

**Analytical Methods**

*Electronic Supplementary Information for*

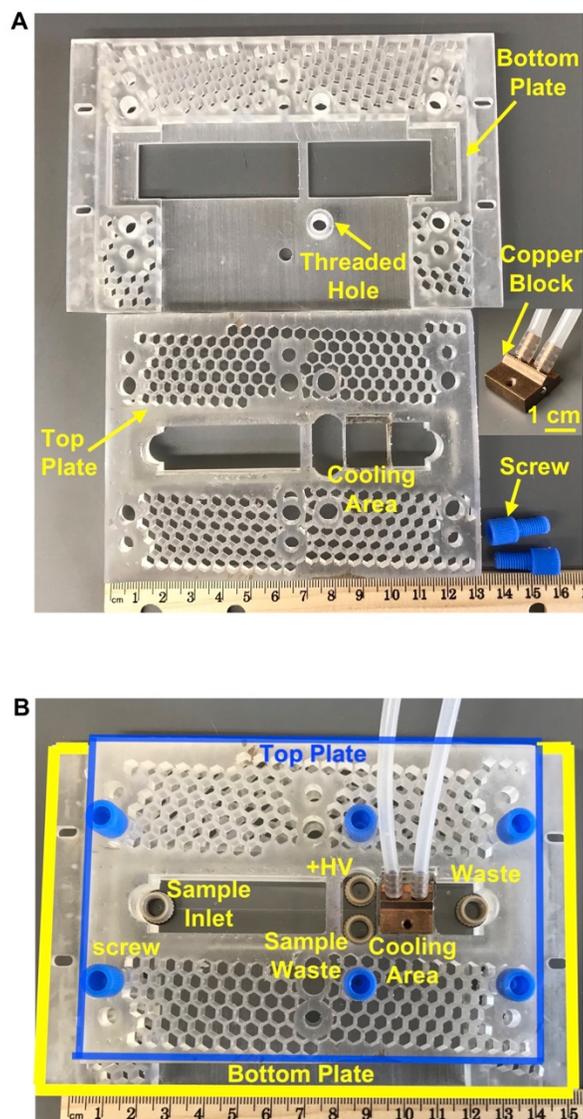
**A microfluidic platform integrating pressure-driven and electroosmotic-driven flow with  
inline filters for affinity separations**

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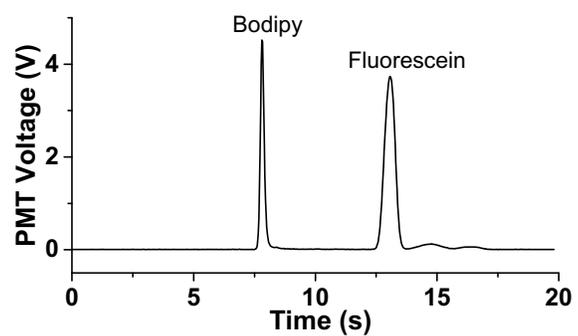
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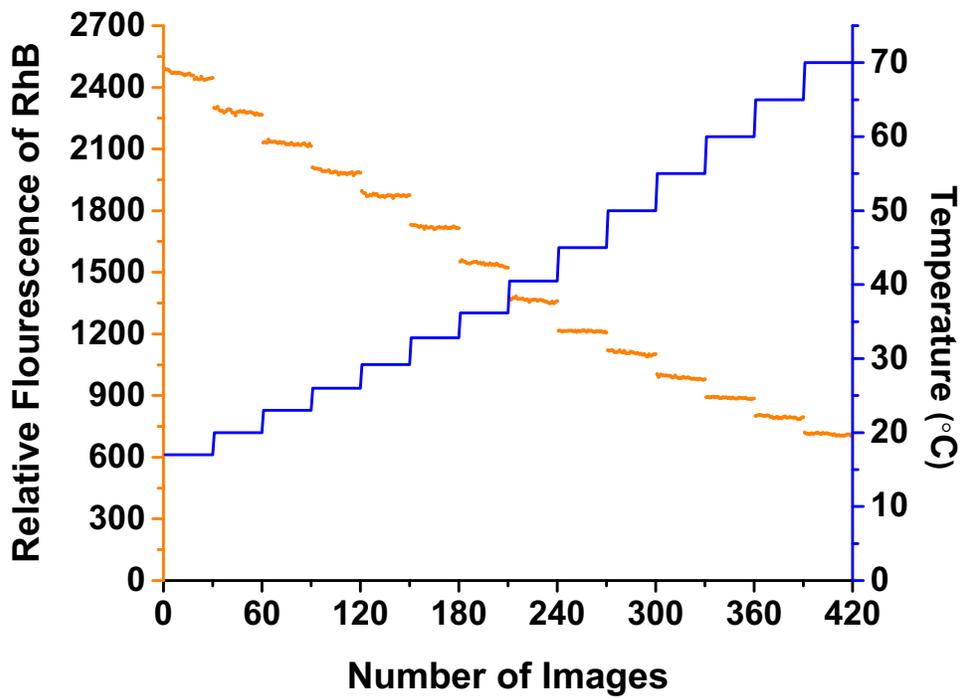
**Figure S-1. 3D-printed manifold.** **A.** The top and bottom plate of the manifold are shown with the screws (blue) used to connect them. The copper block used to circulate cold water to cool the heated side of the Peltier cooler is shown in the inset. The honey-cone shaped design for the manifold was used to reduce thermal mass and consumption of the 3D printing material. **B.** The manifold connected together and sandwiching a microfluidic device is shown. The top and a bottom plate of the manifold are held together with 6 screws (blue in photo), while the liquid reservoirs used to hold reagents and buffer are brown in the photo.

**Table S-1. Peak height information for the data in Figure 3.**

Result	Trial 1			Trial 2			Trial 3		
	Peak Height		Peak Height Ratio	Peak Height		Peak Height Ratio	Peak Height		Peak Height Ratio
	Bodipy	Fluorescein		Bodipy	Fluorescein		Bodipy	Fluorescein	
Average	5.12	3.75	1.37	8.56	5.51	1.55	8.05	5.22	1.54
Standard Deviation	0.22	0.02	0.06	0.30	0.03	0.05	0.48	0.06	0.10
%RSD	4.26	0.45	4.16	3.50	0.56	3.33	5.92	1.10	6.28



**Figure S-2. Representative electropherogram of bodipy and fluorescein.** Shown is a representative electropherogram from the data in Figure 3. The PDF rate was  $100 \text{ nL min}^{-1}$  and a 1.8 s injection time was used with a field strength of  $1250 \text{ V/cm}$ .



**Figure S-3. The image intensity of RhB as a function of temperature.** Shown are the image intensities (orange points, left y-axis) from 30 images that were taken at each temperature (blue line, right y-axis).