

Supporting Information

Multiple “Hot exciton” channels molecular design in organic electroluminescence materials: a theoretical investigation

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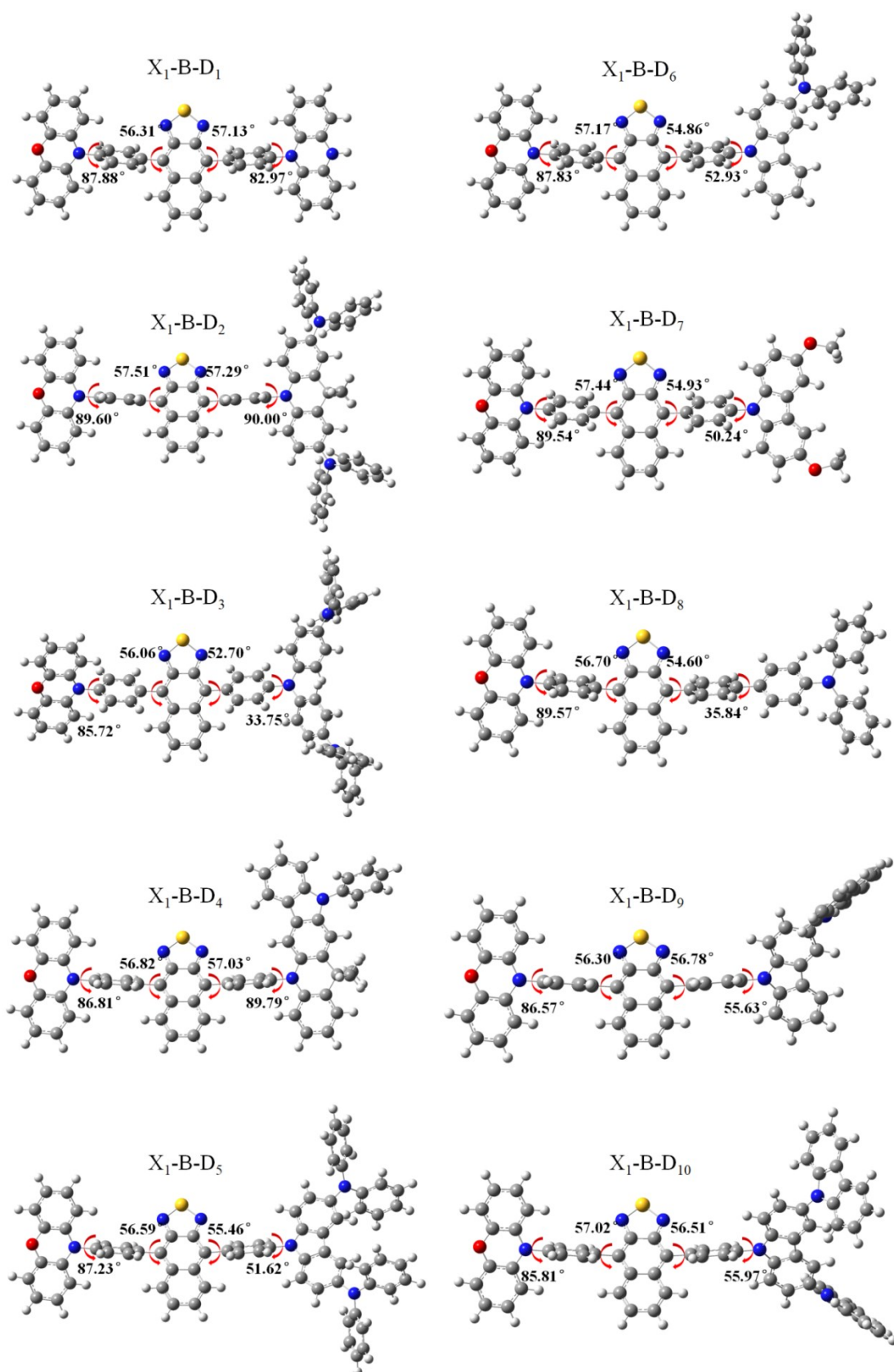
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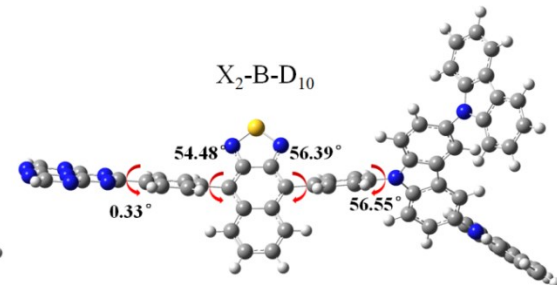
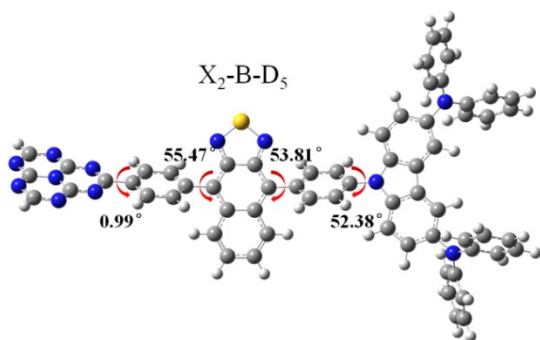
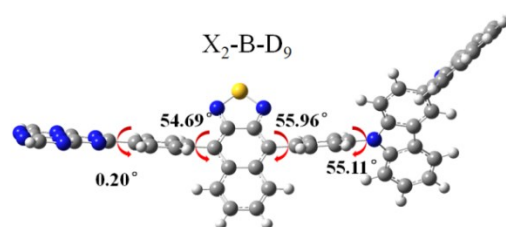
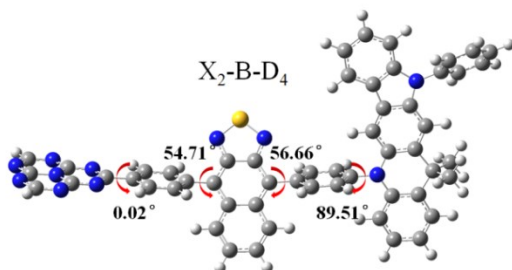
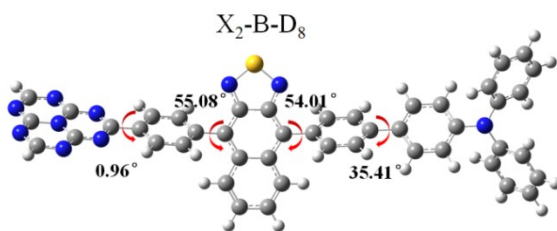
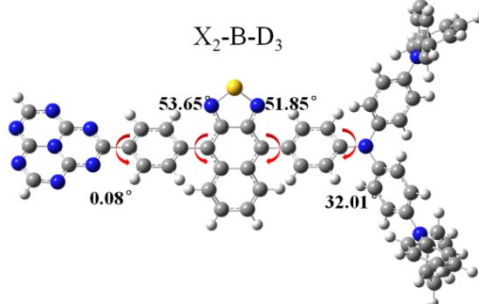
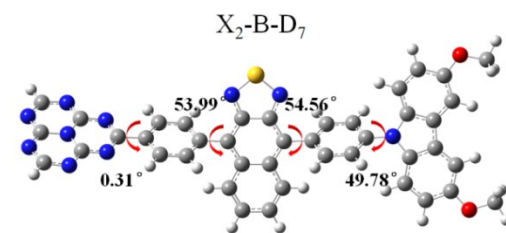
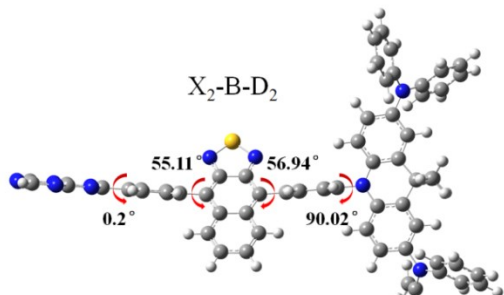
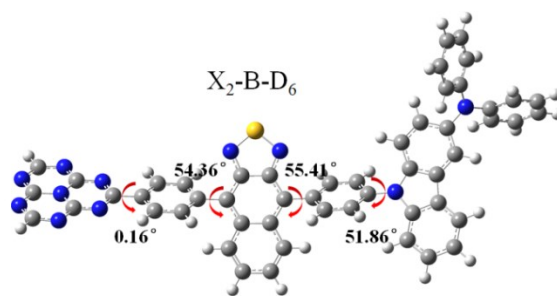
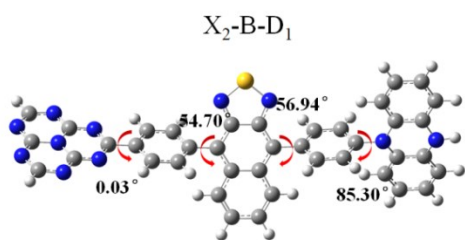
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SI: Ground state optimized configuration for the X_1 -NZ- D_{1-10} and X_2 -NZ- D_{1-10} .





