Electronic Supplementary information (ESI) for

Small Molecular Logic Systems can Draw the Outlines of Objects via Edge Visualization

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S1. Outline drawing parameters: Full width at half maximum and brightness

The quality of the outline can be defined in terms of its sharpness in space and its distinguishability from its immediate background. Each outline is necessarily asymmetric, with an inside face and an outside face. The full width of the outline is given as a sum of half widths at half height. The half width of the outside face is half $width_1$, for example. The brightness of the outside face of the outline is $brightness_1$, for example. Even before the outline emerges, brightness can be defined as the ratio of intensities of the bright region and dark regions. The parameters are defined with reference to Figure S1.
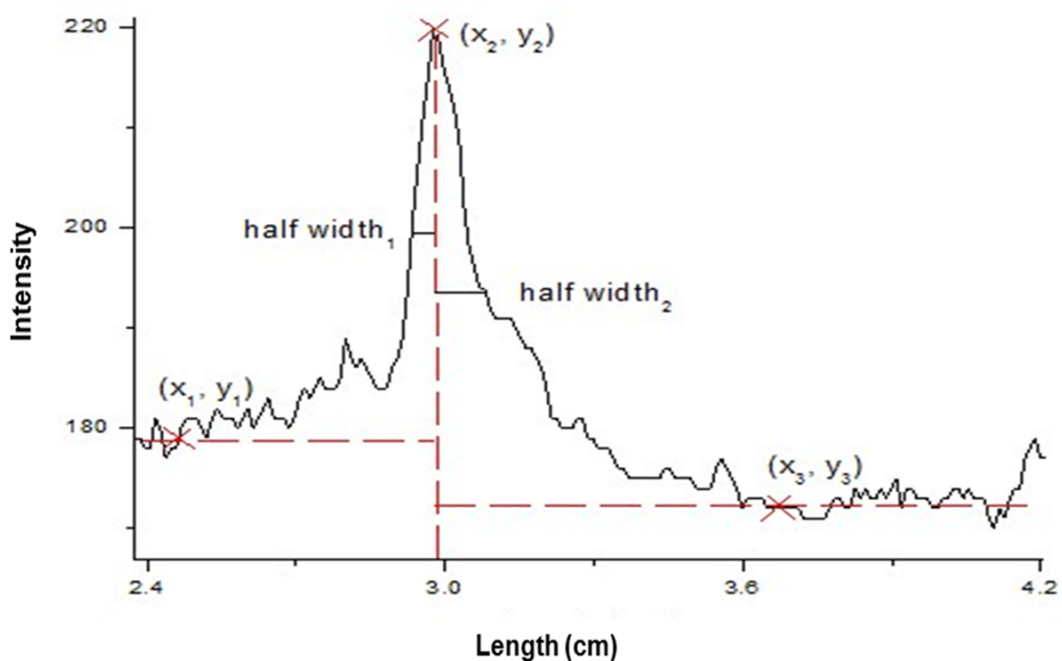

Figure S1. Expansion of a fluorescence intensity - length graph of a single outline.

a)   Half $width_1 = x_2 - f[(y_1/2) + (y_2/2)]$

b)   Half $width_2 = f[(y_3/2) + (y_2/2)] - x_2$

c)   Full width = Half $width_1$ + Half $width_2 = f[(y_3/2) + (y_2/2)] - f[(y_1/2) + (y_2/2)]$

d) $Brightness_1 = y_2/y_1$

e) $\text{Brightness}_2 = y_2/y_3$

where $f[(y_1/2) + (y_2/2)]$, for example, refers to the value of the abscissa for the data point which has an ordinate of $[(y_1/2) + (y_2/2)]$.