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Supplementary Materials

Table I. Partial charges on the Solutes Molecules.

resorufin - lithium		thionine - Chloride	
Atom name	Q (e)	Atom name	Q (e)
C1	-0.080	C1	-0.255
1H	0.198	1H	0.213
C2	-0.649	C2	-0.405
2H	0.245	2H	0.230
C3	1.014	C3	0.773
3O	-1.127	3N	-0.850
		3NH1	0.417
		3NH2	0.476
C4	-0.822	C4	-0.597
4H	0.277	4H	0.393
C4a	0.510	C4a	0.110
O5	-0.429	S5	-0.099
C5a	0.595	C5a	0.027
C6	-0.920	C6	-0.425
6H	0.289	6H	0.283
C7	1.154	C7	0.502
7O	-0.868	7N	-0.931
		7NH1	0.415
		7NH2	0.421
C8	-0.634	C8	-0.359
8H	0.251	8H	0.223
C9	-0.086	C9	-0.238
9H	0.192	9H	0.201

C9a	0.463	C9a	0.527
N10	-0.693	N10	-0.789
C10a	0.237	C10a	0.704
Li	0.884	Cl	-0.968

Table II. Viscosity, dielectric parameters and rotational relaxation times of thionine (thn) and cresyl violet (CV) in LiCl DMSO and methanol (MEOH) solution.

[LiCl](M)	DMSO				MEOH			
	η (cP)	$S \times 10^{14}$ (s)	τ_{or} (ps)		η (cP)	$S \times 10^{14}$ (s)	τ_{or} (ps)	
			thn	CV			thn	CV
0.00	1.99	9.93	302±46	321±20	0.55	37.1	84±4	97±9
0.25	2.52	11.1	346±32	373±31	0.64	48.8	89±6	115±10
0.50	3.11	12.7	414±58	434±39	0.73	61.2	103±8	127±12
0.75	3.94	14.4	445±46	515±16	0.84	67.1	107±7	135±11
1.00	4.92	16.8	502±34	595±44	0.94	70.8	115±1 3	142±8

$$S = (\epsilon_s - 1)\tau_D / (2\epsilon_s + 1)^2$$