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Supplementary Information

An Optofluidic Temperature Probe. *Sensors* 2013, *13*, 4289-4302

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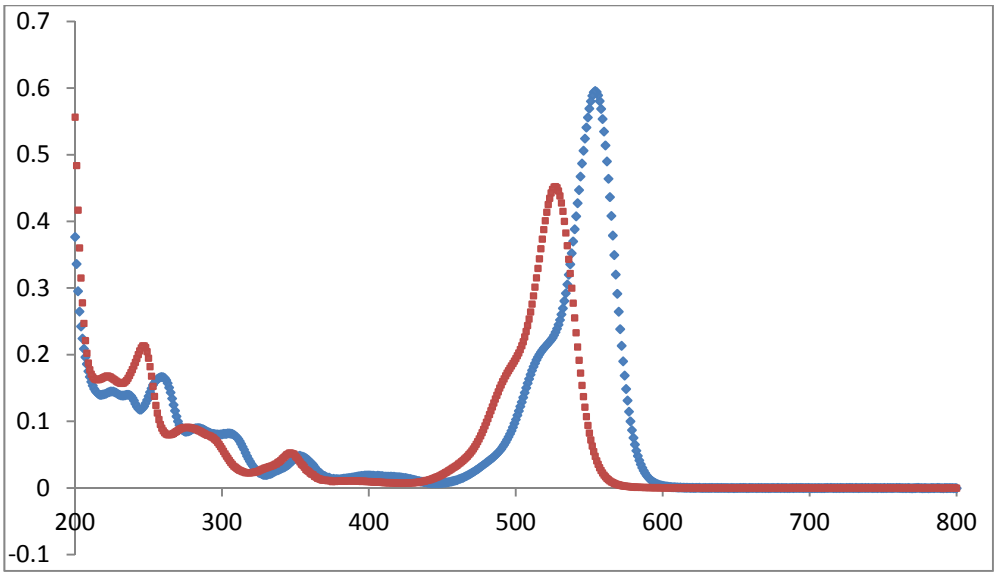
Figure S1. UV-Vis absorption spectra of the RhB (blue) and Rh6G(red) solutions used in the study (sixteen times diluted).



Dye concentrations calculated, using Lambert-Beer's Law:

RhB: Ext. Coeff. ε_{mol} = 106,000 $M^{-1}\cdot cm^{-1}$ ($\lambda_{abs,\ max}$ = 554 nm, A = 0.595675)

Concentration before dilution: 89.9 µM

Rh6G: Ext. Coeff. ε_{mol} = 116,000 $M^{-1}\cdot cm^{-1}$ ($\lambda_{abs,\ max}$ = 527 nm, A = 0.452295)

Concentration before dilution: 62.4 µM

The measurements were performed in water within 10 mm quartz cuvettes. The solutions used in the pipette thermometer were 16× diluted before absorption measurement. Note that the absolute concentration values are only approximate, since the literature extinction coefficients used in the calculation were determined in ethanol. Absolute concentrations are not required for calibration and temperature measurement, it is important that the concentration ratio of 1.44:1 (RhB:Rh6G) is established in order to use the calibration model described in the main text.

Table S1. Thermal equilibration and dye concentration depending on flow rate. The flow rate preferentially used in the experiments (2.4 nL/s) is highlighted in blue.

$Q\left(\frac{nL}{s}\right)$	$T_{surface}$	$T_{average}$	T_{min}	$c_{surface}$
1.2	96%	89%	76%	96%
2.4	95%	87%	71%	99%
4.8	94%	83%	63%	99.7%