SUPPORTING INFORMATION

Table S1: Excitation energies (in eV) and oscillator strengths, f, of electronic transitions corresponding to the singlet excited states of $(ZnP)_2X$ and $(ZnTriPP)_2X$, where (X = DPA, DPB, DPO, DPS, DPX), obtained at the TD-B3LYP/6-31G(d) level of theory *in vacuo* with a C_{2v} symmetry constraint.

States	Composition of Transitions				E(eV)	f
ZnP						
S1(1^1E_u)	H→L	50%	H-1→L+1	49%	2.45	0.0025
S2(1^1E_g)	H-2→L+1	100%			3.34	0.0000
S3(2^1E_u)	H-1→L+1	46%	H→L	48%	3.55	0.9024
	H-6→L+1	4%	H-3→L+1	4%		
(ZnP)₂DPA						
S1(1^1A_2)	H-3→L+3	20%	H-2→L	24%	2.41	0.0000
	H-1→L+2	25%	H→L+1	29%		
S2(1^1B_2)	H-3→L+1	21%	H-2→L+2	23%	2.41	0.0000
	H-1→L	28%	H→L+3	26%		
S3(1^1B_1)	H→L	33%	H-1→L+3	23%	2.41	0.0049
	H-3→L+2	23%	H-2→L+1	20%		
S4(1^1A_1)	H→L+2	29%	H-1→L+1	25%	2.41	0.0008
	H-3→L	24%	H-2→L+3	20%		
S5(2^1B_1)	H→L	49%	H-2→L+1	47%	2.58	0.0002
S6(2^1A_2)	H-2→L	45%	H→L+1	53%	2.58	0.0000
S7(2^1B_2)	H→L+3	49%	H-2→L+2	39%	2.61	0.0018
	H-3→L+1	4%	H-1→L	8%		
S8(2^1A_1)	H→L+2	46%	H-2→L+3	46%	2.61	0.0016
	H-1→L+1	6%				
S9(3^1A_1)	H-3→L	49%	H-1→L+1	45%	2.62	0.0001
	H-2→L+3	3%	H→L+2	3%		
S10(3^1B_2)	H-3→L+1	48%	H-1→L	40%	2.62	0.0003
	H-2→L+2	7%	H→L+3	5%		
S11(3^1B_1)	H-3→L+2	50%	H-1→L+3	50%	2.64	0.0000
S12(3^1A_2)	H-3→L+3	51%	H-1→L+2	48%	2.64	0.0000
S13(4^1B_1)	H-4→L	87%	H-2→L+1	9%	2.79	0.0036
S14(4^1A_2)	H-4→L+1	86%	H-2→L	8%	2.80	0.0000
S15(4^1B_2)	H-4→L+3	83%	H-3→L+1	2%	2.86	0.0169
	H→L+3	4%	H-2→L+2	8%		
S16(4^1A_1)	H-4→L+2	91%	H-2→L+3	4%	2.87	0.0237
	H→L+2	3%				

S17(5^1A_2)	H-1→L+4	99%			2.92	0.0000
S18(5^1A_1)	H→L+4	98%			2.92	0.0325
S19(5^1B_1)	H-3→L+4	99%			2.93	0.0000
S20(5^1B_2)	H-2→L+4	99%			2.95	0.0009
S21(6^1A_1)	H-4→L+4	95%			3.25	0.2699
S22(6^1B_2)	H-2→L+2	23%	H-3→L+1	22%	3.30	0.0668
	H-1→L	21%	H-4→L+3	15%		
	H→L+3	15%				
S23(6^1A_2)	H-6→L+1	48%	H-5→L	51%	3.32	0.0000
S24(6^1B_1)	H-5→L+1	48%	H-6→L	51%	3.32	0.0000
S25(7^1A_1)	H-5→L+3	49%	H-6→L+2	51%	3.33	0.0000
S26(7^1B_2)	H-5→L+2	51%	H-6→L+3	48%	3.33	0.0006
S27(7^1A_2)	H-4→L+1	11%	H-3→L+3	25%	3.38	0.0000
	H-2→L	22%	H-1→L+2	23%		
	H→L+1	16%				
S28(7^1B_1)	H-2→L+1	21%	H-3→L+2	20%	3.59	1.1884
	H-1→L+3	20%	H→L	14%		
	H-16→L+2	2%	H-7→L+1	6%		
	H-14→L+3	2%	H-4→L	9%		
	H-9→L	4%				
