*Article*

Supplementary Information

Table S1. Wavelength and oscillator strength of the main transitions in the spectrum for the three coumarin-based dyes, in neutral and deprotonated anionic form, calculated by TD-DFT (at B3LYP/DZVP level) in various solvents.

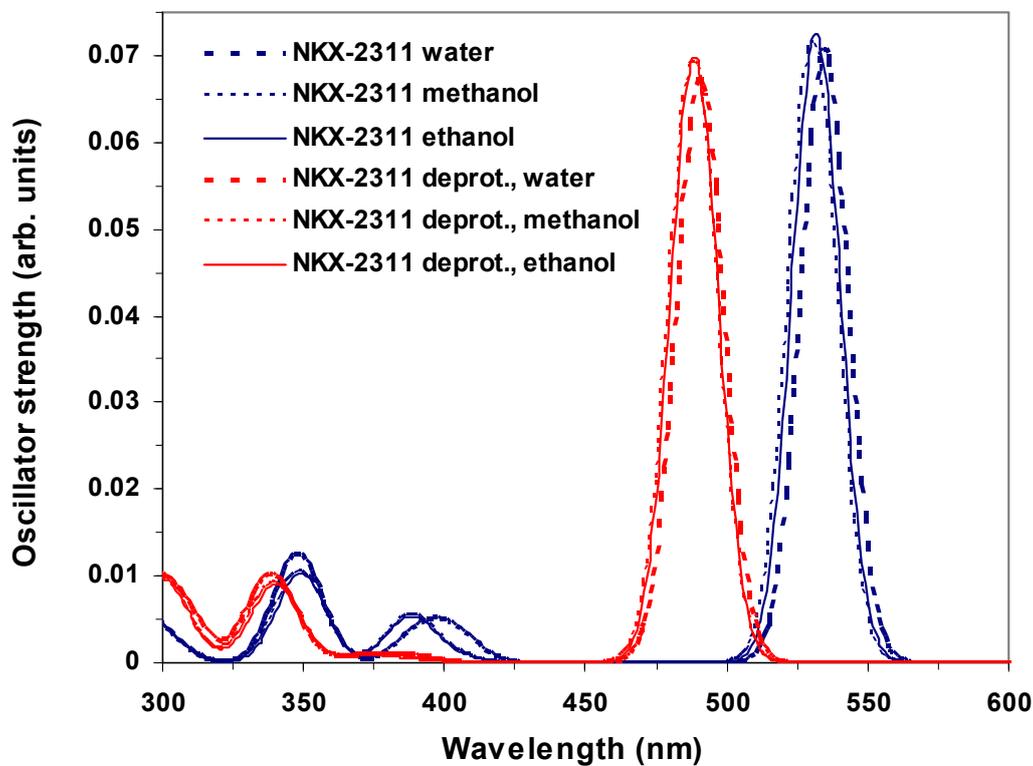| Dye	Dye form	Solvent	Wavelength (nm)	Oscillator strength
C343	Deprotonated	water	413.57	0.5373
		methanol	405.24	0.5564
		ethanol	404.89	0.5658
	Neutral	water	423.67	0.7468
		methanol	419.77	0.7352
		ethanol	420.56	0.7457
NKX-2398	Deprotonated	water	438.11	0.7819
		methanol	435.00	0.8136
		ethanol	435.63	0.8195
	Neutral	water	454.22	1.0980
		methanol	449.83	1.0963
		ethanol	450.39	1.1072
NKX-2311	Deprotonated	water	490.55	1.4381
		methanol	488.06	1.4755
		ethanol	488.53	1.4894
	Neutral	water	534.67	1.5050
		methanol	530.48	1.5270
		ethanol	531.72	1.5417