S II : NTOs of Singlet states S_1 - S_{10} and Triplet states T_1 - T_{10} for X_1 -NZ- D_{1-10} and X_2 -NZ- D_{1-10} .

$(X_1$ - B - $D_1)$	Hole	Particle	Hole	Particle
$S_0 \rightarrow S_1$		99.0%	$S_0 \rightarrow T_1$	3.4%
$S_0 \rightarrow S_2$		2.14%	$S_0 \rightarrow T_2$	99.0%
$S_0 \rightarrow S_3$		85.8%	$S_0 \rightarrow T_3$	98.9%
$S_0 \rightarrow S_4$		16.7%	$S_0 \rightarrow T_4$	0.80%
$S_0 \rightarrow S_5$		80.5%	$S_0 \rightarrow T_5$	2.1%
$S_0 \rightarrow S_6$		32.2%	$S_0 \rightarrow T_6$	0.4%
$S_0 \rightarrow S_7$		66.3%	$S_0 \rightarrow T_7$	0.7%
$S_0 \rightarrow S_8$		1.80%	$S_0 \rightarrow T_8$	8.0%
$S_0 \rightarrow S_9$		87.7%	$S_0 \rightarrow T_9$	1.2%
$S_0 \rightarrow S_{10}$		58.0%	$S_0 \rightarrow T_{10}$	17.8%

The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₂)	Hole	Particle	Hole	Particle
S ₀ →S ₁		98.7%	S ₀ →T ₁	3.2%
S ₀ →S ₂		25.2%	S ₀ →T ₂	98.7%
S ₀ →S ₃		96.3%	S ₀ →T ₃	99.0%
S ₀ →S ₄		99.2%	S ₀ →T ₄	1.8%
S ₀ →S ₅		956.2%	S ₀ →T ₅	99.3%
S ₀ →S ₆		7.6%	S ₀ →T ₆	0.5%
S ₀ →S ₇		52.3%	S ₀ →T ₇	0.3%
S ₀ →S ₈		46.6%	S ₀ →T ₈	0.3%
S ₀ →S ₉		1.5%	S ₀ →T ₉	0.6%
S ₀ →S ₁₀		94.8%	S ₀ →T ₁₀	0.2%

The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₃)	Hole	Particle	Hole	Particle
S ₀ →S ₁		48.6%	S ₀ →T ₁	6.4%
S ₀ →S ₂		98.6%	S ₀ →T ₂	84.4%
S ₀ →S ₃		51.4%	S ₀ →T ₃	98.8%
S ₀ →S ₄		97.7%	S ₀ →T ₄	3.3%
S ₀ →S ₅		84.4%	S ₀ →T ₅	0.7%
S ₀ →S ₆		8.0%	S ₀ →T ₆	5.1%
S ₀ →S ₇		8.4%	S ₀ →T ₇	4.3%
S ₀ →S ₈		16.0%	S ₀ →T ₈	16.0%
S ₀ →S ₉		81.1%	S ₀ →T ₉	88.0%
S ₀ →S ₁₀		27.6%	S ₀ →T ₁₀	55.9%

The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₄)	Hole	Particle	Hole	Particle
S ₀ →S ₁		33.8%	S ₀ →T ₁	3.4%
S ₀ →S ₂		98.4%	S ₀ →T ₂	89.7%
S ₀ →S ₃		98.9%	S ₀ →T ₃	89.8%
S ₀ →S ₄		98.6%	S ₀ →T ₄	2.1%
S ₀ →S ₅		2.9%	S ₀ →T ₅	0.1%
S ₀ →S ₆		7.5%	S ₀ →T ₆	0.4%
S ₀ →S ₇		91.5%	S ₀ →T ₇	0.4%
S ₀ →S ₈		94.9%	S ₀ →T ₈	0.6%
S ₀ →S ₉		1.5%	S ₀ →T ₉	90.0%
S ₀ →S ₁₀		89.7%	S ₀ →T ₁₀	34.4%

The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₅)	Hole	Particle	Hole	Particle
S ₀ →S ₁		37.1%	S ₀ →T ₁	3.9%
S ₀ →S ₂		97.8%	S ₀ →T ₂	98.9%
S ₀ →S ₃		70.6%	S ₀ →T ₃	96.7%
S ₀ →S ₄		98.9%	S ₀ →T ₄	2.2%
S ₀ →S ₅		3.3%	S ₀ →T ₅	97.6%
S ₀ →S ₆		79.9%	S ₀ →T ₆	2.9%
S ₀ →S ₇		51.2%	S ₀ →T ₇	0.4%
S ₀ →S ₈		46.9%	S ₀ →T ₈	1.0%
S ₀ →S ₉		2.0%	S ₀ →T ₉	1.8%
S ₀ →S ₁₀		5%	S ₀ →T ₁₀	0.5%

The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₆)	Hole	Particle	Hole	Particle
S ₀ →S ₁		25.0% 	S ₀ →T ₁	4.0%
S ₀ →S ₂		99.3% 	S ₀ →T ₂	99.0%
S ₀ →S ₃		85.1% 	S ₀ →T ₃	96.6%
S ₀ →S ₄		90.9% 	S ₀ →T ₄	2.5%
S ₀ →S ₅		2.7% 	S ₀ →T ₅	0.6%
S ₀ →S ₆		45.7% 	S ₀ →T ₆	0.6%
S ₀ →S ₇		53.3% 	S ₀ →T ₇	2.7%
S ₀ →S ₈		1.9% 	S ₀ →T ₈	68.5%
S ₀ →S ₉		86.9% 	S ₀ →T ₉	1.5%
S ₀ →S ₁₀		37.4% 	S ₀ →T ₁₀	0.1%

The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₇)	Hole	Particle	Hole	Particle
S ₀ →S ₁		23.2% 	S ₀ →T ₁	4.1%
S ₀ →S ₂		98.7% 	S ₀ →T ₂	96.7%
S ₀ →S ₃		79.1% 	S ₀ →T ₃	87.4%
S ₀ →S ₄		98.1% 	S ₀ →T ₄	3.7%
S ₀ →S ₅		23.6% 	S ₀ →T ₅	0.3%
S ₀ →S ₆		74.6% 	S ₀ →T ₆	0.9%
S ₀ →S ₇		1.7% 	S ₀ →T ₇	4.5%
S ₀ →S ₈		6.2% 	S ₀ →T ₈	4.8%
S ₀ →S ₉		26.9% 	S ₀ →T ₉	69.9%
S ₀ →S ₁₀		41.6% 	S ₀ →T ₁₀	54.0%

