SUPPORTING INFORMATION

Jitendriya Swain* and Ashok Kumar Mishra

Department of Chemistry, Indian Institute of Technology Madras, Chennai 600 036, India

Figure S1. Fluorescence emission Spectra of Nile red in water, sol and gel state of PF127. [Nile red] = 5 μM, (λ_{ex}= 550 nm), [PF127] = 10 % (W/v).

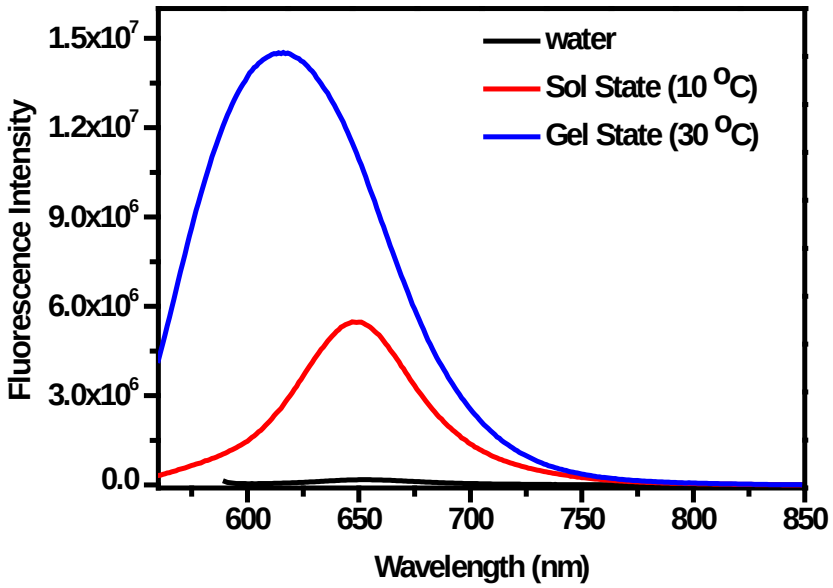

Figure S2. Fluorescence emission spectra (λexc=550 nm) of nile red in dioxane-water mixtures (0-90 % v/v).

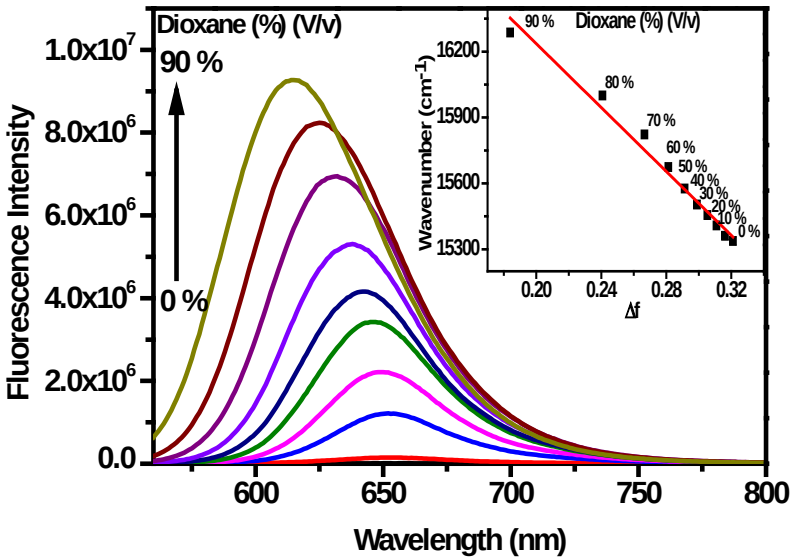

Figure S3. Temperature dependent fluorescence lifetime decays of Nile red in PF127 at emission wavelengths 590 nm. [Nile red] = 5 μM, (λ_{ex}= 570 nm), [PF127] = 10 % (W/v).

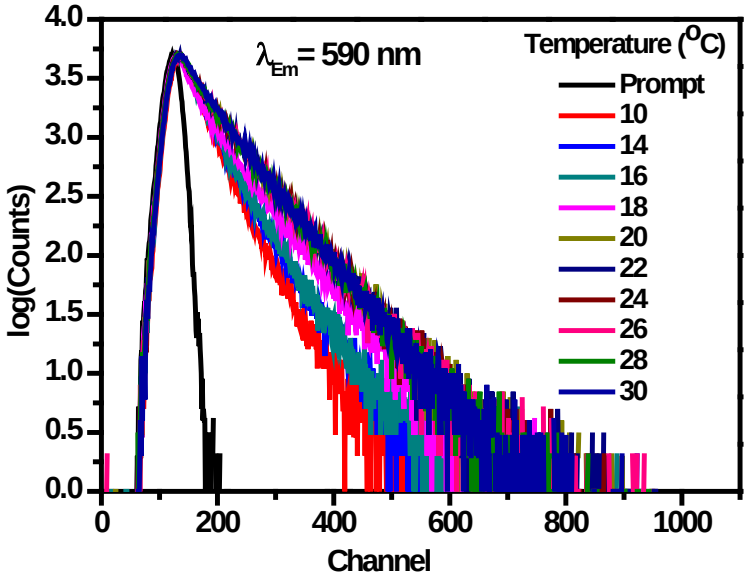

Table S1. Temperature dependent fluorescence lifetime decays data of Nile red in PF127 at emission wavelengths 590 nm. [Nile red] = 5 μM, (λ_{ex}= 570 nm), [PF127] = 10 % (W/v).

