Supporting Information

Thermo-responsive fluorescent polymers with diverse LCSTs for ratiometric temperature sensing through FRET

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Figure S1. $^1$H NMR of BOBPYOH

Figure S2. $^{13}$C NMR of BOBPYOH
Figure S3. $^1$H NMR of BOBPYOX

$\delta = 164.68, 158.91, 151.01, 149.31, 143.29, 135.33, 133.43, 133.09, 132.66, 132.03, 131.94, 130.46, 128.74, 128.55, 128.24, 126.39, 125.67, 125.47, 123.47, 120.14, 119.86, 119.81, 119.60, 119.07, 110.97, 17.48, 14.84, 13.05, 9.59.$

Figure S4. $^{13}$C NMR of BOBPYOX

$\delta = 164.68, 158.91, 151.01, 149.31, 143.29, 135.33, 133.43, 133.09, 132.66, 132.03, 131.94, 130.46, 128.74, 128.55, 128.24, 126.39, 125.67, 125.47, 123.47, 120.14, 119.86, 119.81, 119.60, 119.07, 110.97, 17.48, 14.84, 13.05, 9.59.$
Figure S5. GPC result of PNB

MW Averages

Table: MW Averages

| Peak No | Mp     | Mn     | Mw     | Mz     | Mz+1   | Mv     | PD    |
|---------|--------|--------|--------|--------|--------|--------|-------|
| 1       | 8015   | 5975   | 7954   | 10107  | 12175  | 7646   | 1.33121 |

Processed Peaks

Table: Processed Peaks

| Peak No | Name  | Start RT (mins) | Max RT (mins) | End RT (mins) | Pk Height (mV) | % Height | Area (mV.secs) | % Area |
|---------|-------|-----------------|---------------|--------------|----------------|----------|----------------|--------|
| 1       |       | 15.97           | 18.35         | 19.85        | 0.802255       | 0        | 107.656       | 100    |

Figure S6. GPC result of PNmR

MW Averages

Table: MW Averages

| Peak No | Mp     | Mn     | Mw     | Mz     | Mz+1   | Mv     | PD    |
|---------|--------|--------|--------|--------|--------|--------|-------|
| 1       | 14626  | 11144  | 16140  | 21913  | 27399  | 15334  | 1.44831 |

Processed Peaks

Table: Processed Peaks

| Peak No | Name  | Start RT (mins) | Max RT (mins) | End RT (mins) | Pk Height (mV) | % Height | Area (mV.secs) | % Area |
|---------|-------|-----------------|---------------|--------------|----------------|----------|----------------|--------|
| 1       |       | 14.73           | 17.02         | 19.50        | 1.54918        | 0        | 255.827       | 100    |