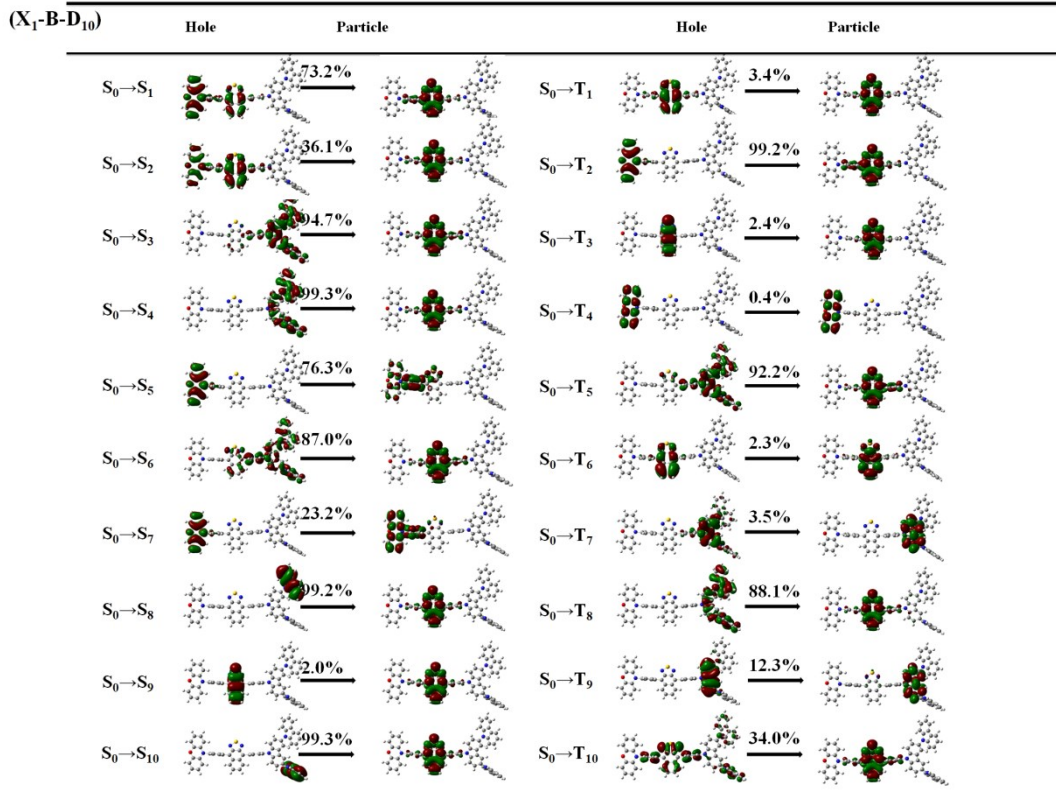
The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₈)	Hole	Particle	Hole	Particle
S ₀ →S ₁		17.6%	S ₀ →T ₁	4.6%
S ₀ →S ₂		99.0%	S ₀ →T ₂	99.0%
S ₀ →S ₃		84.7%	S ₀ →T ₃	19.6%
S ₀ →S ₄		8.5%	S ₀ →T ₄	34.2%
S ₀ →S ₅		89.4%	S ₀ →T ₅	0.3%
S ₀ →S ₆		2.3%	S ₀ →T ₆	1.1%
S ₀ →S ₇		13.5%	S ₀ →T ₇	38.3%
S ₀ →S ₈		42.6%	S ₀ →T ₈	1.1%
S ₀ →S ₉		68.5%	S ₀ →T ₉	27%
S ₀ →S ₁₀		39.6%	S ₀ →T ₁₀	3.9%

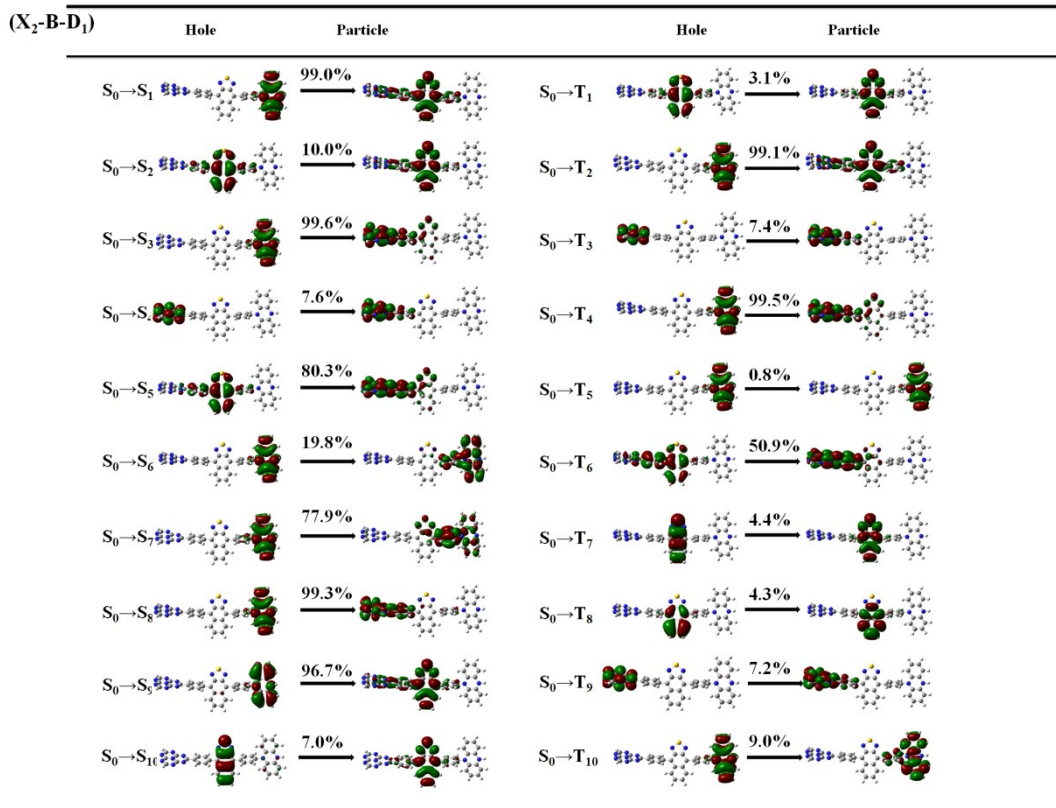
The percentage on the arrow is the electron transfer ratio among fragments.

(X ₁ -B-D ₉)	Hole	Particle	Hole	Particle
S ₀ →S ₁		41.0%	S ₀ →T ₁	3.7%
S ₀ →S ₂		68.5%	S ₀ →T ₂	99.1%
S ₀ →S ₃		93.7%	S ₀ →T ₃	2.3%
S ₀ →S ₄		93.7%	S ₀ →T ₄	0.3%
S ₀ →S ₅		75.4%	S ₀ →T ₅	90.3%
S ₀ →S ₆		23.4%	S ₀ →T ₆	1.9%
S ₀ →S ₇		99.4%	S ₀ →T ₇	3.4%
S ₀ →S ₈		1.5%	S ₀ →T ₈	9.6%
S ₀ →S ₉		40.3%	S ₀ →T ₉	54.0%
S ₀ →S ₁₀		69.5%	S ₀ →T ₁₀	0.1%