Em=590 nm Temp. (°C)	τ_{DS} (ns)(α_{DS}) (Decay Shorter)	τ_{DL} (ns)(α_{DL}) (Decay Longer)	χ^2
10	1.42(45)	2.67(55)	1.14
14	1.38(45)	3.09(55)	1.09
16	1.36(40)	3.11(60)	1.20
18	1.00(28)	3.64(72)	1.37
20	1.52(20)	4.06(80)	1.25
22	1.43(19)	4.00(81)	1.34
24	1.51(18)	3.95(82)	1.38
26	1.47(18)	3.94(82)	1.43
28	1.49(18)	3.91(82)	1.45
30	1.59(18)	3.91(82)	1.32

Figure S4. Temperature dependent fluorescence lifetime decays of Nile red in PF127 at emission wavelengths 630 nm. [Nile red] = 5 μM, (λ_{ex}= 570 nm), [PF127] = 10 % (W/v).

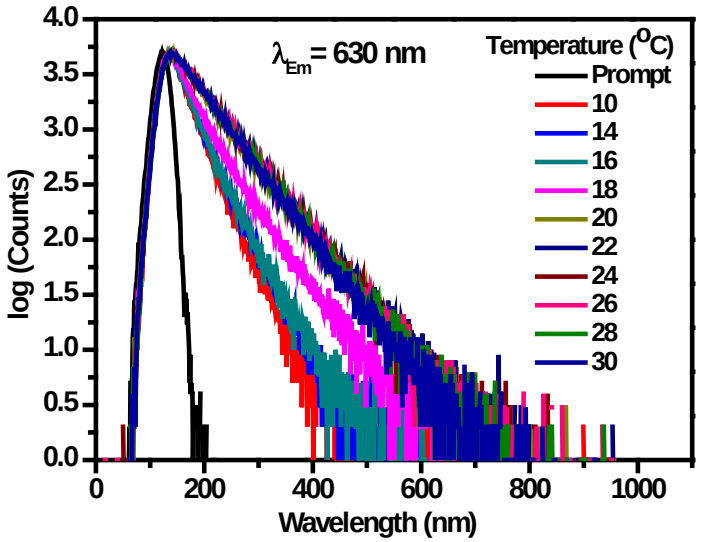

Figure S5. Temperature dependent fluorescence lifetime decays of Nile red in PF127 at emission wavelengths 700 nm. [Nile red] = 5 μM, (λ_{ex}= 570 nm), [PF127] = 10 % (W/v).

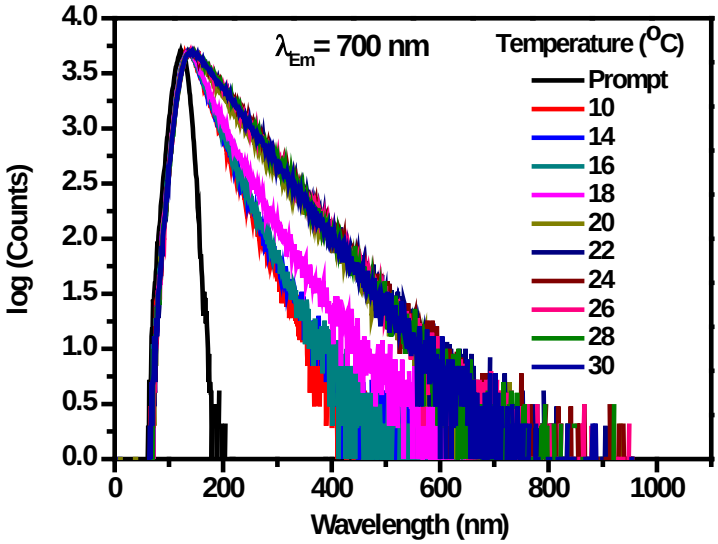

Table S2. Temperature dependent fluorescence lifetime decays data of Nile red in PF127 at emission wavelengths 700 nm. [Nile red] = 5 μM, (λ_{ex}= 570 nm), [PF127] = 10 % (W/v).

Em=700 nm Temp. (°C)	τ_R (ns)(α_R) (Rise Time)	τ_{DS} (ns)(α_{DS}) (Decay Shorter)	τ_{DL} (ns)(α_{DL}) (Decay Longer)	χ^2
10		1.45(68)	2.57(32)	1.15
14		1.54(67)	2.60(33)	1.12
16		1.58(67)	2.61(33)	1.20
18		1.81(66)	3.51(34)	1.36
20		2.38(30)	3.98(70)	1.06
22	0.8(-5)	2.40(8)	3.88(97)	0.9
24	0.8(-5)	1.92(4)	3.80(101)	1.09
26	0.7(-5)	1.87(2)	3.74(103)	1.07
28	0.6(-6)	1.82(2)	3.66(105)	1.10
30	0.7(-8)	1.84(2)	3.70(106)	1.03

Figure S6. Correlation of the fluorescence lifetime with the viscosity of the glycerol medium according to the equation Log (τ/τ_o) = C + x logη (Forster-Hoffmann equation, where τ is fluorescence lifetime of Nile red in glycerol, τ_o= natural lifetime of Nile red (5.74 ns). η is solvent viscosity, x is dye-dependent constant and C is concentration and temperature dependent constant). The slope of the linear fits is 0.51, and r^2 value (goodness of fits) is 0.99.