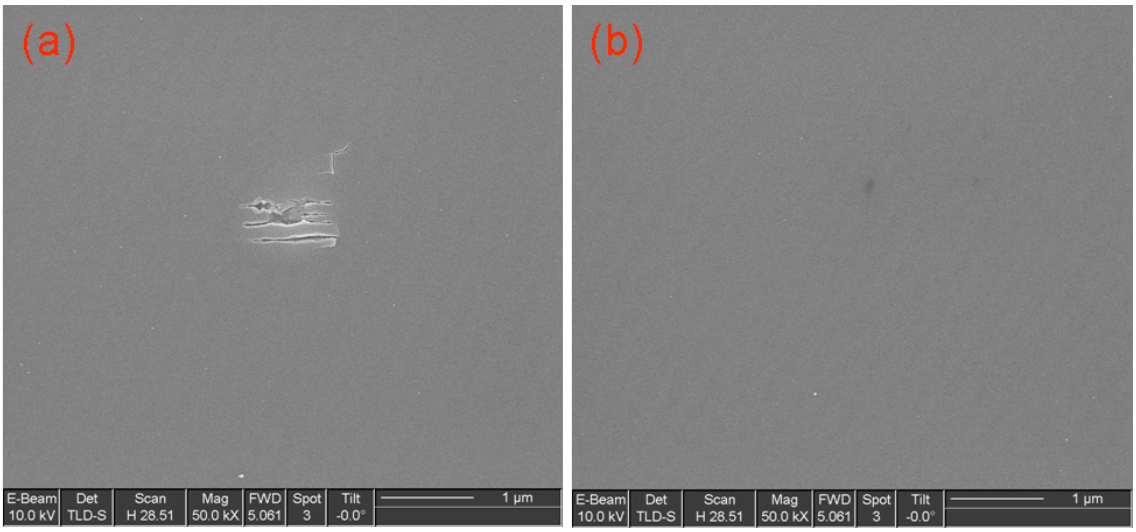

Figure 1 SEM photos of the junction region between the microchannel and optical waveguide written by (a) pulse energy of 84 nJ and scan speed of 10 µm/s without gap distance from the surface (b) pulse energy of 84 nJ and scan speed of 10 µm/s with 10 µm gap distance from the surface

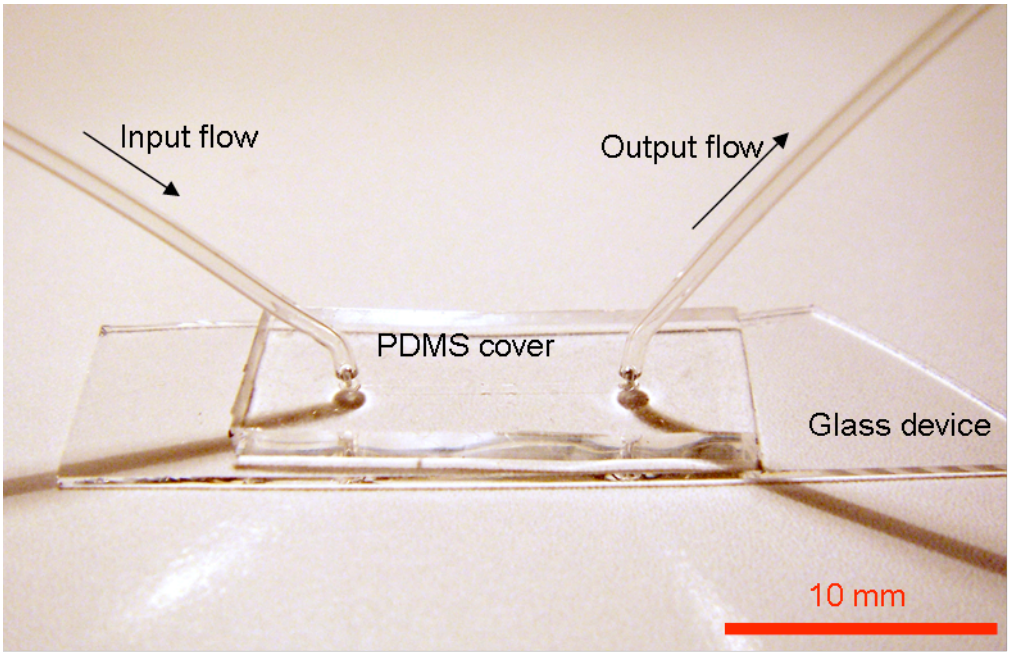

Figure 2 The final device bonded with PDMS cover with two holes for input and output fluidic connection

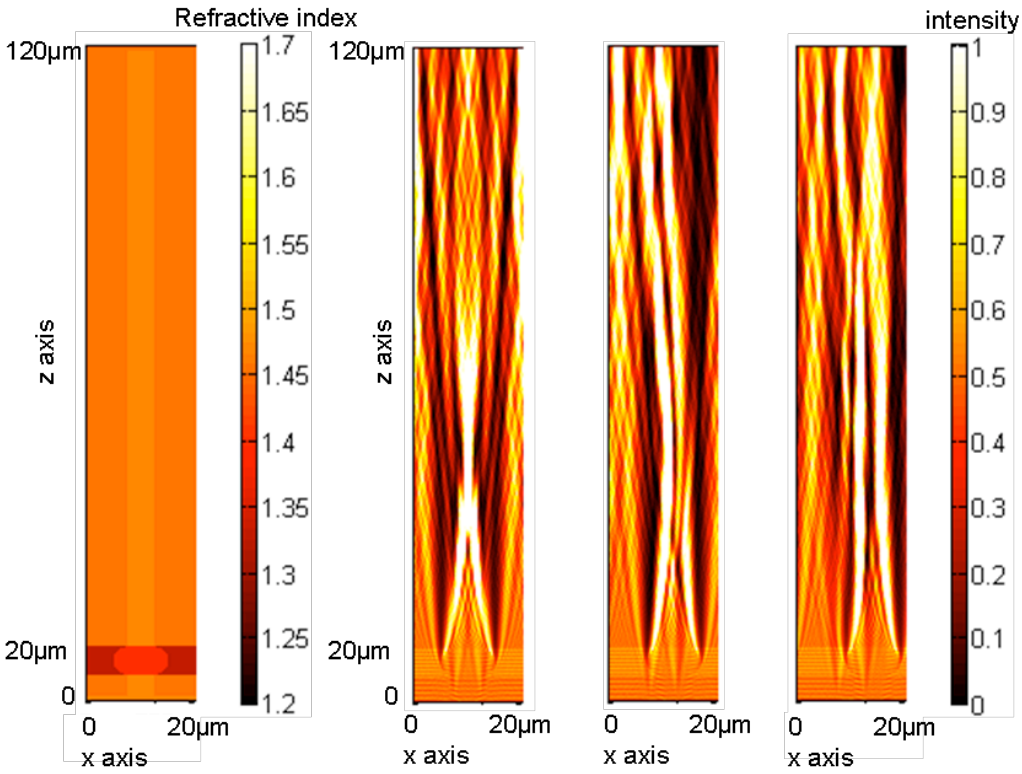

Figure 3 (a) 2D simulated geometric map of refractive indexes of the optofluidic device with a RBC between probing and collecting waveguide in 5 μm microchannel (cell position x=10μm). Calculated intensity profiles of different cell positions are presented at (b) x=10μm (c) x=12μm (d) x=14μm