S29(8^1A_1)	H-2→L+3	23%	H-3→L	20%	3.61	1.6240
	H-1→L+1	20%	H→L+2	17%		
	H-16→L	3%	H-14→L+1	3%		
	H-4→L+2	7%	H-9→L+2	2%		
(ZnP)₂DPB						
S1(1^1B_2)	H-1→L+1	46%	H→L	48%	2.31	0.0000
	H-3→L+2	2%	H-2→L+3	3%		
S2(1^1A_2)	H-1→L	47%	H→L+1	47%	2.31	0.0000
	H-3→L+3	2%	H-2→L+2	3%		
S3(1^1B_1)	H-1→L+2	27%	H→L+3	26%	2.42	0.0030
	H-3→L+1	24%	H-2→L	23%		
S4(1^1A_1)	H→L+2	28%	H-1→L+3	24%	2.42	0.0005
	H-2→L+1	24%	H-3→L	22%		
S5(2^1A_2)	H-3→L+3	14%	H-2→L+2	14%	2.54	0.0000
	H-1→L	37%	H→L+1	35%		
S6(2^1B_2)	H-1→L+1	37%	H→L	37%	2.54	0.0120
	H-3→L+2	16%	H-2→L+3	10%		
S7(2^1A_1)	H-3→L	52%	H→L+2	47%	2.56	0.0000
S8(2^1B_1)	H-1→L+2	23%	H→L+3	24%	2.57	0.0000

	H-3→L+1	29%	H-2→L	25%		
S9(3^{1}B$_1$)	H-1→L+2	26%	H→L+3	24%	2.58	0.0000
	H-3→L+1	23%	H-2→L	27%		
S10(3^{1}A$_1$)	H-2→L+1	50%	H-1→L+3	50%	2.58	0.0001
S11(3^{1}A$_2$)	H-3→L+3	47%	H-2→L+2	48%	2.68	0.0000
	H-1→L	2%	H→L+1	3%		
S12(3^{1}B$_2$)	H-2→L+3	48%	H-3→L+2	46%	2.68	0.0005
	H-1→L+1	4%				
S13(4^{1}A$_2$)	H-4→L	97%			2.90	0.0000
S14(4^{1}B$_2$)	H-4→L+1	94%	H-4→L+4	2%	2.93	0.0018
S15(4^{1}B$_1$)	H-4→L+2	97%			3.06	0.0054
S16(4^{1}A$_1$)	H-4→L+3	98%			3.13	0.0195
S17(5^{1}B$_2$)	H-1→L+4	57%	H-3→L+2	12%	3.19	0.0264
	H-2→L+3	15%	H-4→L+1	4%		
	H-4→L+4	2%	H-1→L+1	5%		
	H→L	4%				
S18(5^{1}A$_2$)	H→L+4	81%	H-3→L+3	8%	3.20	0.0000
	H-2→L+2	6%	H→L+1	3%		
S19(6^{1}A$_2$)	H-6→L+2	30%	H-5→L	69%	3.30	0.0000
S20(5^{1}B$_1$)	H-6→L	69%	H-5→L+2	31%	3.31	0.0001
S21(6^{1}B$_2$)	H-5→L+1	66%	H-6→L+3	28%	3.31	0.0018
	H-1→L+4	2%				
S22(5^{1}A$_1$)	H-6→L+1	69%	H-5→L+3	30%	3.31	0.0001
S23(7^{1}B$_2$)	H-1→L+4	32%	H-2→L+3	20%	3.32	0.0383
	H-3→L+2	19%	H-5→L+1	4%		
	H-4→L+4	5%	H-1→L+1	7%		
	H→L	8%				
S24(7^{1}A$_2$)	H-3→L+3	27%	H-2→L+2	27%	3.37	0.0000
	H-1→L	11%	H→L+1	11%		
	H→L+4	18%				
S25(6^{1}B$_1$)	H-3→L+4	88%	H-3→L+1	3%	3.37	0.0814
	H-2→L	3%	H-1→L+2	2%		
	H→L+3	3%				
S26(6^{1}A$_1$)	H-2→L+4	89%	H-3→L	2%	3.41	0.1947
	H-2→L+1	3%	H-1→L+3	3%		
	H→L+2	2%				
S27(8^{1}B$_2$)	H-4→L+4	89%	H-1→L+4	8%	3.44	0.0000
S28(8^{1}A$_2$)	H-7→L	55%	H-12→L+2	4%	3.62	0.0000
	H-8→L+1	29%	H-9→L	5%		

	H-11→L+3	4%			
S29(7^{1}A$_1$)	H-1→L+3	19%	H-2→L+1	19%	3.64	1.4316
	H-3→L	18%	H-2→L+4	10%		
	H→L+2	17%	H-15→L	3%		
	H-14→L+2	3%	H-10→L+1	3%		
	H-7→L+3	4%				