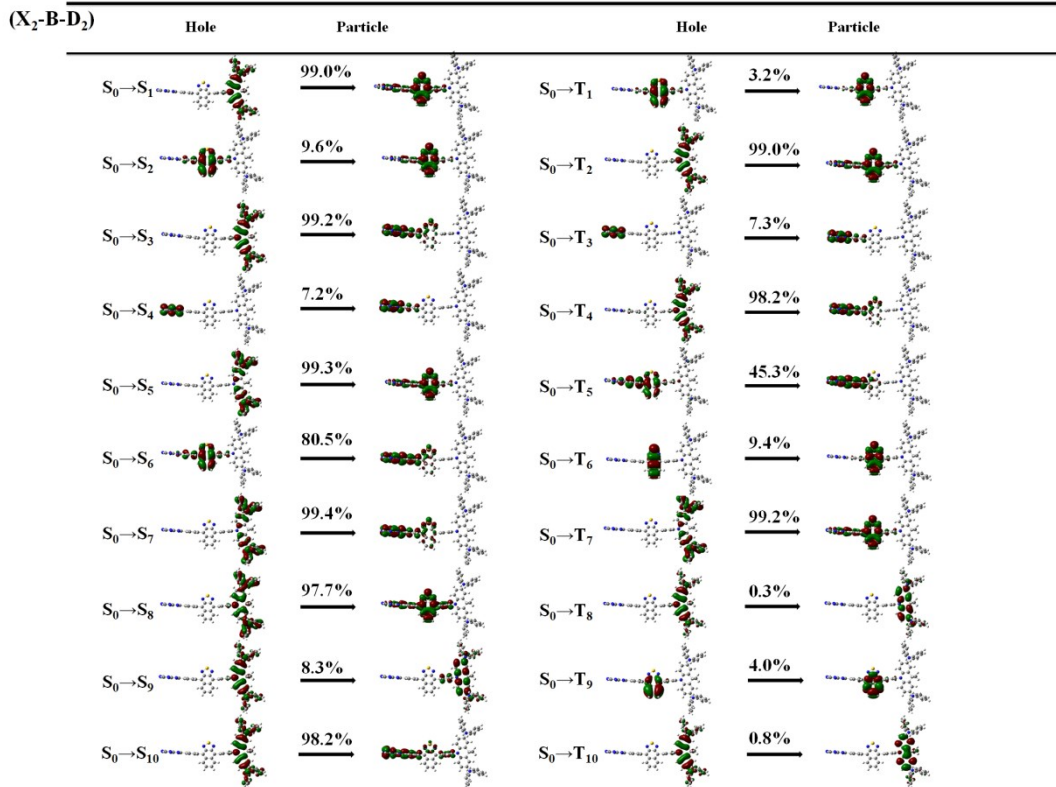
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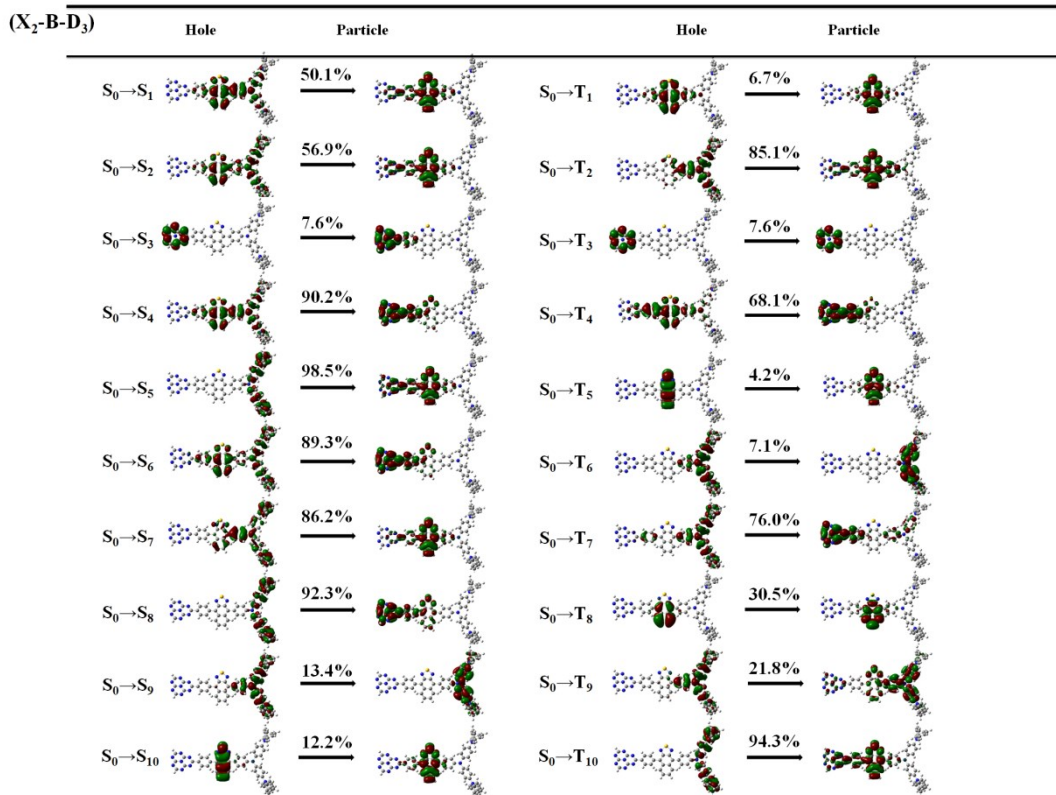
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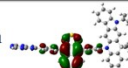
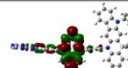
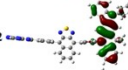
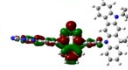
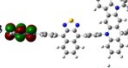
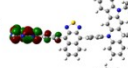
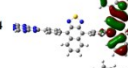
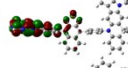
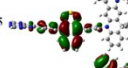
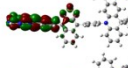
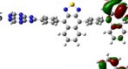
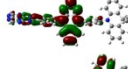

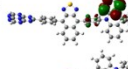

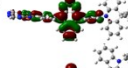
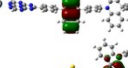
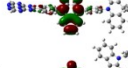
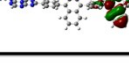
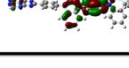
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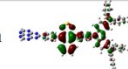
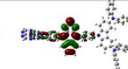
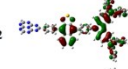
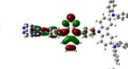

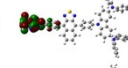

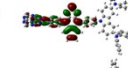
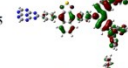
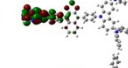
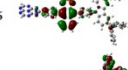
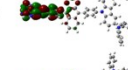
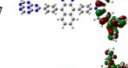
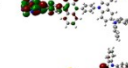
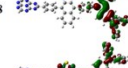
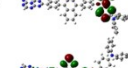

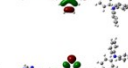


The percentage on the arrow is the electron transfer ratio among fragments.



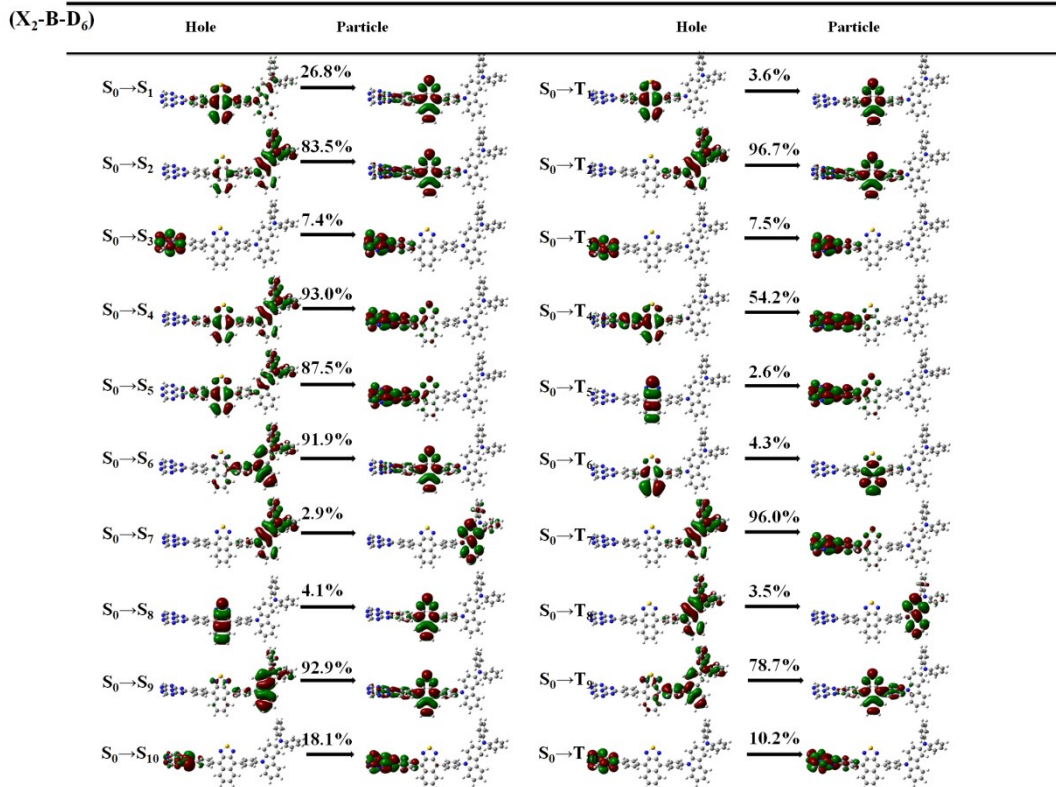
The percentage on the arrow is the electron transfer ratio among fragments.

