Table ST1. Fitting parameters of fluorescence time-profiles of NCDs solution with $\lambda_{ex} = 375$ nm at different emission wavelengths (nm)

λ_{em}(nm)	τ_1 (ns)	a_1 (%)	τ_2 (ns)	a_2 (%)	τ_3 (ns)	a_3 (%)	τ_{avg} (ns)
420	0.20	58	1.20	31	5.10	11	1.00
430	0.20	49	1.40	38	5.70	13	1.50
440	0.30	48	1.40	38	6.00	14	1.50
450	0.30	47	1.40	38	6.00	15	1.50
460	0.30	47	1.60	38	6.40	15	1.70
470	0.30	46	1.50	39	6.40	15	1.70
480	0.30	45	1.50	39	6.40	16	1.70
490	0.30	45	1.60	39	6.60	16	1.80
500	0.30	46	1.60	38	6.60	16	1.80
510	0.30	46	1.60	38	6.60	16	1.80
520	0.30	45	1.60	39	6.60	16	1.80
530	0.30	45	1.60	39	6.60	16	1.80
540	0.30	46	1.60	39	6.60	15	1.80
550	0.30	46	1.60	38	6.50	16	1.80
560	0.30	46	1.60	38	6.50	16	1.80
580	0.30	46	1.50	39	6.40	15	1.70
600	0.30	49	1.60	37	6.30	14	1.60

Table ST2. Fitting parameters of fluorescence time-profiles of NCDs solution with $\lambda_{ex} = 450$ nm at different emission wavelengths (nm)

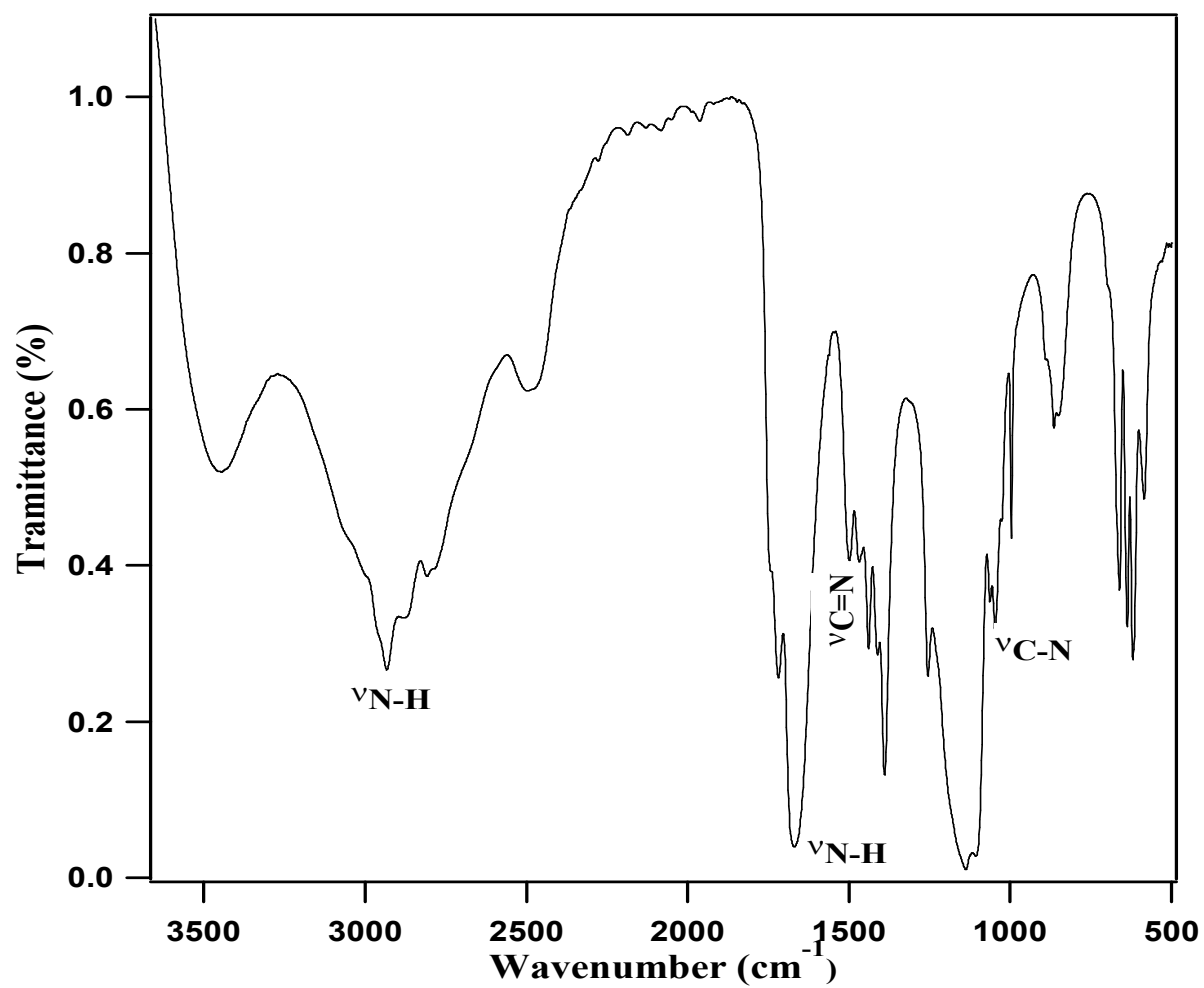| λ_{em}(nm)	τ_1 (ns)	a_1 (%)	τ_2 (ns)	a_2 (%)	τ_3 (ns)	a_3 (%)	τ_{avg} (ns)
490	0.20	54	1.50	31	6.00	15	1.50
500	0.20	52	1.50	32	6.30	16	1.60