S30(9^{1}B$_2$)	H-7→L+1	59%	H-8→L	31%	3.64	0.0018
	H-12→L+3	3%	H-11→L+2	2%		
S31(7^{1}B$_1$)	H-3→L+1	14%	H-2→L	17%	3.65	0.9373
	H-1→L+2	16%	H→L+3	15%		
	H-15→L+1	3%	H-14→L+3	2%		
	H-12→L	6%	H-8→L+3	3%		
	H-7→L+2	8%	H-3→L+4	9%		
(ZnP)$_2$DPO						
S1(1^{1}B$_2$)	H→L+3	23%	H-2→L+1	25%	2.42	0.0000
	H-1→L	26%	H→L+2	26%		
S2(1^{1}A$_2$)	H-3→L+1	24%	H-1→L+2	25%	2.42	0.0000
	H-2→L+3	23%	H→L	27%		
S3(1^{1}B$_1$)	H→L+1	26%	H-2→L+2	25%	2.43	0.0047
	H-3→L	25%	H-1→L+3	24%		
S4(1^{1}A$_1$)	H-2→L	26%	H-1→L+1	25%	2.43	0.0003
	H→L+3	25%	H-3→L+2	24%		
S5(2^{1}A$_1$)	H-2→L	50%	H-1→L+1	50%	2.70	0.0000
S6(2^{1}B$_2$)	H-2→L+1	50%	H-1→L	50%	2.70	0.0000
S7(2^{1}B$_1$)	H-3→L	50%	H→L+1	50%	2.70	0.0000
S8(2^{1}A$_2$)	H-3→L+1	51%	H→L	49%	2.70	0.0000
S9(3^{1}B$_1$)	H-2→L+2	50%	H-1→L+3	50%	2.72	0.0000
S10(3^{1}A$_2$)	H-2→L+3	50%	H-1→L+2	50%	2.72	0.0000
S11(3^{1}A$_1$)	H-3→L+2	50%	H→L+3	50%	2.72	0.0000
S12(3^{1}B$_2$)	H-3→L+3	50%	H→L+2	50%	2.72	0.0004
S13(4^{1}A$_2$)	H-7→L+1	49%	H-6→L	50%	3.31	0.0000
S14(4^{1}B$_1$)	H-7→L	50%	H-6→L+1	49%	3.31	0.0000
S15(4^{1}B$_2$)	H-6→L+2	50%	H-7→L+3	49%	3.34	0.0038
S16(4^{1}A$_1$)	H-7→L+2	50%	H-6→L+3	49%	3.34	0.0001
S17(5^{1}B$_2$)	H-3→L+3	26%	H→L+2	23%	3.36	0.3378
	H-2→L+1	22%	H-1→L	22%		
S18(5^{1}A$_2$)	H-4→L	10%	H-3→L+1	22%	3.42	0.0000
	H-2→L+3	22%	H-1→L+2	21%		
	H→L	20%				

S19(5^{1}B$_1$)	H-4→L+1	42%	H-3→L	14%	3.50	0.6862
	H-2→L+2	12%	H-1→L+3	12%		
	H→L+1	13%	H-2→L+4	2%		
S20(5^{1}A$_1$)	H-3→L+2	23%	H→L+3	23%	3.55	1.7771
	H-1→L+1	21%	H-2→L	21%		
	H-4→L+3	4%	H-3→L+4	3%		
S21(6^{1}A$_2$)	H-4→L	84%	H-1→L+2	3%	3.58	0.0000
	H-2→L+3	3%	H-1→L+4	3%		
	H-5→L+1	5%	H→L	2%		
S22(6^{1}B$_1$)	H-5→L	89%	H-4→L+1	2%	3.60	0.0800
S23(7^{1}A$_2$)	H-5→L+1	93%	H-4→L	5%	3.60	0.0000
S24(7^{1}B$_1$)	H-4→L+1	49%	H-2→L+4	18%	3.61	0.4027
	H-2→L+2	6%	H-3→L	5%		
	H-5→L	8%	H-1→L+3	6%		
	H→L+1	6%				
S25(6^{1}B$_2$)	H-4→L+2	93%	H→L+4	3%	3.64	0.0000
S26(6^{1}A$_1$)	H-4→L+3	89%	H-5→L+2	4%	3.64	0.0419
(ZnP)$_2$DPS						
S1(1^{1}B$_2$)	H-2→L	27%	H→L+2	24%	2.42	0.0001
	H-3→L+1	24%	H-1→L+3	24%		
S2(1^{1}A$_1$)	H-2→L+1	26%	H-3→L	25%	2.42	0.0004
	H→L+3	25%	H-1→L+2	24%		
S3(1^{1}A$_2$)	H-3→L+3	23%	H-1→L+1	25%	2.42	0.0000
	H-2→L+2	25%	H→L	27%		
S4(1^{1}B$_1$)	H-1→L	26%	H→L+1	26%	2.42	0.0063