(X_2-B-D_4)		Hole	Particle	Hole	Particle
$S_0 \rightarrow S_1$		32.6%		$S_0 \rightarrow T_1$	16.8%
$S_0 \rightarrow S_2$		99.0%		$S_0 \rightarrow T_2$	80.6%
$S_0 \rightarrow S_3$		7.4%		$S_0 \rightarrow T_3$	0.3%
$S_0 \rightarrow S_4$		99.1%		$S_0 \rightarrow T_4$	30.0%
$S_0 \rightarrow S_5$		80.2%		$S_0 \rightarrow T_5$	16.7%
$S_0 \rightarrow S_6$		98.8%		$S_0 \rightarrow T_6$	8.2%
$S_0 \rightarrow S_7$		3.3%		$S_0 \rightarrow T_7$	38.9%
$S_0 \rightarrow S_8$		96.0%		$S_0 \rightarrow T_8$	18.3%
$S_0 \rightarrow S_9$		3.2%		$S_0 \rightarrow T_9$	17.9%
$S_0 \rightarrow S_{10}$		92.3%		$S_0 \rightarrow T_{10}$	33.3%

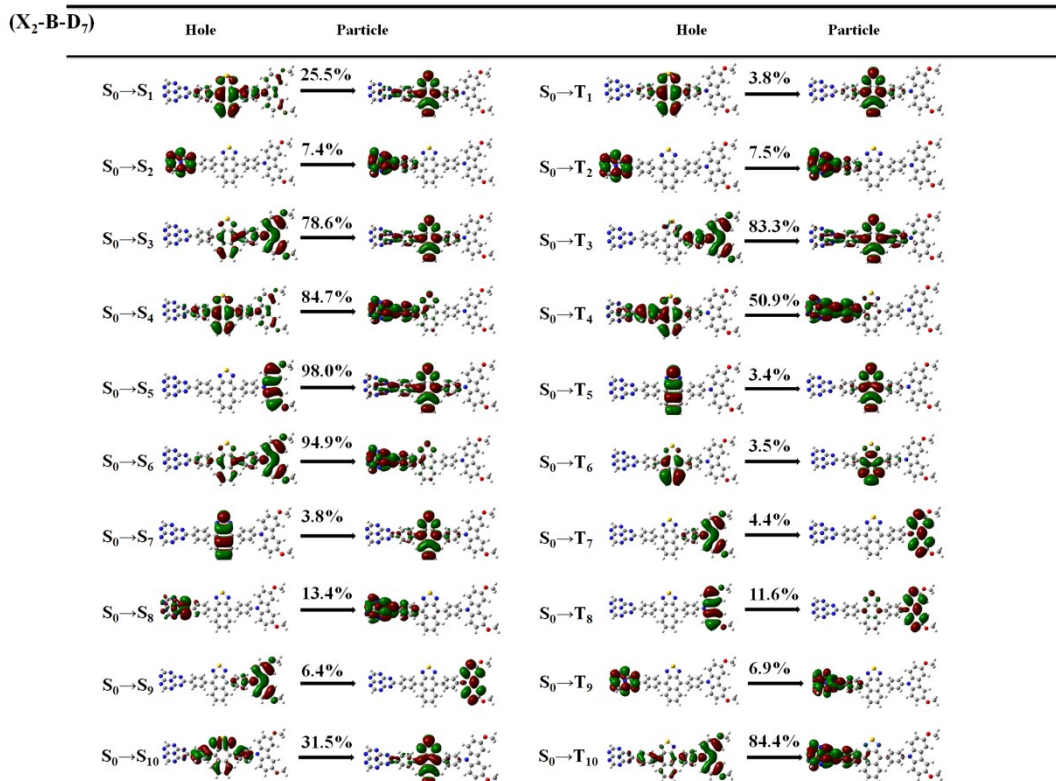
The percentage on the arrow is the electron transfer ratio among fragments.

(X_2-B-D_5)		Hole	Particle	Hole	Particle
$S_0 \rightarrow S_1$		42.0%		$S_0 \rightarrow T_1$	3.4%
$S_0 \rightarrow S_2$		67.3%		$S_0 \rightarrow T_2$	97.0%
$S_0 \rightarrow S_3$		7.7%		$S_0 \rightarrow T_3$	7.4%
$S_0 \rightarrow S_4$		99.1%		$S_0 \rightarrow T_4$	58.0%
$S_0 \rightarrow S_5$		96.7%		$S_0 \rightarrow T_5$	3.4%
$S_0 \rightarrow S_6$		84.0%		$S_0 \rightarrow T_6$	98.6%
$S_0 \rightarrow S_7$		99.3%		$S_0 \rightarrow T_7$	3.2%
$S_0 \rightarrow S_8$		3.1%		$S_0 \rightarrow T_8$	97.5%
$S_0 \rightarrow S_9$		83.5%		$S_0 \rightarrow T_9$	6.3%
$S_0 \rightarrow S_{10}$		5%		$S_0 \rightarrow T_{10}$	2.0%

The percentage on the arrow is the electron transfer ratio among fragments.



The percentage on the arrow is the electron transfer ratio among fragments.



The percentage on the arrow is the electron transfer ratio among fragments.

(X_2-B-D_8)		Hole	Particle	Hole	Particle
$S_0 \rightarrow S_1$		19.2%		$S_0 \rightarrow T_1$	4.6%
$S_0 \rightarrow S_2$		7.2%	$S_0 \rightarrow T_2$		7.0%
$S_0 \rightarrow S_3$		84.6%	$S_0 \rightarrow T_3$		54.2%
$S_0 \rightarrow S_4$		81.5%	$S_0 \rightarrow T_4$		50.5%
$S_0 \rightarrow S_5$		96.5%	$S_0 \rightarrow T_5$		2.1%
$S_0 \rightarrow S_6$		4.0%	$S_0 \rightarrow T_6$		2.9%
$S_0 \rightarrow S_7$		13.8%	$S_0 \rightarrow T_7$		35.7%
$S_0 \rightarrow S_8$		35.3%	$S_0 \rightarrow T_8$		7.1%
$S_0 \rightarrow S_9$		25.8%	$S_0 \rightarrow T_9$		7.2%
$S_0 \rightarrow S_{10}$		67.3%	$S_0 \rightarrow T_{10}$		67.5%

The percentage on the arrow is the electron transfer ratio among fragments.

