

Supplementary Materials

Article

Ultrafast Energy Transfer Dynamics in a Cyanobacterial Light-Harvesting Phycobilisome

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Supplementary Figures:

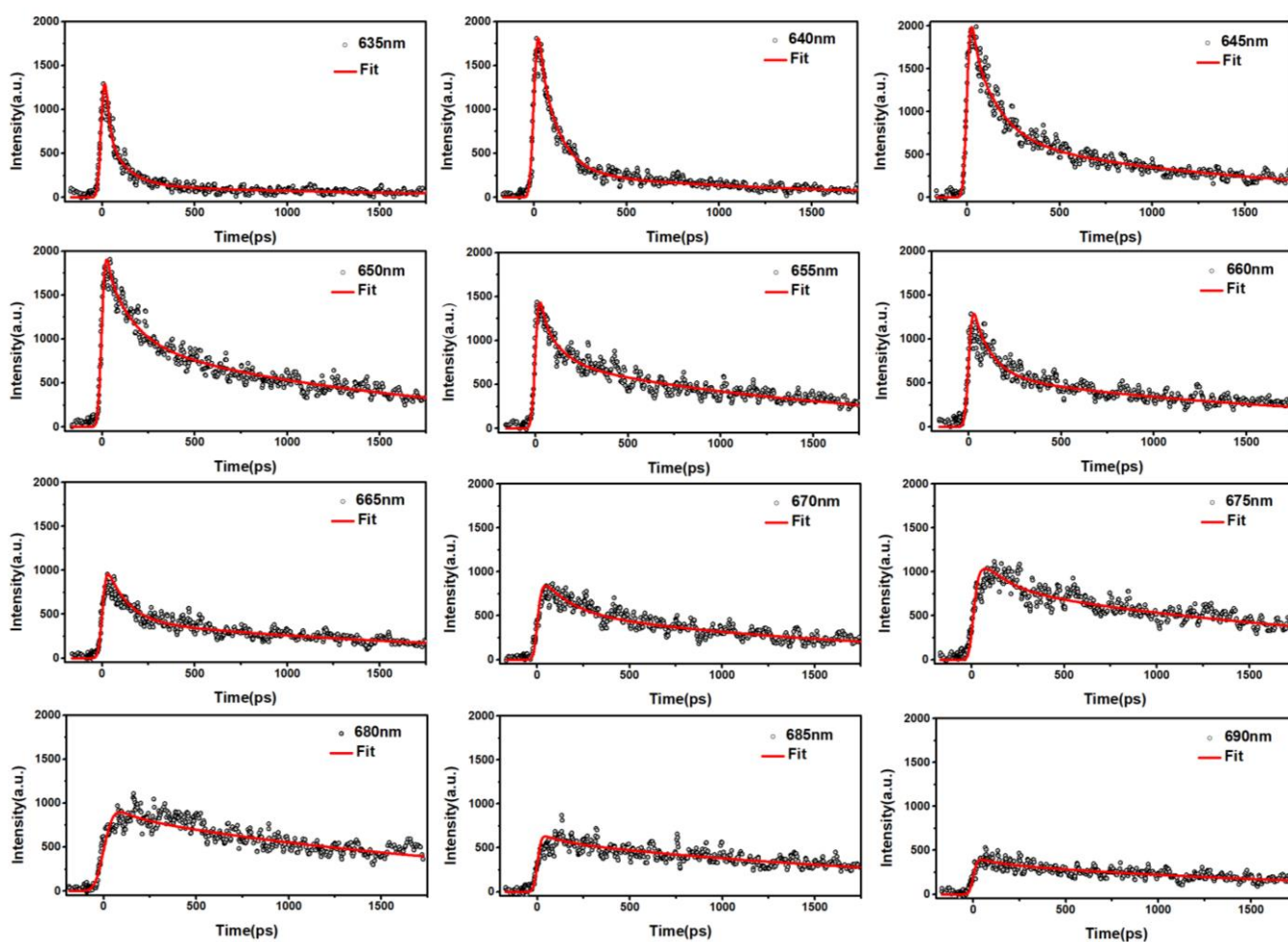


Figure S1. Fluorescence intensity decay curves and fitting results of PBS from T. 2134 at 77K on excitation at 498 nm. The detection wavelengths were 635nm, 640nm, 645nm, 650nm, 655nm, 660nm, 665nm, 670nm, 675nm, 680nm, 685nm, and 690nm. The experiment data is represented by black circles, and the fitting results are represented by red lines.

