

Supporting Information

Steady-State Fluorescence and Lifetime Emission Study of pH-Sensitive Probes Based on i-motif Forming Oligonucleotides Single and Double Labeled with Pyrene *Chemosensors* 2015, 3, 211-223; doi:10.3390/chemosensors3030211

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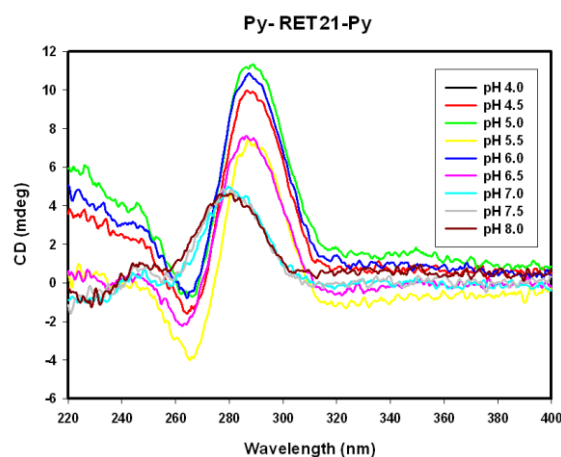


Figure S1. Circular Dichroism (CD) spectra for Py-RET21-Py at varied pH values (2 μ M probe in 10 mM Tris-acetate buffers).

