



Supplementary Figure S1. Influence of heating fiber displacement from the center of OFRR cross section on the sensing performance. (a) and (b) are the temperature distribution (in Kelvin) over the cross section of the optofluidic ring resonator with displacement of the heating fiber tip,  $\Delta r = 0$  and  $\Delta r = 10$   $\mu\text{m}$ , respectively. (c) Wavelength shift of the OFRR as a function of heating laser power at different displacement of the heating fiber from the center. It is shown that the displacement of the heating fiber does not influence the sensing signal. The parameters of the OFRR and the fiber tip are set to be the same as in the experiment.

Supplementary Table S1 Comparison with commercially available flow rate sensors

No.	Manufacturer	Part No.	Dynamic range	Accuracy	Website
1	Dolomite	3200098	1-50 $\mu$ L/min	5%	<a href="http://www.dolomite-microfluidics.com/webshop/sensors-flow-sensors-c:51_52/mitos-flow-rate-sensor-1-50-micro-l-min-p:239">http://www.dolomite-microfluidics.com/webshop/sensors-flow-sensors-c:51_52/mitos-flow-rate-sensor-1-50-micro-l-min-p:239</a>
2	Elveflow	MFS 3	2-80 $\mu$ L/min	5%	<a href="http://www.elveflow.com/microfluidic-flow-control-products/microfluidic-flow-control-module/microfluidic-liquid-mass-flow-sensors/">http://www.elveflow.com/microfluidic-flow-control-products/microfluidic-flow-control-module/microfluidic-liquid-mass-flow-sensors/</a>
3	Sensirion	SLI 430	2-80 $\mu$ L/min	5%	<a href="http://www.sensirion.com/fileadmin/user_upload/customers/sensirion/Dokumente/LiquidFlow/Sensirion_Liquid_Flow_SLI_Datasheet_V2.pdf">http://www.sensirion.com/fileadmin/user_upload/customers/sensirion/Dokumente/LiquidFlow/Sensirion_Liquid_Flow_SLI_Datasheet_V2.pdf</a>
4	Fluigent	Flow Unit M	2-80 $\mu$ L/min	5%	<a href="http://www.fluigent.com/flow-rate-platform">http://www.fluigent.com/flow-rate-platform</a>
5	Our work		2-100 $\mu$ L/min	5.2%	