(X_2-B-D_9)		Hole	Particle	Hole	Particle
$S_0 \rightarrow S_1$		13.9%	$S_0 \rightarrow T_1$		3.0%
$S_0 \rightarrow S_2$		7.7%	$S_0 \rightarrow T_2$		7.6%
$S_0 \rightarrow S_3$		93.5%	$S_0 \rightarrow T_3$		46.0%
$S_0 \rightarrow S_4$		81.4%	$S_0 \rightarrow T_4$		7.4%
$S_0 \rightarrow S_5$		95.2%	$S_0 \rightarrow T_5$		93.0%
$S_0 \rightarrow S_6$		98.5%	$S_0 \rightarrow T_6$		5.2%
$S_0 \rightarrow S_7$		99.6%	$S_0 \rightarrow T_7$		7.7%
$S_0 \rightarrow S_8$		4.0%	$S_0 \rightarrow T_8$		70.3%
$S_0 \rightarrow S_9$		13.5%	$S_0 \rightarrow T_9$		22.2%
$S_0 \rightarrow S_{10}$		92.1%	$S_0 \rightarrow T_{10}$		4.3%

The percentage on the arrow is the electron transfer ratio among fragments.

(X ₂ -B-D ₁₀)	Hole	Particle	Hole	Particle
S ₀ →S ₁		12.9%	S ₀ →T ₁	3.3%
S ₀ →S ₂		7.7%	S ₀ →T ₂	7.7%
S ₀ →S ₃		94.7%	S ₀ →T ₃	26.1%
S ₀ →S ₄		81.1%	S ₀ →T ₄	18.9%
S ₀ →S ₅		99.2%	S ₀ →T ₅	94.4%
S ₀ →S ₆		98.3%	S ₀ →T ₆	5.3%
S ₀ →S ₇		99.1%	S ₀ →T ₇	98.5%
S ₀ →S ₈		93.1%	S ₀ →T ₈	3.5%
S ₀ →S ₉		99.4%	S ₀ →T ₉	7.4%
S ₀ →S ₁₀		99.7%	S ₀ →T ₁₀	0.5%

The percentage on the arrow is the electron transfer ratio among fragments.

SIII: The electron transfer ratio among fragments.

In order to clarify the charge transfer in the designed molecules, we divide the molecule into five fragments, as shown in Fig. SIII-1, and calculate the charge transfer ratio between each fragment, which is listed in the tables below. Fig. SIII-2 shows an example of data interpretation in the tables.

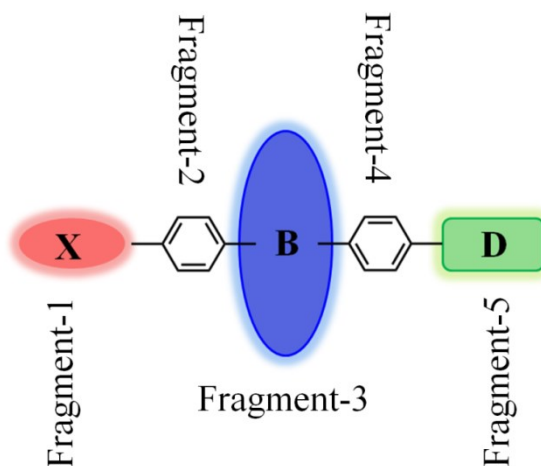


Fig. SIII-1. Schematic diagram of molecular fragment distribution.

A_1-NZ-D_1

S_1	1	2	3	4	5
1		0.000	0.000	0.000	0.000
2			0.000	0.000	0.022
3				0.017	0.901
4					0.050
5					

0.022(2.2%)

Fragment-2 ↔ Fragment-5

Electron transfer ratio

0.017(1.7%)

Fragment-3 ↔ Fragment-4

Electron transfer ratio

0.901(90.1%)

Fragment-3 ↔ Fragment-5

Electron transfer ratio

Fig. SIII-2. Illustrative example of electronic transition ratio data.

X₁-NZ-D₁

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.003	0.128	0.003	0.000	1		0.048	0.766	0.018	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.000	0.000	0.022	2			0.039	0.000	0.000	2			0.020	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.000	0.000
3				0.017	0.901	3				0.041	0.000	3				0.006	0.000	3				0.000	0.013	3				0.004	0.131
4					0.050	4					0.000	4					0.000	4					0.154	4					0.670
5						5						5						5						5					

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.278	0.043	0.000	0.000	1		0.548	0.111	0.001	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.001	1		0.000	0.000	0.000	0.000
2			0.001	0.000	0.000	2			0.003	0.000	0.000	2			0.010	0.000	0.000	2			0.000	0.000	0.016	2			0.000	0.000	0.005
3				0.000	0.000	3				0.000	0.000	3				0.008	0.000	3				0.009	0.722	3				0.003	0.208
4					0.000	4					0.000	4					0.000	4					0.129	4					0.364
5						5						5						5						5					

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.064	0.881	0.021	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.016	0.000	0.000	2			0.000	0.000	0.022	2			0.022	0.001	0.000	2			0.000	0.000	0.000	2			0.012	0.000	0.000
3				0.018	0.000	3				0.018	0.900	3				0.000	0.000	3				0.000	0.000	3				0.009	0.000
4					0.000	4					0.050	4					0.000	4					0.008	4					0.000
5						5						5						5						5					

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.003	0.001	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.000	0.000	0.000	2			0.001	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.000	0.002	2			0.076	0.002	0.000
3				0.000	0.000	3				0.006	0.000	3				0.000	0.005	3				0.000	0.000	3				0.100	0.000
4					0.000	4					0.000	4					0.075	4					0.010	4					0.000
5						5						5						5						5					

X₁-NZ-D₂

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.004	0.167	0.003	0.000	1		0.042	0.735	0.156	0.000	1		0.000	0.000	0.000	0.001	1		0.000	0.000	0.000	0.000
2			0.000	0.000	0.021	2			0.035	0.000	0.000	2			0.022	0.000	0.000	2			0.000	0.000	0.021	2			0.000	0.000	0.011
3				0.015	0.909	3				0.037	0.002	3				0.008	0.000	3				0.941	0.029	3				0.011	0.569
4					0.042	4					0.000	4					0.000	4						4					0.371
5						5						5						5						5					

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.445	0.075	0.001	0.002	1		0.392	0.071	0.001	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.001
2			0.000	0.000	0.000	2			0.000	0.000	0.000	2			0.002	0.000	0.000	2			0.007	0.000	0.000	2			0.000	0.000	0.008
3				0.000	0.001	3				0.000	0.000	3				0.000	0.000	3				0.008	0.000	3				0.011	0.483
4					0.075	4					0.000	4				0.000		4					0.000	4					0.430
5						5						5						5						5					

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.060	0.887	0.020	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.001
2			0.017	0.000	0.000	2			0.000	0.000	0.021	2			0.023	0.000	0.000	2			0.009	0.000	0.000	2			0.000	0.000	0.021
3				0.016	0.000	3				0.015	0.909	3				0.000	0.000	3				0.009	0.000	3				0.002	0.940
4					0.000	4					0.042	4				0.000		4					0.000	4					0.029
5						5						5						5						5					

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.004	0.000	0.000	0.001	1		0.000	0.000	0.000	0.000	1		0.000	0.001	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.000	0.000	0.000	2			0.000	0.000	0.000	2			0.002	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.000	0.000
3				0.000	0.000	3				0.000	0.000	3				0.000	0.000	3				0.000	0.000	3				0.000	0.001
4					0.000	4					0.003	4				0.000		4					0.006	4					0.001
5						5						5						5						5					

X₁-NZ-D₃

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.000	0.003	0.000	0.000	1		0.063	0.855	0.024	0.005	1		0.000	0.016	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.023	0.003	0.006	2			0.024	0.000	0.001	2			0.017	0.000	0.010	2			0.000	0.000	0.023	2			0.002	0.006	0.014
3				0.182	0.261	3				0.002	0.012	3				0.019	0.439	3				0.006	0.913	3				0.232	0.568
4					0.008	4					0.000	4				0.013		4					0.035	4					0.022
5						5						5						5						5					

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.079	0.005	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.513	0.177	0.018	0.064	1		0.012	0.025	0.019	0.053
2			0.000	0.000	0.000	2			0.000	0.000	0.000	2			0.001	0.001	0.001	2			0.006	0.026	0.000	2			0.019	0.009	0.054
3				0.001	0.004	3				0.000	0.000	3				0.053	0.066	3				0.000	0.007	3				0.013	0.025
4					0.075	4					0.000	4				0.038		4					0.000	4					0.047
5						5						5						5						5					