	H-2→L+3	25%	H-3→L+2	23%		
S5(2^{1}A$_2$)	H-1→L+1	50%	H→L	49%	2.73	0.0000
S6(2^{1}B$_1$)	H-1→L	49%	H→L+1	50%	2.73	0.0000
S7(2^{1}A$_1$)	H-3→L	50%	H-2→L+1	50%	2.74	0.0000
S8(2^{1}B$_2$)	H-3→L+1	51%	H-2→L	49%	2.74	0.0006
S9(3^{1}B$_2$)	H-1→L+3	50%	H→L+2	50%	2.76	0.0000
S10(3^{1}A$_1$)	H-1→L+2	50%	H→L+3	50%	2.76	0.0000
S11(3^{1}B$_1$)	H-3→L+2	50%	H-2→L+3	50%	2.78	0.0001
S12(3^{1}A$_2$)	H-3→L+3	51%	H-2→L+2	49%	2.78	0.0000
S13(4^{1}A$_2$)	H-4→L	94%			3.16	0.0000
S14(4^{1}B$_1$)	H-4→L+1	95%			3.17	0.0189
S15(4^{1}B$_2$)	H-4→L+2	84%	H-3→L+1	4%	3.25	0.1209
	H-2→L	3%	H-1→L+3	5%		
	H→L+2	3%				

S16(4^{1}A$_1$)	H-4→L+3	98%			3.27	0.0119
S17(5^{1}A$_2$)	H-7→L+1	49%	H-6→L	51%	3.31	0.0000
S18(5^{1}B$_1$)	H-7→L	51%	H-6→L+1	49%	3.31	0.0000
S19(5^{1}B$_2$)	H-6→L+2	50%	H-7→L+3	50%	3.34	0.0006
S20(5^{1}A$_1$)	H-7→L+2	50%	H-6→L+3	50%	3.34	0.0001
S21(6^{1}B$_2$)	H→L+2	21%	H-1→L+3	20%	3.39	0.5308
	H-3→L+1	20%	H-2→L	18%		
	H-4→L+2	15%				
S22(6^{1}A$_2$)	H-5→L+1	19%	H-3→L+3	19%	3.44	0.0000
	H-2→L+2	18%	H-1→L+1	17%		
	H→L	18%				
S23(6^{1}B$_1$)	H-5→L	50%	H-3→L+2	11%	3.48	0.5857
	H-2→L+3	10%	H-1→L	10%		
	H→L+1	11%	H-4→L+1	3%		
S24(6^{1}A$_1$)	H→L+3	23%	H-1→L+2	22%	3.54	1.6849
	H-3→L	21%	H-2→L+1	21%		
	H-5→L+2	6%				
S26(7^{1}B$_1$)	H-5→L	47%	H-3→L+2	12%	3.59	0.796
	H→L+1	10%	H-2→L+3	11%		
	H-1→L	11%	H-2→L+4	4%		
(ZnP)$_2$DPX						
S1(1^{1}A$_2$)	H-1→L	47%	H→L+1	45%	2.35	0.0000
	H-3→L+3	3%	H-2→L+2	4%		
S2(1^{1}B$_2$)	H-1→L+1	43%	H→L	50%	2.35	0.0000
	H-3→L+2	3%	H-2→L+3	4%		
S3(1^{1}B$_1$)	H→L+3	28%	H-1→L+2	27%	2.42	0.0033
	H-2→L	23%	H-3→L+1	22%		
S4(1^{1}A$_1$)	H→L+2	31%	H-1→L+3	25%	2.43	0.0001
	H-2→L+1	23%	H-3→L	21%		
S5(2^{1}B$_2$)	H-3→L+2	22%	H-2→L+3	11%	2.56	0.0000
	H-1→L+1	35%	H→L	32%		
S6(2^{1}A$_2$)	H-3→L+3	15%	H-1→L	34%	2.56	0.0000
	H-2→L+2	18%	H→L+1	33%		
S7(2^{1}A$_1$)	H-3→L	54%	H→L+2	45%	2.57	0.0001
S8(2^{1}B$_1$)	H-2→L	51%	H-1→L+2	46%	2.58	0.0000
S9(3^{1}B$_1$)	H-3→L+1	51%	H→L+3	47%	2.58	0.0001
S10(3^{1}A$_1$)	H-2→L+1	51%	H-1→L+3	49%	2.59	0.0000
S11(3^{1}A$_2$)	H-3→L+3	47%	H-1→L	3%	2.65	0.0000
	H-2→L+2	46%	H→L+1	5%		

S12(3^{1}B$_2$)	H-3→L+2	41%	H-1→L+1	6%	2.65	0.0000
	H-2→L+3	50%				
S13(4^{1}B$_1$)	H-4→L	99%			3.18	0.0002
S14(4^{1}A$_1$)	H-4→L+1	100%			3.25	0.0001
