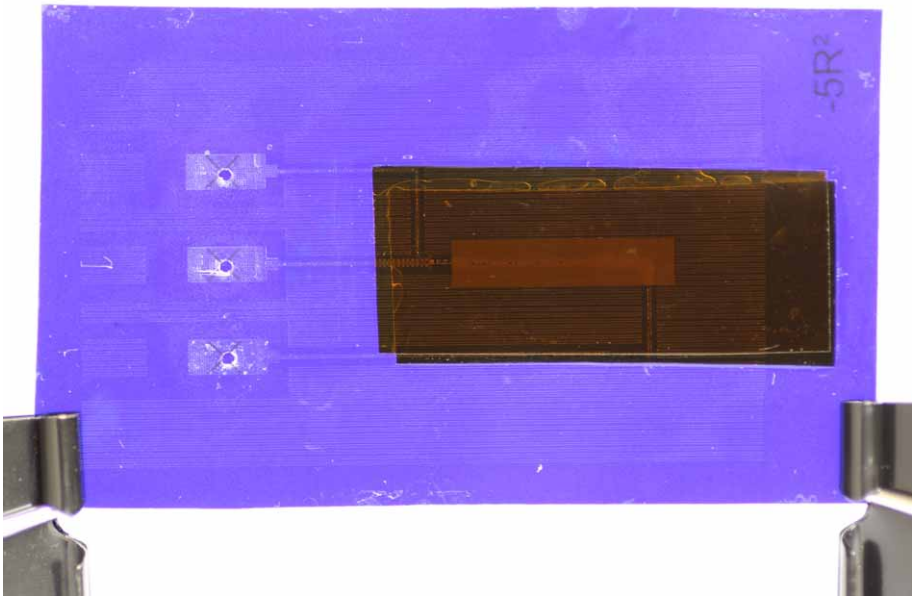

Fig. S3: Whole chip image, front side.

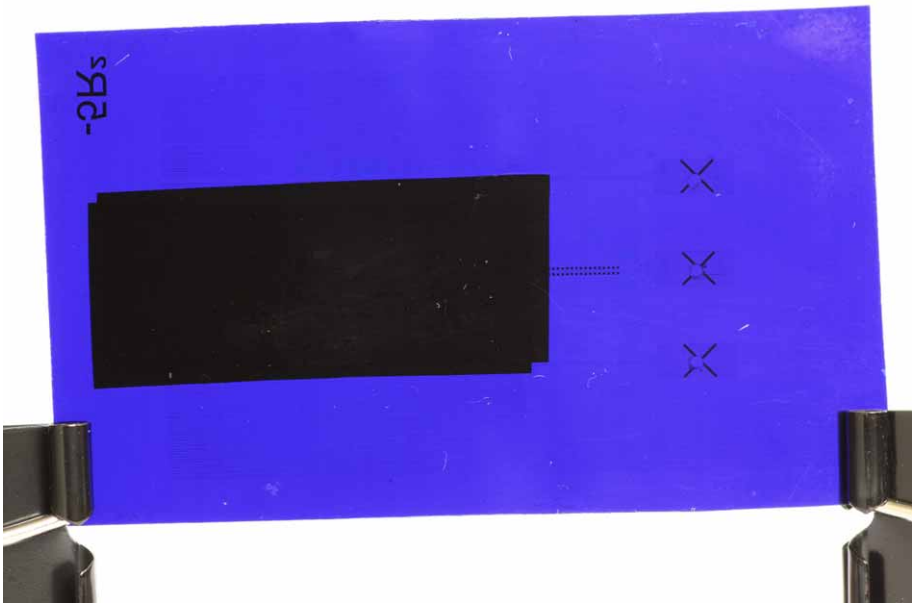

Fig. S4: Whole chip image, back side.