510	0.20	52	1.50	32	6.40	16	1.60
520	0.30	51	1.60	32	6.70	17	1.80
530	0.30	48	1.60	34	6.90	18	2.00
540	0.30	47	1.60	35	7.00	18	2.00
550	0.30	47	1.70	35	7.20	18	2.00
560	0.30	47	1.70	35	7.20	18	2.00
570	0.30	47	1.80	35	7.20	18	2.00
580	0.30	48	1.80	35	7.20	17	2.00
590	0.30	48	1.70	35	7.00	17	1.90
600	0.30	48	1.70	35	6.80	17	1.90

Figure SF1. FTIR spectrum of NCDs.
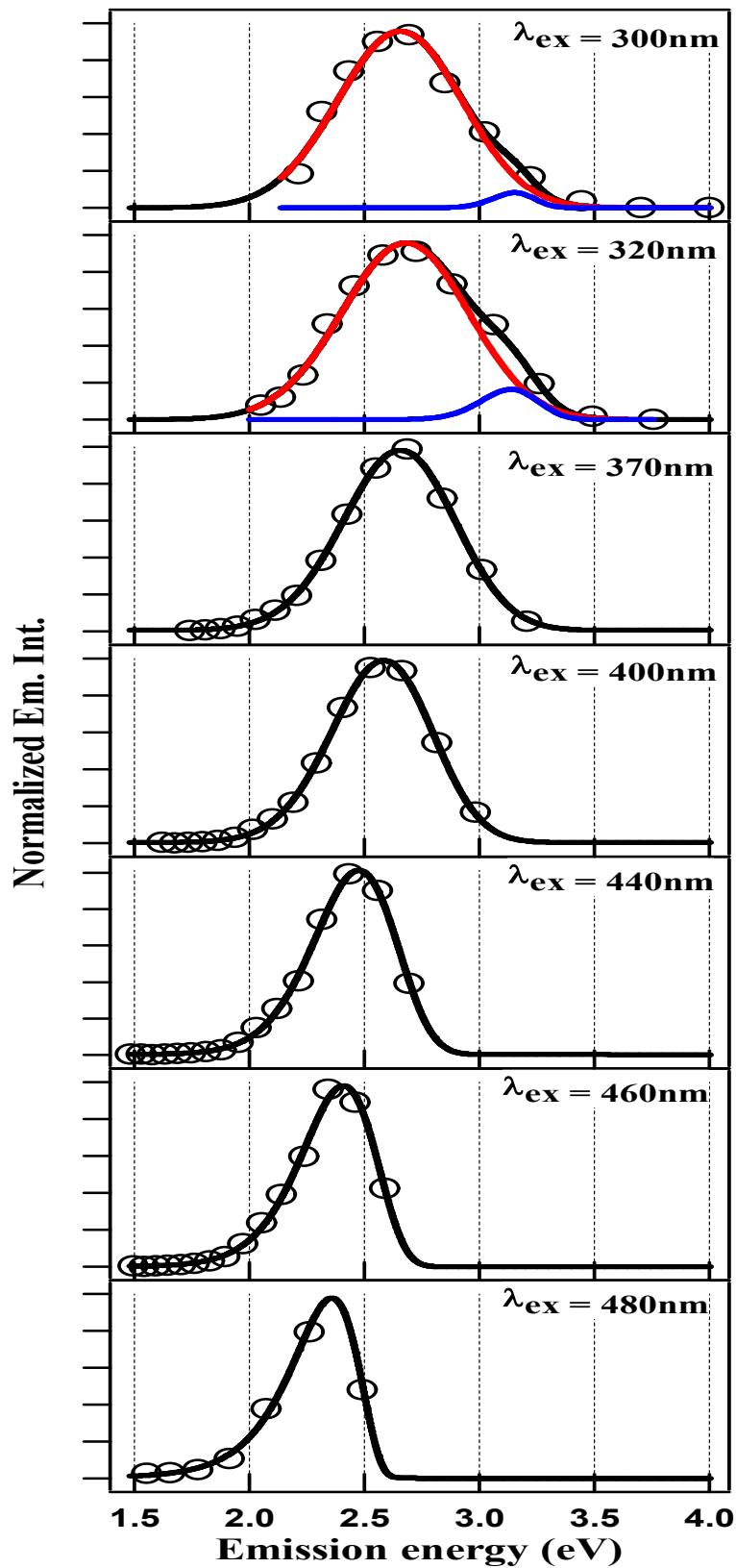
Figure SF2. Steady-state emission spectra of NCDs plotted as a function of emission energy at different excitation energies, as indicated. The