S15(4^{1}B$_2$)	H-2→L+3	34%	H-3→L+2	31%	3.28	0.0082
	H-1→L+1	16%	H→L	15%		
	H-4→L+3	2%				
S16(4^{1}A$_2$)	H-4→L+2	91%	H-5→L	2%	3.30	0.0000
S17(5^{1}A$_2$)	H-6→L+2	32%	H-5→L	60%	3.31	0.0000
	H-4→L+2	5%				
S18(5^{1}B$_1$)	H-6→L	64%	H-5→L+2	35%	3.31	0.0000
S19(5^{1}B$_2$)	H-6→L+3	34%	H-5→L+1	66%	3.32	0.0000
S20(5^{1}A$_1$)	H-6→L+1	65%	H-5→L+3	35%	3.32	0.0001
S21(6^{1}A$_2$)	H-5→L	3%	H-3→L+3	32%	3.33	0.0000
	H-2→L+2	30%	H-1→L	15%		
	H→L+1	15%	H-4→L+2	3%		
S22(6^{1}B$_2$)	H-4→L+3	98%			3.38	0.0012
S23(6^{1}B$_1$)	H-2→L	21%	H-1→L+2	21%	3.62	1.0817
	H-3→L+1	20%	H→L+3	19%		
	H-16→L+1	2%	H-10→L	6%		
	H-14→L+3	3%	H-7→L+2	6%		
S24(6^{1}A$_1$)	H-2→L+1	23%	H-1→L+3	23%	3.62	1.7342
	H-3→L	21%	H→L+2	20%		
	H-16→L	3%	H-10→L+1	3%		
	H-14→L+2	3%	H-7→L+3	3%		
ZnTriP						
S1(1^{1}A$_1$)	H-1→L	48%	H→L+1	52%	2.38	0.0000
S2(1^{1}B$_2$)	H→L	53%	H-1→L+1	47%	2.38	0.0009
S3(1^{1}B$_1$)	H-2→L	100%			3.30	0.0000
S4(1^{1}A$_2$)	H-2→L+1	100%			3.30	0.0000
S5(2^{1}B$_2$)	H→L	45%	H-1→L+1	52%	3.39	1.3841
	H-12→L	2%				
S6(2^{1}A$_1$)	H-1→L	51%	H→L+1	45%	3.40	1.0192
	H-12→L+1	3%				
(ZnTriPP)$_2$DPA						
S1(1^{1}B$_2$)	H-3→L+3	19%	H-1→L+2	26%	2.33	0.0000
	H→L+1	27%	H-2→L	26%		
S2(1^{1}A$_1$)	H-2→L+3	27%	H-1→L+1	26%	2.33	0.0019
	H→L+2	26%	H-3→L	20%		
S3(1^{1}A$_2$)	H-2→L+2	27%	H-3→L+1	19%	2.33	0.0000
	H-1→L	27%	H→L+3	26%		
S4(1^{1}B$_1$)	H-2→L+1	28%	H→L	26%	2.33	0.0080
	H-1→L+3	25%	H-3→L+2	19%		
S5(2^{1}B$_2$)	H-1→L+2	50%	H→L+1	50%	2.53	0.0000

S6(2^1A_1)	H-1→L+1	50%	H→L+2	50%	2.53	0.0000
S7(2^1B_1)	H-1→L+3	50%	H→L	50%	2.53	0.0000
S8(2^1A_2)	H-1→L	49%	H→L+3	51%	2.53	0.0000
S9(3^1B_1)	H-2→L+1	54%	H-3→L+2	40%	2.57	0.0058
	H-4→L+1	4%				
S10(3^1A_2)	H-3→L+1	39%	H-2→L+2	56%	2.57	0.0000
	H-4→L+2	3%				
S11(3^1B_2)	H-2→L	56%	H-2→L+3	41%	2.59	0.0065
S12(3^1A_1)	H-2→L+3	53%	H-3→L	46%	2.59	0.0063
S13(4^1B_1)	H-4→L+1	81%	H-3→L+2	15%	2.78	0.0222
S14(4^1A_2)	H-4→L+2	77%	H-3→L+1	17%	2.78	0.0000
S15(4^1B_2)	H-4→L	76%	H-2→L	3%	2.81	0.0307
	H-1→L+2	3%	H-3→L+3	15%		
	H→L+1	2%				
S16(5^1A_2)	H→L+4	99%			2.84	0.0000
S17(4^1A_1)	H-4→L+3	88%	H-2→L+3	2%	2.84	0.0528
	H-3→L	8%				
S18(5^1B_1)	H-1→L+4	99%			2.84	0.0001
S19(5^1A_1)	H-2→L+4	98%			2.91	0.0536
S20(5^1B_2)	H-3→L+4	99%			2.95	0.0003