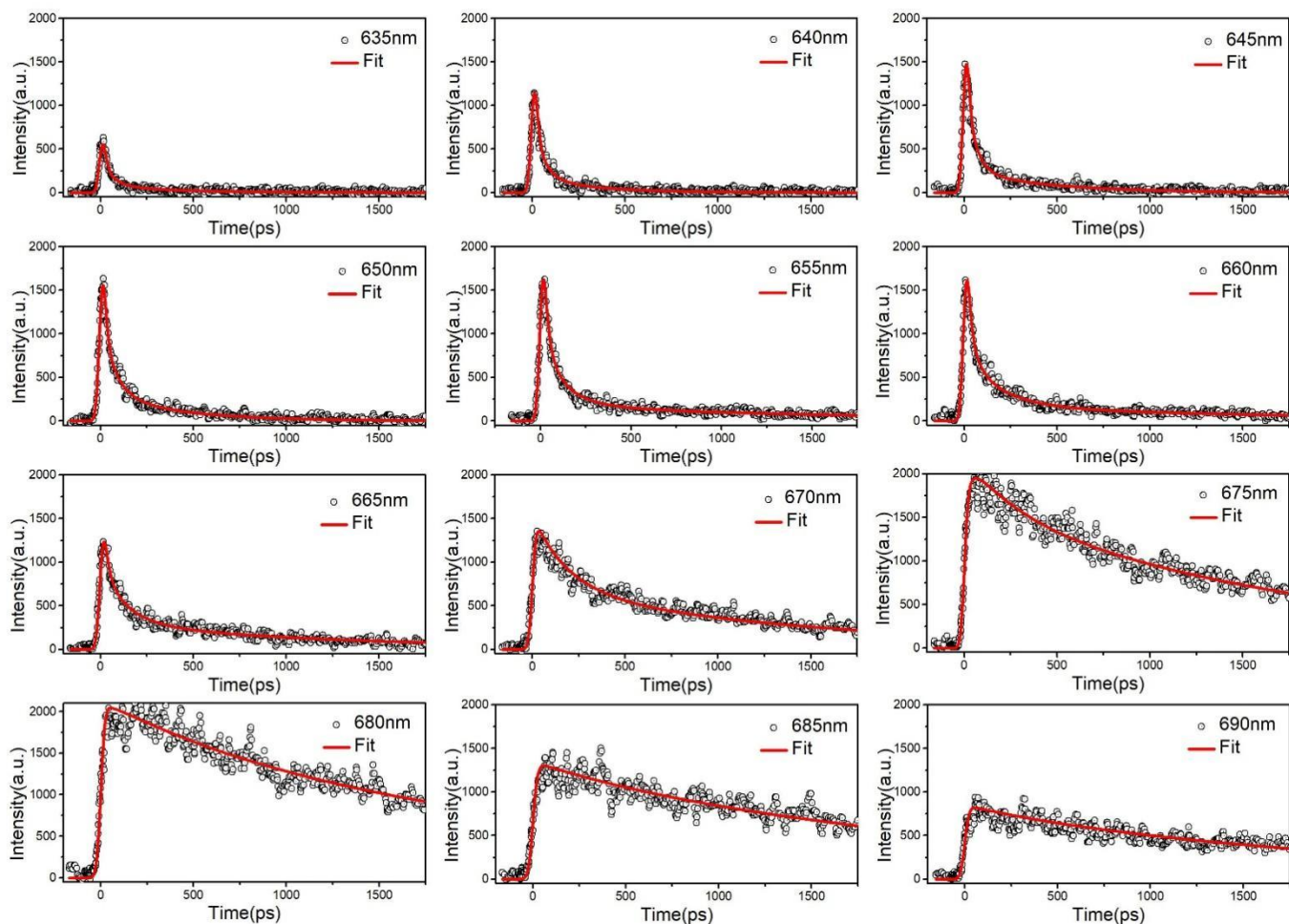


Figure S2. Fluorescence intensity decay curves and fitting results of PBS from T. 2134 at 77K on excitation at 570 nm. The detection wavelengths were 635nm, 640nm, 645nm, 650nm, 655nm, 660nm, 665nm, 670nm, 675nm, 680nm, 685nm, and 690nm. The experiment data is represented by black circles, and the fitting results are represented by red lines.

Supplementary Tables:

Table S1. The deconvolution results of T. 2134 on excitation at 498nm.

E_{em}/nm	τ₁/ps	A₁/%	τ₂/ps	A₂/%	τ₃/ps	A₃/%	τ₄/ps	A₄/%	χ²
630	8.9	79.4	25.7	12.9	105.1	5.6	2061	2.2	2.7
635	10	60.8	24.8	17.3	111.2	18.2	1553	3.8	1.5
640	9.8	9.8	20.8	24.4	105	56.2	1317	9.6	0.9
645	6.8	3.9	17.9	30.4	140.5	42.9	1392	22.9	0.6
650	9.9	-5.1	11.8	42	141	28.6	1595	29.4	0.5
655	7.9	-10.5	16.3	39.3	105	28.4	1636	32.3	0.7
660	9.2	-13.3	21.6	20.3	104.6	47.5	1814	32.2	1
665	7.9	-14.8	18.6	-6.9	109.3	63.8	1893	36.2	0.9
670	7.6	-23.5	25.5	-22.2	146.2	45.3	1732	54.7	0.8