solid line represents the emissive component obtained by applying lognormal deconvolution.
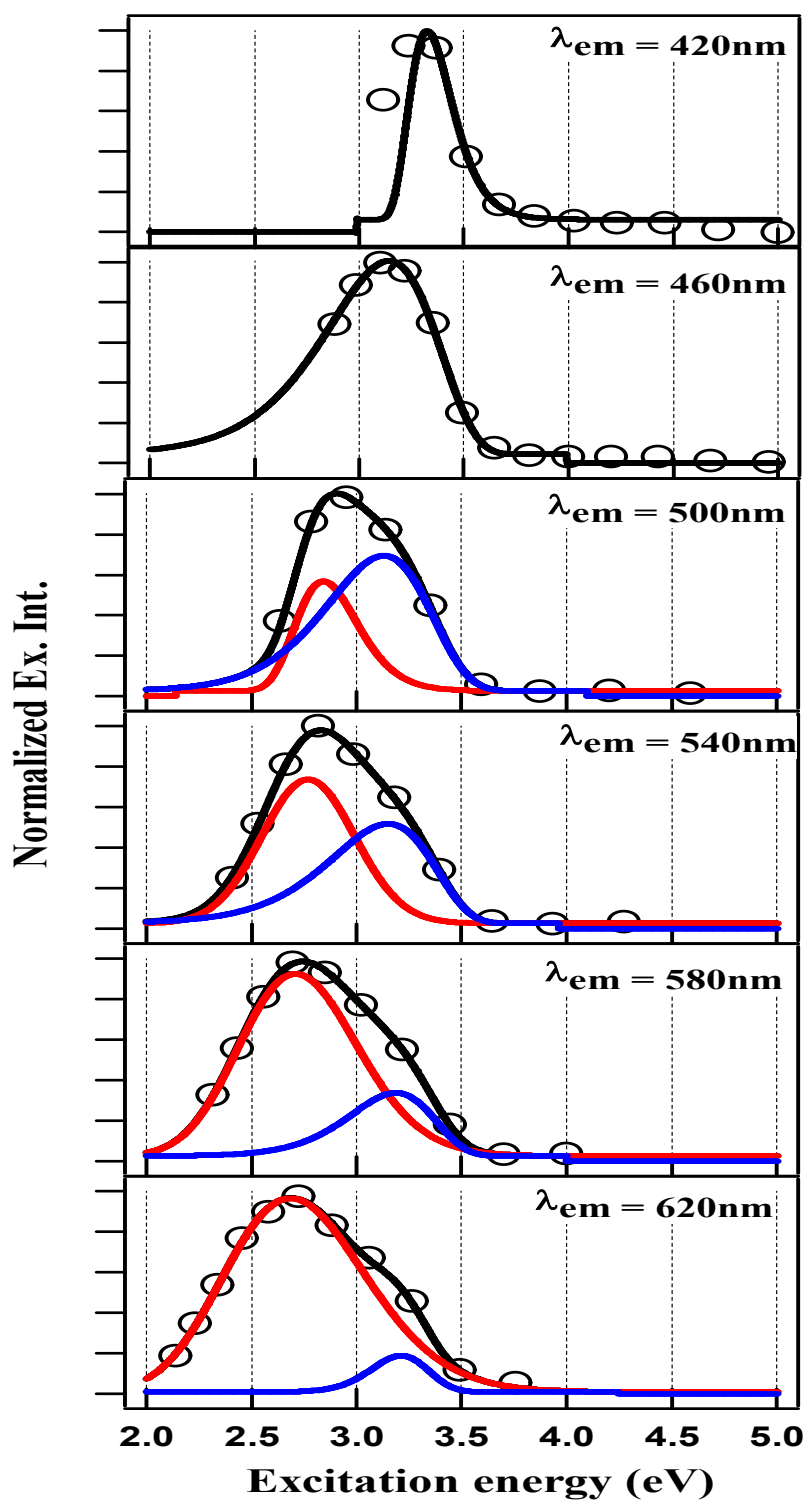
Figure SF3. Fluorescence excitation spectra of NCDs plotted as a function of excitation energy at different emission wavelengths, as indicated. The solid line represents the contributory component obtained by applying lognormal deconvolution.
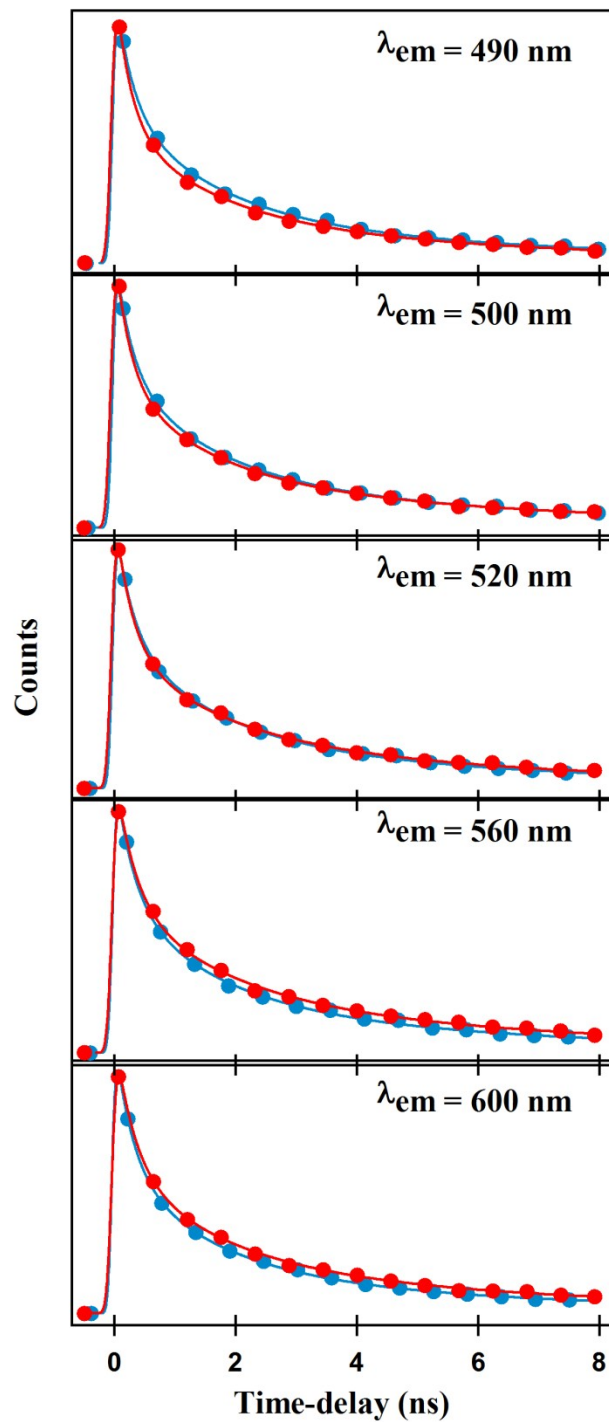
Figure SF4. Fitted time-profiles of NCDs recorded at λ_{ex} = 375 nm (blue curve) and 450 nm (red curve) at different emission wavelengths.