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
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1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.066	0.869	0.024	0.005	1	0.000	0.000	0.000	0.000	1	0.006	0.001	0.000	0.000
2		0.016	0.000	0.000	2		0.000	0.005	0.014	2		0.024	0.000	0.000	2		0.012	0.000	0.000	2		0.000	0.000	0.000
3			0.036	0.012	3			0.211	0.560	3			0.000	0.000	3			0.016	0.005	3			0.000	0.000
4				0.000	4				0.054	4				0.000	4				0.000	4				0.000
5					5					5					5					5				

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.001	1	0.000	0.000	0.000	0.000					
2		0.000	0.000	0.000	2		0.000	0.000	0.000	2		0.000	0.000	0.000	2		0.000	0.000	0.021	2		0.007	0.002	0.013					
3			0.001	0.016	3			0.011	0.030	3			0.005	0.086	3			0.033	0.785	3			0.092	0.383					
4				0.034	4				0.002	4				0.069	4				0.040	4				0.062					
5					5					5					5					5									

X₁-NZ-D₄

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.062	0.884	0.020	0.001	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000					
2		0.196	0.000	0.000	2		0.000	0.000	0.020	2		0.022	0.000	0.000	2		0.000	0.000	0.020	2		0.000	0.000	0.000					
3			0.142	0.000	3			0.020	0.896	3			0.000	0.000	3			0.005	0.929	3			0.000	0.000					
4				0.000	4				0.048	4				0.000	4				0.032	4				0.029					
5					5					5					5					5									

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.073	0.002	0.000	0.000	1	0.765	0.145	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000					
2		0.000	0.000	0.000	2		0.005	0.000	0.000	2		0.000	0.000	0.007	2		0.009	0.000	0.000	2		0.006	0.001	0.015					
3			0.000	0.000	3			0.000	0.000	3			0.009	0.371	3			0.006	0.000	3			0.013	0.656					
4				0.000	4				0.000	4				0.562	4				0.000	4				0.206					
5					5					5					5					5									

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.063	0.882	0.020	0.001	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000					
2		0.016	0.000	0.000	2		0.000	0.000	0.020	2		0.023	0.000	0.000	2		0.011	0.000	0.000	2		0.000	0.000	0.000					
3			0.016	0.002	3			0.020	0.899	3			0.000	0.000	3			0.010	0.000	3			0.000	0.001					
4				0.000	4				0.048	4				0.000	4				0.000	4				0.000					
5					5					5					5					5									

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.003	0.001	0.000	0.000	1	0.000	0.001	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000					

2	0.000	0.000	0.000	2	0.001	0.000	0.000	2	0.000	0.000	0.000	2	0.011	0.000	0.019	2	0.000	0.000	0.008
3	0.000	0.000	3	0.001	0.001	3	0.000	0.001	3	0.027	0.816	3	0.099	0.127					
4	0.000	4	0.000	4	0.005	4	0.027	4	0.010										
5	5	5	5	5															

X₁-NZ-D₅

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.000	0.024	0.000	0.000	1	0.058	0.854	0.021	0.002	1	0.000	0.004	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000
2	0.031	0.000	0.005	2	0.022	0.000	0.001	2	0.013	0.000	0.015	2	0.000	0.000	0.022	2	0.000	0.000	0.022	2	0.000	0.000	0.000	2	0.000	0.000	0.000	0.000	
3	0.081	0.223	3	0.002	0.018	3	0.014	0.640	3	0.001	0.933	3	0.000	0.003															
4	0.007	4	0.000	4	0.020	4	0.033	4	0.030																				
5	5	5	5	5																									

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.429	0.079	0.000	0.001	1	0.392	0.075	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000
2	0.000	0.005	0.011	2	0.002	0.000	0.001	2	0.002	0.000	0.000	2	0.005	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	0.000	
3	0.252	0.505	3	0.000	0.000	3	0.000	0.000	3	0.013	0.002	3	0.000	0.005															
4	0.026	4	0.000	4	0.000	4	0.000	4	0.000																				
5	5	5	5	5																									

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.062	0.879	0.022	0.002	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000
2	0.017	0.000	0.000	2	0.024	0.000	0.000	2	0.000	0.002	0.020	2	0.012	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.023		
3	0.020	0.002	3	0.000	0.000	3	0.072	0.825	3	0.010	0.000	3	0.001	0.915															
4	0.000	4	0.000	4	0.048	4	0.000	4	0.037																				
5	5	5	5	5																									

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.003	0.001	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.003	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	0.000	
3	0.000	0.029	3	0.000	0.000	3	0.007	0.000	3	0.000	0.015	3	0.000	0.002															
4	4	0.000	4	0.000	4	0.003	4	0.003	4	0.003																			
5	5	5	5	5																									

X₁-NZ-D₆

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.000	0.023	0.001	0.000	1	0.099	0.864	0.022	0.002	1	0.000	0.001	0.000	0.001	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000

2	0.036	0.001	0.002	2	0.000	0.000	0.000	2	0.007	0.000	0.017	2	0.000	0.004	0.017	2	0.000	0.000	0.000										
3	0.075	0.109	3	0.002	0.004	3	0.018	0.779	3	0.148	0.706	3	0.000	0.000	0.000	3	0.000	0.000	0.001										
4	0.003	4	0.000	4	0.028	4	0.034	4	0.026	5	5	5	5	5	5	5	5	5	5										
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5										
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.391	0.064	0.000	0.000	1	0.446	0.084	0.001	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	
2	0.002	0.000	0.000	2	0.002	0.000	0.000	2	0.008	0.000	0.000	2	0.012	0.000	0.016	2	0.170	0.009	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
3	0.000	0.000	3	0.000	0.000	3	0.010	0.001	3	0.047	0.762	3	0.016	0.166	3	0.000	0.000	0.000	3	0.016	0.166	3	0.000	0.000	0.000	0.000	0.000	0.000	
4	0.000	4	0.000	4	0.000	4	0.000	4	0.000	4	0.032	4	0.009	4	0.000	0.000	0.000	4	0.000	0.000	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.060	0.883	0.022	0.002	1	0.000	0.000	0.000	0.001	1	0.000	0.000	0.000	0.000	1	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	
2	0.017	0.000	0.000	2	0.023	0.000	0.000	2	0.000	0.002	0.020	2	0.012	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.019	0.004	3	0.000	0.000	3	0.068	0.827	3	0.012	0.001	3	0.000	0.000	3	0.000	0.000	0.000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4	0.000	4	0.000	4	0.000	4	0.048	4	0.000	4	0.000	4	0.000	4	0.000	4	0.000	0.000	4	0.000	0.000	4	0.000	0.000	4	0.000	0.000	0.000	0.000
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000
2	0.001	0.000	0.000	2	0.000	0.000	0.001	2	0.005	0.003	0.008	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	0.000	0.000
3	0.005	0.000	3	0.000	0.001	3	0.191	0.386	3	0.000	0.004	3	0.000	0.004	3	0.000	0.000	0.000	3	0.000	0.000	0.000	3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	4	0.025	4	0.092	4	0.011	4	0.001	4	0.001	4	0.001	4	0.001	4	0.001	0.001	4	0.001	0.001	4	0.001	4	0.001	0.001	0.001	0.001	0.001
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

