Table 1. ^{13}C and ^{15}N chemical shifts (δ^C and δ^N) of the chromophore in Cph1(PAS–GAF–PHY) and SyB.Cph2(GAF). Data were obtained from *u*-[^{13}C,^{15}N]-PCB-Cph1(PAS–GAF–PHY) as Pr and Pfr (2) and *u*-[^{13}C,^{15}N]-PCB-SyB.Cph2(GAF) as P630 and P690 (Figs. 1 and 2). $\Delta\delta^C$ and $\Delta\delta^N$ for Cph1(PAS–GAF–PHY) (Pfr – Pr) as $\Delta\delta^{(Pfr-Pr)}$, SyB.Cph2(GAF) (P690 – P630) as $\Delta\delta^{(P690-P630)}$, SyB.Cph2(GAF) P630 – Cph1(PAS–GAF–PHY) Pr as $\Delta\delta^{(P630-Pr)}$ and SyB.Cph2(GAF) P690 – Cph1(PAS–GAF–PHY) Pfr as $\Delta\delta^{(P690-Pfr)}$ are listed.

		Cph1(PAS–GAF–PHY)			SyB.Cph2(GAF)			SyB.Cph2(GAF) – Cph1(PAS–GAF–PHY)	
chromophore carbon		δ^{Pr} (ppm)	δ^{Pfr} (ppm)	$\Delta\delta^{(Pfr-Pr)}$ (ppm)	δ^{P630} (ppm)	δ^{P690} (ppm)	$\Delta\delta^{(P690-P630)}$ (ppm)	$\Delta\delta^{(P630-Pr)}$ (ppm)	$\Delta\delta^{(P690-Pfr)}$ (ppm)
	1	184.0	182.8	**–1.2**	182.0	183.3	**+1.3**	**–2.0**	**+0.5**
	2	37.1	37.2	**+0.1**	35.2	36.4	**+1.2**	**–1.9**	**–0.8**
	2^1	17.5	18.5	**+1.0**	17.2 (2^{1a}) 18.1 (2^{1b})	17.6 (2^{1a}) 18.0 (2^{1b})	**+0.4** **–0.1**	**–0.3** **+0.6**	**–0.9** **–0.5**
Ring A	**3**	53.4	54.3	**+0.9**	53.3 (3^a) 53.6 (3^b)	51.0 (3^a) 52.7 (3^b)	**–2.3** **–0.9**	**–0.1** **+0.2**	**–3.3** **–1.6**
	3^1	47.6	50.0	**+2.4**	47.4	48.4	**+1.0**	**–0.2**	**–1.6**
	3^2	21.8	21.4	**–0.4**	20.6	19.3	**–1.3**	**–1.2**	**–2.1**
	4	153.9	153.5	**–0.4**	156.9 (4^a) 157.4 (4^b) 157.9 (4^c)	156.6	**–0.3** **–0.8** **–1.3**	**+3.0** **+3.5** **+4.0**	**+3.1**
A–B	**5**	87.1	88.5	**+1.4**	85.4 (5^a) 86.5 (5^b)	86.1	**+0.7** **–0.4**	**–1.7** **–0.6**	**–2.4**
	6	149.5	149.3	**–0.2**	151.4 (6^a) 152.1 (6^b)	151.8	**+0.4** **–0.3**	**+1.9** **+2.6**	**+2.5**
	7	125.7	126.1	**+0.4**	127.4	127.2	**–0.2**	**+1.7**	**+1.1**
	7^1	9.2	9.3	**+0.1**	8.3	9.9	**+1.6**	**–0.9**	**+0.6**
Ring B	**8**	145.2	143.8	**–1.4**	147.5	146.7	**–0.8**	**+2.3**	**+2.9**
	8^1	21.8	23.1	**+1.3**	20.9	20.1	**–0.8**	**–0.9**	**–3.0**
	8^2	42.9	41.8	**–1.1**	38.5	39.1	**+0.6**	**–4.4**	**–2.7**
	8^3	180.0	180.5	**+0.5**	180.2	179.7	**–0.5**	**+0.2**	**–0.8**
	9	127.7	129.9	**+2.2**	126.4	126.6	**+0.2**	**–1.3**	**–3.3**
B–C	**10**	112.8	112.4	**–0.4**	112.9	113.1	**+0.2**	**+0.1**	**+0.7**
	11	127.7	131.0	**+3.3**	130.0	129.7	**–0.3**	**+2.3**	**–1.3**
	12	145.2	145.8	**+0.6**	138.5	138.3	**–0.2**	**–6.7**	**–7.5**
	12^1	20.4	20.5	**+0.1**	21.3	22.3	**+1.0**	**+0.9**	**+1.8**
Ring C	**12^2**	38.1	38.4	**+0.3**	37.3	38.2	**+0.9**	**–0.8**	**–0.2**
	12^3	179.0	175.3	**–3.7**	177.6	177.0	**–0.6**	**–1.4**	**+1.7**
	13	126.4	130.7	**+4.3**	123.6	124.3	**+0.7**	**–2.8**	**–6.4**
	13^1	11.4	11.6	**+0.2**	11.2	11.3	**+0.1**	**–0.2**	**–0.3**
	14	145.9	152.0	**+6.1**	140.4	140.3	**–0.1**	**–5.5**	**–11.7**
C–D	**15**	93.2	91.6	**–1.6**	94.7	94.6	**–0.1**	**+1.5**	**+3.0**
	16	145.9	151.6	**+5.7**	143.6	143.4	**–0.2**	**–2.3**	**–8.2**
	17	142.1	135.5	**–6.6**	140.9	141.3	**+0.4**	**–1.2**	**+5.8**
	17^1	9.9	10.0	**+0.1**	8.5	8.8	**+0.3**	**–1.4**	**–1.2**
Ring D	**18**	134.0	140.5	**+6.5**	132.7	132.6	**–0.1**	**–1.3**	**–7.9**
	18^1	16.5	15.6	**–0.9**	15.0	15.4	**+0.4**	**–1.5**	**–0.2**
	18^2	13.2	13.3	**+0.1**	11.3	12.3	**+1.0**	**–1.9**	**–1.0**
	19	172.7	169.1	**–3.6**	171.7	171.0	**–0.7**	**–1.0**	**+1.9**
pyrrole nitrogen		δ^{Pr} (ppm)	δ^{Pfr} (ppm)	$\Delta\delta^{(Pfr-Pr)}$ (ppm)	δ^{P630} (ppm)	δ^{P690} (ppm)	$\Delta\delta^{(P690-P630)}$ (ppm)	$\Delta\delta^{(P630-Pr)}$ (ppm)	$\Delta\delta^{(P690-Pfr)}$ (ppm)
Ring A	**21**	158.6	158.7	**+0.1**	156.6	156.0	**–0.6**	**–2.0**	**–2.7**
Ring B	**22**	160.7	156.7	**–4.0**	161.7	161.5	**–0.2**	**+1.0**	**+4.8**
Ring C	**23**	148.0	142.2	**–5.8**	145.4	145.6	**+0.2**	**–2.6**	**+3.4**
Ring D	**24**	133.1	138.8	**+5.7**	131.9	132.0	**+0.1**	**–1.2**	**–6.8**