S21(6^1B_2)	H-3→L+3	25%	H-4→L	20%	3.18	0.1455
	H-1→L+2	19%	H→L+1	19%		
	H-2→L	14%				
S22(6^1A_2)	H-3→L+1	25%	H-4→L+2	17%	3.20	0.0000
	H-2→L+2	16%	H→L+3	20%		
	H-1→L	20%				
S23(6^1A_1)	H-4→L+4	90%	H-3→L	2%	3.25	0.5015
S24(7^1A_2)	H-6→L+2	49%	H-5→L+1	50%	3.28	0.0000
S25(6^1B_1)	H-6→L+1	50%	H-5→L+2	49%	3.28	0.0006
S26(7^1B_2)	H-6→L	50%	H-5→L+3	49%	3.29	0.0001
S27(7^1A_1)	H-6→L+3	49%	H-5→L	50%	3.29	0.0000
S28(7^1B_1)	H-3→L+2	25%	H-1→L+3	20%	3.41	2.3128
	H→L	20%	H-2→L+1	16%		
	H-4→L+1	13%				
S29(8^1A_1)	H-3→L	23%	H→L+2	19%	3.42	1.5154
	H-1→L+1	19%	H-2→L+3	16%		
	H-4→L+3	9%	H-4→L+4	7%		
(ZnTriPP)₂DPB						
S1(1^1B_2)	H-1→L+3	10%	H→L+1	47%	2.30	0.0004
	H-3→L+2	10%	H-2→L	32%		
S2(1^1A_2)	H-3→L+3	10%	H-2→L+1	30%	2.30	0.0000
	H-1→L+2	9%	H→L	51%		
S3(1^1A_1)	H-1→L+1	30%	H→L+3	24%	2.33	0.0028
	H-3→L	23%	H-2→L+2	23%		
S4(1^1B_1)	H-1→L	31%	H→L+2	25%	2.33	0.0158
	H-3→L+1	22%	H-2→L+3	21%		
S5(2^1B_1)	H-1→L	48%	H→L+2	52%	2.48	0.0000
S6(2^1A_2)	H-1→L+2	59%	H→L	32%	2.49	0.0000
	H-2→L+1	8%				
S7(2^1A_1)	H→L+3	53%	H-1→L+1	47%	2.49	0.0001
S8(2^1B_2)	H-1→L+3	55%	H→L+1	36%	2.50	0.0069

	H-2→L	9%				
S9(3^{1}A$_1$)	H-3→L	50%	H-2→L+2	50%	2.59	0.0002
S10(3^{1}B$_2$)	H-3→L+2	51%	H-2→L	40%	2.59	0.0089
	H-1→L+3	8%				
S11(3^{1}B$_1$)	H-3→L+1	49%	H-2→L+3	51%	2.60	0.0000
S12(3^{1}A$_2$)	H-3→L+3	51%	H-2→L+1	42%	2.60	0.0000
	H-1→L+2	6%				
S13(4^{1}A$_2$)	H-4→L+1	94%	H-3→L+3	3%	2.90	0.0000
S14(4^{1}B$_2$)	H-4→L	90%	H-4→L+4	2%	2.91	0.0081
	H-3→L+2	4%				
S15(4^{1}B$_1$)	H-4→L+3	96%			2.99	0.0195
S16(4^{1}A$_1$)	H-4→L+2	98%			3.02	0.0275
S17(5^{1}B$_2$)	H-3→L+2	31%	H-1→L+3	22%	3.12	0.1809
	H-2→L	15%	H→L+1	13%		
	H-2→L+4	10%	H-4→L	7%		
S18(5^{1}A$_2$)	H-3→L+3	24%	H-1→L+2	18%	3.13	0.0000
	H-2→L+1	13%	H→L	11%		
	H→L+4	30%	H-4→L+1	3%		
S19(5^{1}B$_1$)	H-3→L+1	5%	H-1→L+4	80%	3.24	0.2711
	H-2→L+3	5%	H-1→L	4%		
	H→L+2	5%				
S20(6^{1}A$_2$)	H-3→L+3	10%	H-2→L+1	6%	3.25	0.0000
	H-2→L+1	6%	H→L	5%		
	H→L+4	69%				
S21(6^{1}B$_2$)	H-6→L+2	41%	H-5→L	58%	3.28	0.0000
S22(5^{1}A$_1$)	H-6→L	58%	H-5→L+2	41%	3.28	0.0022
S23(7^{1}A$_2$)	H-6→L+3	40%	H-5→L+1	59%	3.28	0.0000
S24(6^{1}B$_1$)	H-6→L+1	58%	H-5→L+3	40%	3.28	0.0001
S25(7^{1}B$_2$)	H-4→L+4	16%	H-2→L+4	72%	3.32	0.0193
	H-3→L+2	3%	H-2→L	2%		