675	10.5	-23.2	32.7	-55.6	128	39.3	2178	60.8	0.7
680	6.7	-5.3	21.0	-14.3	108	15.1	2165	84.9	0.7
685	8.8	-4	19.8	-2.8	127.7	13.4	2357	86.6	0.9
690	9	-4.3	27.5	-2.4	121.7	15.7	2078	84.3	0.9
Average	9		23		120		1817		

Table S2. The deconvolution results of T. 2134 on excitation at 570 nm.

E_{em}/nm	τ₁/ps	A₁/%	τ₂/ps	A₂/%	τ₃/ps	A₃/%	τ₄/ps	A₄/%	χ²
630	10	91.8	59.1	8.3	-	-	-	-	4.3
635	12.4	76.4	63.3	18.2	378.3	5.4	-	-	2.3
640	10.5	75.8	57.1	19.3	328.5	4.9	-	-	1.8
645	9.7	72.6	52.5	21.8	448.7	5.6	-	-	1.5
650	10.6	73.2	70.9	19.8	404.5	7	-	-	1
655	16.5	65.6	66.9	18.5	167	11	1754	4.8	0.9
660	12.6	65.9	46.4	15.5	189.8	14.4	1803	4.2	1.2
665	16.4	51.4	48.4	12	144.9	24.4	1306	12	0.9
670	14.4	-11.4	41.3	5.2	198.3	52	1542	42.7	0.6
675	17.1	-15.9	47.8	-14.1	252.3	26.2	1820	73.8	0.5
680	8.1	-8.2	78.2	-3.2	731.3	19.5	2579	80.5	0.4
685	12	-2.7	41.6	-2.7	462.7	7.8	2441	92.2	0.6
690	12.5	-1.6	45.1	-1.3	305.5	5.9	2111	94	0.7
Average	13		55		334		1920		