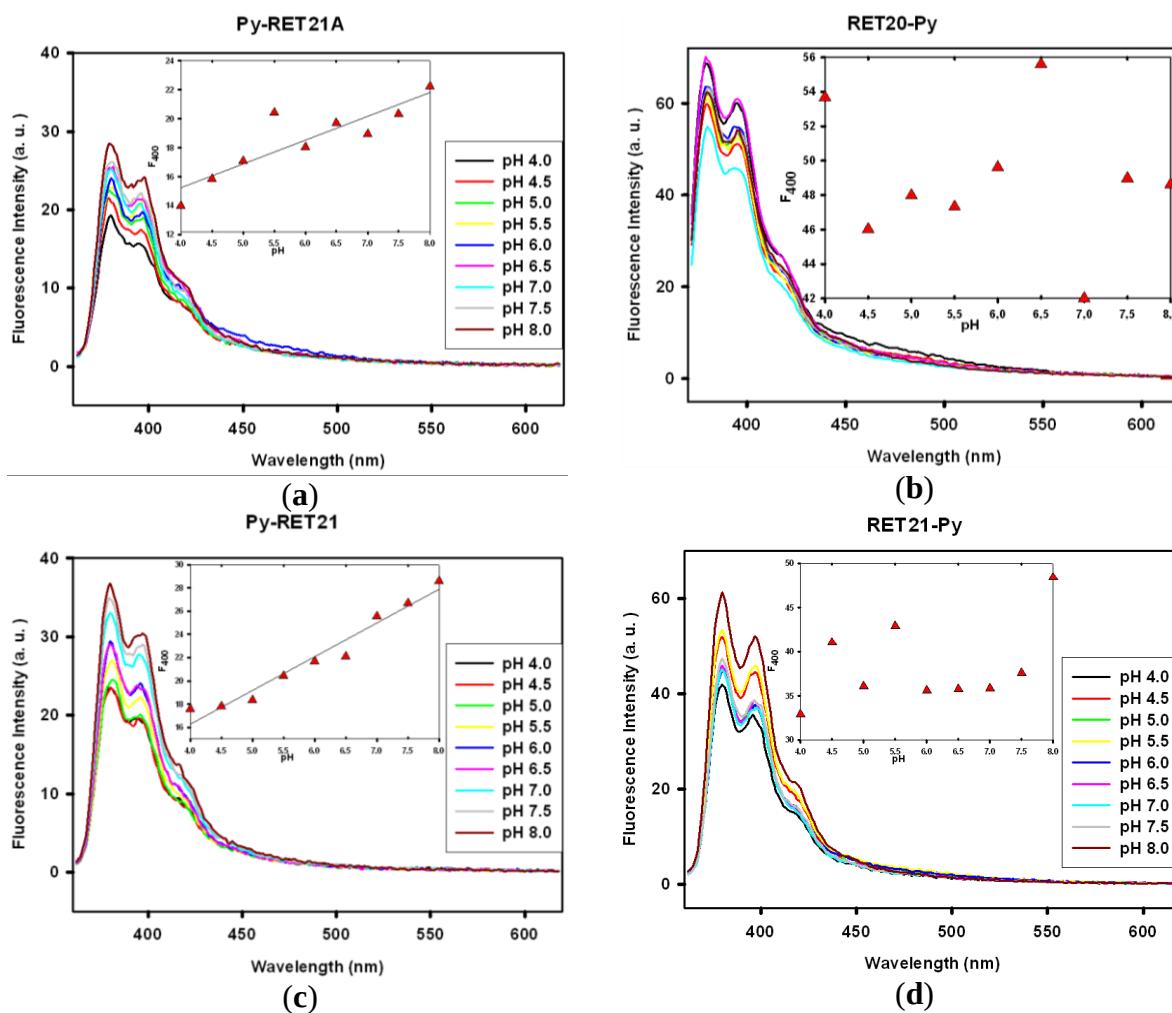


Figure S2. The fluorescence spectra of probes single labeled with pyrene measured at different pH values (1 μM probe in 10 mM Tris-acetate buffers; excited at 340 nm) with insert showing changes in fluorescence intensity at 400 nm versus pH: (a) Py-RET21A; (b) RET20-Py; (c) Py-RET21; (d) RET21-Py.

Table S1. The calculated intensity- and amplitude-weighted average lifetimes, $\langle\tau\rangle$ values for dual- and mono-pyrene labeled probes.

Py-RET21A-Py			Py-RET21A		
pH	Intensity weighted [ns]	Amplitude weighted $\langle\tau\rangle$ [ns]	pH	Intensity weighted [ns]	Amplitude weighted $\langle\tau\rangle$ [ns]
4.0	25.95	12.02	4.0	55.80	42.81
4.5	29.24	13.79	4.5	55.32	42.15
5.0	25.34	12.22	5.0	55.88	43.03
5.5	29.47	14.08	5.5	53.95	40.51
6.0	26.26	12.62	6.0	56.01	42.94
6.5	26.27	12.56	6.5	55.33	42.31
7.0	24.44	11.94	7.0	54.74	42.74
7.5	24.82	12.12	7.5	45.67	34.33
8.0	27.01	13.48	8.0	38.13	26.07
Py-RET20-Py			RET20-Py		
pH	Intensity weighted [ns]	Amplitude weighted $\langle\tau\rangle$ [ns]	pH	Intensity weighted [ns]	Amplitude weighted $\langle\tau\rangle$ [ns]
4.0	39.48	21.21	4.0	37.19	17.99
4.5	44.91	26.21	4.5	42.15	20.17
5.0	46.68	25.89	5.0	36.59	18.48
5.5	45.74	21.18	5.5	38.82	19.43
6.0	49.24	27.71	6.0	38.86	19.80
6.5	47.90	27.62	6.5	32.70	15.91
7.0	43.18	25.45	7.0	28.99	14.58
7.5	62.48	34.68	7.5	54.29	29.25
8.0	45.67	14.12	8.0	51.075	25.41
Py-RET21-Py			RET21-Py		
pH	Intensity weighted [ns]	Amplitude weighted $\langle\tau\rangle$ [ns]	pH	Intensity weighted [ns]	Amplitude weighted $\langle\tau\rangle$ [ns]
4.0	39.77	26.16	4.0	33.63	16.35
4.5	36.72	25.64	4.5	32.15	18.11
5.0	36.97	26.18	5.0	30.61	17.28
5.5	37.59	27.27	5.5	32.70	19.57
6.0	38.87	29.24	6.0	27.35	16.18
6.5	38.74	30.29	6.5	29.38	17.88
7.0	43.61	34.77	7.0	28.78	16.81
7.5	50.90	41.28	7.5	33.92	21.22
8.0	33.98	24.77	8.0	29.89	18.35

Table S1. Cont.

Py-RET21		
pH	Intensity weighted [ns]	Amplitude weighted < τ > [ns]
4.0	37.68	19.03
4.5	38.35	20.76
5.0	35.35	17.59
5.5	35.37	19.06
6.0	35.55	18.45
6.5	32.83	16.51
7.0	37.39	18.33
7.5	34.40	14.96
8.0	26.72	9.68