Figure S1. Simulated UV-Vis absorption spectra of neutral and deprotonated C343 dyes, calculated by TD-DFT, in various solvents. The spectral lines were convoluted with Gaussian distributions of 20 nm linewidth at half maximum.
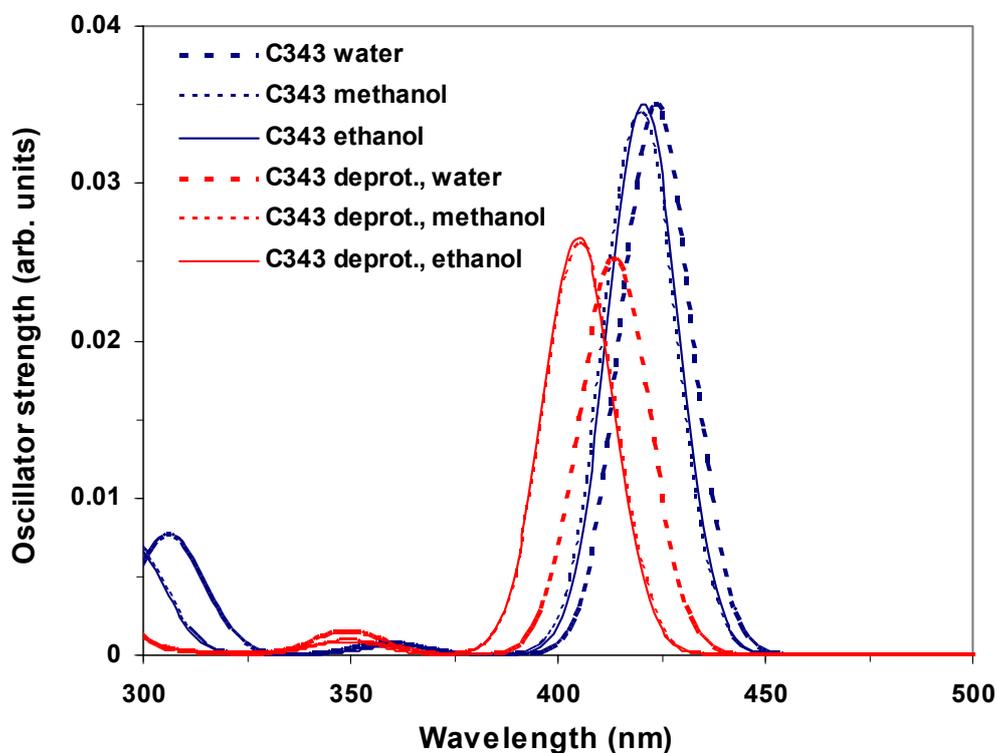
Figure S2. Simulated UV-Vis absorption spectra of neutral and deprotonated NKX-2398 dyes, calculated by TD-DFT, in various solvents. The spectral lines were convoluted with Gaussian distributions of 20 nm linewidth at half maximum.
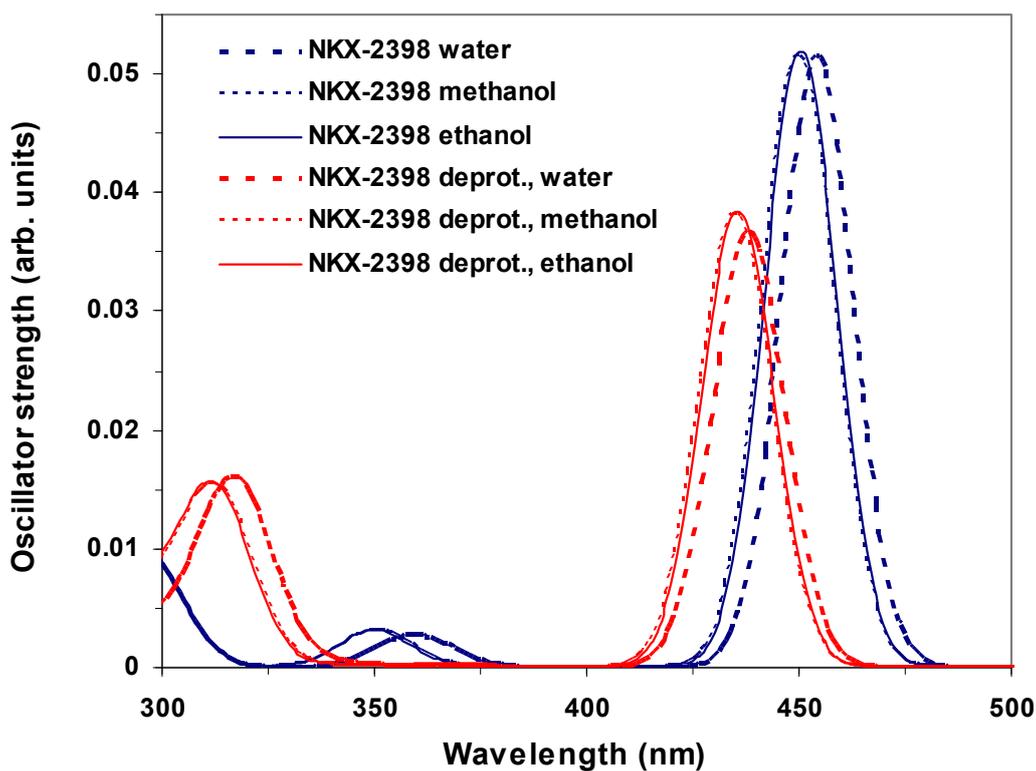
Figure S3. Simulated UV-Vis absorption spectra of neutral and deprotonated NKX-2311 dyes, calculated by TD-DFT, in various solvents. The spectral lines were convoluted with Gaussian distributions of 20 nm linewidth at half maximum.