	H-1→L+3	3%	H→L+1	2%		
S26(6^{1}A$_1$)	H-3→L	14%	H-3→L+4	45%	3.35	1.0558
	H-2→L+2	15%	H-1→L+1	11%		
	H→L+3	12%				
S27(7^{1}B$_1$)	H-3→L+1	21%	H-2→L+3	20%	3.44	2.0516
	H-1→L	15%	H→L+2	16%		
	H-1→L+4	18%	H-4→L+3	2%		
S29(7^{1}A$_1$)	H-3→L	10%	H-3→L+4	54%	3.47	0.8018
	H-2→L+2	11%	H→L+3	10%		
	H-1→L+1	9%				
(ZnTriPP)$_2$DPO						
S1(1^{1}B$_2$)	H→L	28%	H-1→L+2	27%	2.34	0.0008
	H-2→L+1	23%	H-3→L+3	21%		
S2(1^{1}A$_1$)	H-1→L	27%	H→L+2	27%	2.34	0.0039
	H-2→L+3	23%	H-3→L+1	22%		
S3(1^{1}A$_2$)	H-1→L+3	26%	H-3→L+2	21%	2.34	0.0000
	H-2→L	23%	H→L+1	28%		
S4(1^{1}B$_1$)	H-1→L+1	28%	H→L+3	26%	2.34	0.0092
	H-2→L+2	22%	H-3→L	22%		
S5(2^{1}A$_1$)	H-1→L	50%	H→L+2	50%	2.58	0.0000

S6(2^1B_2)	H-1→L+2	50%	H→L	50%	2.58	0.0000
S7(2^1B_1)	H-1→L+1	50%	H→L+3	50%	2.58	0.0000
S8(2^1A_2)	H-1→L+3	51%	H→L+1	49%	2.58	0.0000
S9(3^1A_2)	H-3→L+2	50%	H-2→L	50%	2.67	0.0000
S10(3^1B_1)	H-3→L	50%	H-2→L+2	50%	2.67	0.0000
S11(3^1B_2)	H-3→L+3	50%	H-2→L+1	50%	2.68	0.0005
S12(3^1A_1)	H-3→L+1	50%	H-2→L+3	50%	2.68	0.0000
S13(4^1B_2)	H-3→L+3	29%	H-2→L+1	26%	3.20	0.3317
	H-1→L+2	21%	H→L	21%		
S14(4^1A_2)	H-3→L+2	28%	H-2→L	26%	3.22	0.0000
	H-1→L+3	22%	H→L+1	21%		
S15(5^1A_2)	H-7→L+2	49%	H-6→L	50%	3.28	0.0000
S16(4^1B_1)	H-7→L	50%	H-6→L+2	49%	3.28	0.0000
S17(4^1A_1)	H-7→L+1	50%	H-6→L+3	49%	3.29	0.0012
S18(5^1B_2)	H-6→L+1	50%	H-7→L+3	49%	3.29	0.0004
S19(5^1B_1)	H-3→L	25%	H-2→L+2	23%	3.36	2.1082
	H→L+3	20%	H-1→L+1	19%		
	H-4→L+2	7%				
S20(5^1A_1)	H-3→L+1	26%	H-2→L+3	26%	3.39	1.9706
	H→L+2	21%	H-1→L	21%		
(ZnTriPP)$_2$DPS						
S1(1^1B_2)	H→L	30%	H-1→L+1	26%	2.33	0.0024
	H-2→L+2	22%	H-3→L+3	21%		
S2(1^1A_1)	H→L+1	27%	H-1→L	27%	2.34	0.0038
	H-2→L+3	23%	H-3→L+2	22%		
S3(1^1A_2)	H→L+2	28%	H-1→L+3	26%	2.34	0.0000
	H-2→L	24%	H-3→L+1	22%		
S4(1^1B_1)	H→L+3	28%	H-1→L+2	26%	2.34	0.0087
	H-3→L	23%	H-2→L+1	23%		
S5(2^1A_1)	H-1→L	50%	H→L+1	50%	2.62	0.0000
S6(2^1B_2)	H-1→L+1	51%	H→L	49%	2.62	0.0005
S7(2^1B_1)	H-1→L+2	51%	H→L+3	49%	2.64	0.0000
S8(2^1A_2)	H-1→L+3	51%	H→L+2	49%	2.64	0.0000
S9(3^1A_2)	H-3→L+1	50%	H-2→L	50%	2.70	0.0000
S10(3^1B_1)	H-3→L	49%	H-2→L+1	50%	2.70	0.0000
S11(3^1B_2)	H-2→L+2	50%	H-3→L+3	50%	2.72	0.0001
S12(3^1A_1)	H-2→L+3	50%	H-3→L+2	50%	2.72	0.0000
S13(4^1A_2)	H-4→L	79%	H-2→L	4%	3.13	0.0000