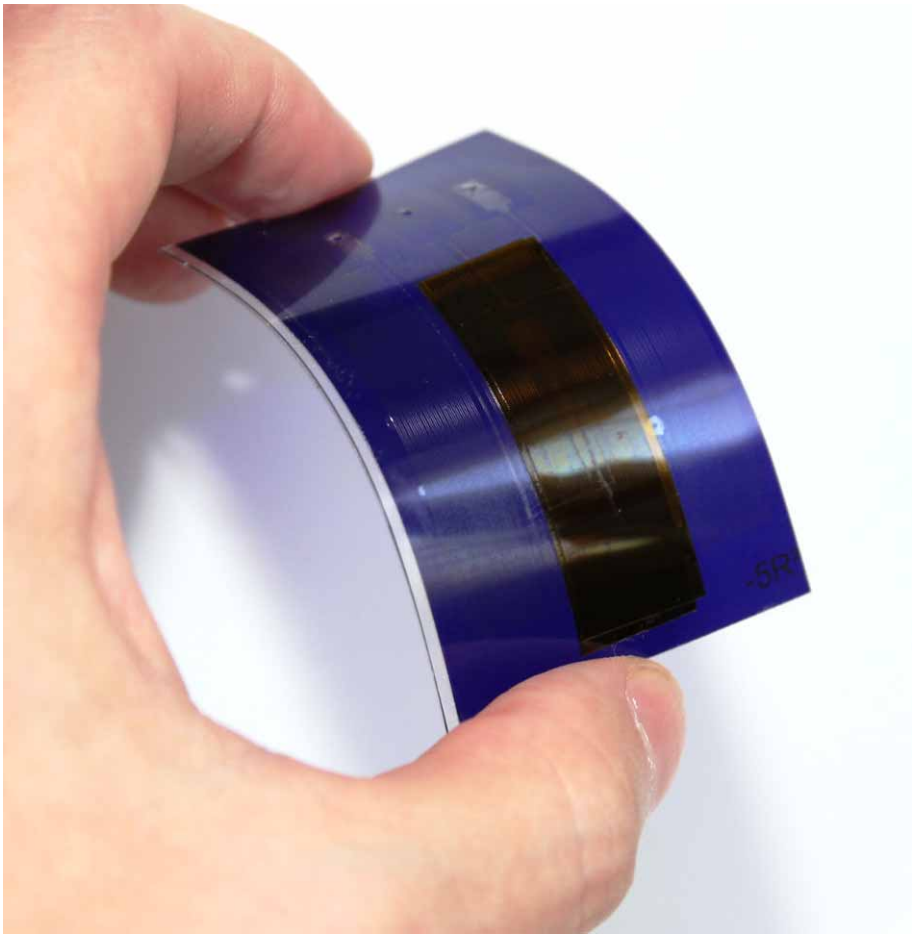

Fig. S5: Demonstration of the microfluidic chip flexibility.

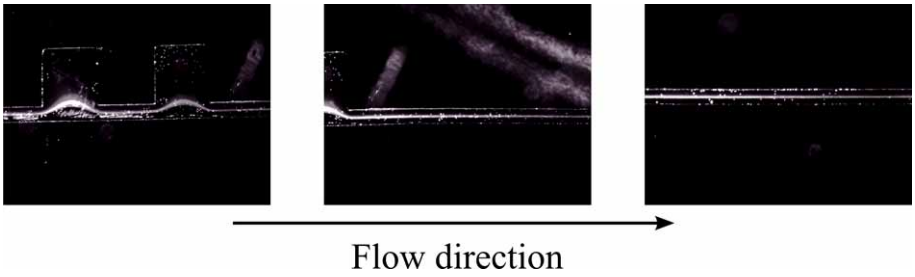

Fig. S6: The three images show the particle focusing at different positions using a focusing structure similar to the one used in this publication. Differences are the number of constriction zones, here 16, the particle size, here 0.84 micron, the total flow rate, here 1500 microliters per hour and the sample to sheath flow ratio which is 1 to 15 for the images. The left image shows the particle flow between the 14th and 16th constriction zone. The middle image shows the transition of the expansion zone to the 16th constriction zone which is the narrow microfluidic channel. The right image shows that the focusing of these small particles is still intact after 7 mm of straight channel.