	H-3→L+1	7%	H-1→L+3	4%		
	H→L+2	4%				
S14(4^1B_1)	H-4→L+1	89%	H-3→L	4%	3.15	0.1320
S15(4^1B_2)	H-4→L+2	34%	H-3→L+3	20%	3.17	0.4959
	H-2→L+2	17%	H-1→L+1	14%		
	H→L	13%				
S16(4^1A_1)	H-4→L+3	94%			3.23	0.0602
S17(5^1A_2)	H-4→L	19%	H-3→L+1	20%	3.27	0.0000
	H-2→L	21%	H-1→L+3	18%		
	H→L+2	17%				
S18(5^1B_2)	H-4→L+2	66%	H-3→L+3	8%	3.27	0.2109
	H-2→L+2	10%	H-1→L+1	8%		
	H→L	7%				

S19(5^{1}B$_1$)	H-7→L	50%	H-6→L+1	49%	3.28	0.0000
S20(6^{1}A$_2$)	H-7→L+1	49%	H-6→L	50%	3.28	0.0000
S21(5^{1}A$_1$)	H-7→L+2	50%	H-6→L+3	49%	3.30	0.0001
S22(6^{1}B$_2$)	H-6→L+2	50%	H-7→L+3	49%	3.30	0.0001
S23(6^{1}B$_1$)	H-2→L+1	22%	H-3→L	21%	3.35	2.0584
	H-1→L+2	18%	H→L+3	18%		
	H-4→L+1	10%	H-5→L	7%		
S24(6^{1}A$_1$)	H-2→L+3	25%	H-3→L+2	25%	3.37	1.7907
	H-1→L	20%	H→L+1	20%		
	H-4→L+3	5%				
(ZnTriPP)$_2$DPX						
S1(1^{1}B$_2$)	H→L+1	35%	H-2→L	25%	2.33	0.0001
	H-1→L+3	21%	H-3→L+2	19%		
S2(1^{1}A$_2$)	H-3→L+3	18%	H-1→L+2	22%	2.33	0.0000
	H-2→L+1	25%	H→L	34%		
S3(1^{1}A$_1$)	H-1→L+1	27%	H→L+3	27%	2.33	0.0040
	H-2→L+2	23%	H-3→L	22%		
S4(1^{1}B$_1$)	H→L+2	29%	H-1→L	26%	2.33	0.0143
	H-3→L+1	22%	H-2→L+3	22%		
S5(2^{1}B$_1$)	H-1→L	51%	H→L+2	49%	2.50	0.0000
S6(2^{1}A$_2$)	H-1→L+2	55%	H→L	45%	2.50	0.0000
S7(2^{1}A$_1$)	H-1→L+1	50%	H→L+3	50%	2.50	0.0000
S8(2^{1}B$_2$)	H-1→L+3	55%	H→L+1	44%	2.51	0.0002
S9(3^{1}A$_1$)	H-3→L	50%	H-2→L+2	50%	2.61	0.0000
S10(3^{1}B$_2$)	H-3→L+2	51%	H-2→L	49%	2.61	0.0003
S11(3^{1}B$_1$)	H-3→L+1	50%	H-2→L+3	50%	2.60	0.0000
S12(3^{1}A$_2$)	H-3→L+3	51%	H-2→L+1	49%	2.61	0.0000
S13(4^{1}B$_2$)	H-3→L+2	28%	H-2→L	26%	3.16	0.1038
	H-1→L+3	23%	H→L+1	20%		
	H-4→L+2	2%				
S14(4^{1}A$_2$)	H-3→L+3	29%	H-2→L+1	25%	3.16	0.0000
	H-1→L+2	21%	H→L	19%		
	H-4→L+3	3%				
S15(4^{1}B$_1$)	H-4→L+1	98%			3.20	0.0098
S16(5^{1}A$_2$)	H-4→L+3	95%			3.23	0.0000
S17(4^{1}A$_1$)	H-4→L	99%			3.26	0.0017
S18(5^{1}B$_2$)	H-4→L+2	96%			3.27	0.0000
S19(5^{1}B$_1$)	H-6→L+1	52%	H-5→L+3	47%	3.29	0.0040
S20(6^{1}A$_2$)	H-6→L+3	47%	H-5→L+1	52%	3.29	0.0000
S21(5^{1}A$_1$)	H-6→L	51%	H-5→L+2	48%	3.29	0.0019
S22(6^{1}B$_2$)	H-5→L	51%	H-6→L+2	47%	3.29	0.0002
S23(6^{1}B$_1$)	H-2→L+3	26%	H-3→L+1	26%	3.39	2.3041
	H-1→L	21%	H→L+2	20%		
S24(6^{1}A$_1$)	H-3→L	26%	H-2→L+2	26%	3.40	1.9957
	H→L+3	21%	H-1→L+1	21%		