X₁.NZ-D₇

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.000	0.004	0.000	0.000	1	0.060	0.879	0.021	0.002	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.001	1	0.210	0.026	0.000	0.000	1	0.000	0.000	0.000	0.000
2	0.035	0.001	0.001	2	0.023	0.001	0.000	2	0.006	0.002	0.014	2	0.000	0.000	0.021	2	0.000	0.000	0.021	2	0.000	0.000	0.000	2	0.000	0.000	0.000	0.000	0.000
3	0.091	0.098	3	0.000	0.001	3	0.083	0.657	3	0.001	0.915	3	0.000	0.000	0.000	3	0.001	0.915	3	0.000	0.000	0.000	3	0.000	0.000	0.000	0.000	0.000	
4	0.002	4	0.000	4	0.029	4	0.043	4	0.000	4	0.000	4	0.000	4	0.000	4	0.000	0.000	4	0.000	0.000	4	0.000	4	0.000	0.000	0.000	0.000	0.000
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.625	0.117	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	1	0.404	0.012	0.000	0.000	1	0.000	0.000	0.000	0.000
2	0.004	0.000	0.000	2	0.007	0.000	0.000	2	0.000	0.000	0.000	2	0.148	0.002	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	0.000	0.000

3			0.000	0.000	3				0.008	0.002	3				0.001	0.006	3				0.091	0.027	3				0.000	0.000	
4				0.000	4					0.000	4					0.055	4					0.000	4					0.000	
5					5						5						5						5						
T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.060	0.883	0.022	0.002	1		0.000	0.000	0.000	0.000	1		0.000	0.001	0.000	0.000	1		0.003	0.000	0.000	0.000
2			0.016	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.003	0.013	2			0.011	0.000	0.000	2			0.000	0.000	0.000
3				0.020	0.005	3				0.000	0.000	3				0.164	0.627	3				0.008	0.017	3				0.000	0.000
4					0.000	4					0.000	4					0.067	4					0.000	4					0.000
5						5						5						5						5					
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.001	0.000	0.000	1		0.000	0.000	0.000	0.001
2			0.004	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.000	0.000	2			0.039	0.002	0.023	2			0.063	0.004	0.023
3				0.003	0.002	3				0.000	0.002	3				0.000	0.036	3				0.024	0.563	3				0.023	0.388
4					0.000	4					0.043	4					0.012	4					0.047	4					0.038
5						5						5						5						5					
X ₁ -NZ-D ₈																													
S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.000	0.002	0.000	0.000	1		0.063	0.877	0.023	0.004	1		0.000	0.000	0.000	0.001	1		0.082	0.003	0.000	0.000	1		0.747	0.142	0.000	0.000
2			0.038	0.001	0.001	2			0.022	0.001	0.000	2			0.004	0.002	0.016	2				0.000	0.000	2			0.005	0.000	0.000
3				0.088	0.046	3				0.000	0.000	3				0.107	0.687	3				0.000	0.000	3				0.000	0.000
4					0.000	4					0.000	4					0.030	4					0.000	4					0.000
5						5						5						5						5					
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.001	1		0.000	0.001	0.000	0.000	1		0.000	0.002	0.000	0.000	1		0.385	0.009	0.001	0.001
2			0.006	0.000	0.000	2			0.004	0.003	0.004	2			0.033	0.001	0.001	2			0.166	0.001	0.002	2			0.000	0.000	0.000
3				0.014	0.002	3				0.004	0.070	3				0.171	0.208	3				0.325	0.186	3				0.000	0.000
4					0.001	4					0.049	4					0.011	4					0.003	4					0.000
5						5						5						5						5					
T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.063	0.876	0.023	0.004	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.003	0.000	0.000	0.000
2			0.015	0.000	0.000	2			0.023	0.001	0.000	2			0.006	0.001	0.003	2			0.005	0.002	0.006	2			0.000	0.000	0.000
3				0.025	0.006	3				0.000	0.000	3				0.031	0.147	3				0.059	0.241	3				0.000	0.000

4				0.000	4					0.000	4					0.008	4					0.029	4					0.000
5					5						5						5						5					

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.000	0.001	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.039	0.000	0.000	0.000
2			0.004	0.000	0.000	2			0.000	0.000	0.005	2			0.000	0.000	0.000	2			0.071	0.001	0.009	2			0.000	0.000	0.000
3				0.002	0.004	3				0.060	0.321	3				0.000	0.001	3				0.055	0.126	3				0.000	0.000
4					0.000	4					0.002	4					0.010	4					0.008	4					0.000
5						5						5						5						5					

X₁-NZ-D₉

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.011	0.304	0.007	0.001	1		0.031	0.599	0.014	0.001	1		0.000	0.000	0.000	0.001	1		0.000	0.000	0.000	0.001	1		0.630	0.119	0.001	0.000
2			0.033	0.001	0.000	2			0.020	0.001	0.000	2			0.001	0.002	0.019	2			0.000	0.003	0.019	2			0.004	0.000	0.000
3				0.037	0.016	3				0.019	0.009	3				0.069	0.813	3				0.112	0.770	3				0.000	0.000
4					0.000	4					0.000	4					0.032	4					0.032	4					0.000
5						5						5						5						5					

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.201	0.032	0.000	0.000	1		0.000	0.000	0.000	0.001	1		0.000	0.000	0.000	0.000	1		0.000	0.003	0.000	0.000	1		0.000	0.000	0.000	0.001
2			0.001	0.000	0.000	2			0.000	0.000	0.023	2			0.009	0.000	0.000	2			0.157	0.002	0.002	2			0.033	0.001	0.007
3				0.000	0.000	3				0.000	0.943	3				0.006	0.000	3				0.039	0.197	3				0.007	0.643
4					0.000	4					0.027	4					0.000	4					0.003	4					0.003
5						5						5						5						5					

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.063	0.881	0.021	0.002	1		0.000	0.000	0.000	0.000	1		0.003	0.000	0.000	0.000	1		0.000	0.000	0.000	0.001
2			0.019	0.000	0.000	2			0.023	0.001	0.000	2			0.011	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.004	0.017
3				0.015	0.003	3				0.000	0.000	3				0.011	0.001	3				0.000	0.000	3				0.141	0.675
4					0.000	4					0.000	4					0.000	4					0.000	4					0.069
5						5						5						5						5					

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.001	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.000	0.000	0.000	2			0.000	0.000	0.000	2			0.001	0.000	0.005	2			0.022	0.001	0.011	2			0.000	0.000	0.000
3				0.002	0.017	3				0.000	0.001	3				0.003	0.071	3				0.079	0.378	3				0.000	0.000
4					0.000	4					0.032	4					0.015	4					0.049	4					0.001

5					5					5					5					5									
X₁-NZ-D₁₀																													
S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.034	0.638	0.014	0.001	1		0.009	0.264	0.006	0.001	1		0.000	0.000	0.000	0.001	1		0.000	0.000	0.000	0.000	1		0.640	0.119	0.000	0.000
2			0.025	0.000	0.000	2			0.029	0.000	0.000	2			0.002	0.001	0.020	2			0.000	0.000	0.023	2			0.004	0.000	0.000
3				0.014	0.006	3				0.036	0.016	3				0.053	0.836	3				0.001	0.938	3				0.000	0.000
4					0.000	4					0.000	4					0.034	4					0.031	4					0.000
5						5						5						5						5					
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.199	0.032	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.000	0.005	0.015	2			0.001	0.000	0.000	2			0.000	0.000	0.023	2			0.007	0.000	0.000	2			0.000	0.000	0.023
3				0.188	0.635	3				0.000	0.000	3				0.001	0.940	3				0.013	0.000	3				0.000	0.941
4					0.027	4					0.000	4					0.028	4					0.000	4					0.029
5						5						5						5						5					
T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.062	0.882	0.022	0.001	1		0.000	0.000	0.000	0.000	1		0.004	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.017	0.000	0.000	2			0.024	0.001	0.000	2			0.011	0.000	0.000	2			0.000	0.000	0.000	2			0.001	0.003	0.019
3				0.015	0.002	3				0.000	0.000	3				0.012	0.001	3				0.000	0.000	3				0.109	0.725
4					0.000	4					0.000	4					0.000	4					0.000	4					0.065
5						5						5						5						5					
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.000	0.001	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.001	0.000	0.000
2			0.001	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.000	0.021	2			0.000	0.000	0.003	2			0.063	0.004	0.012
3				0.000	0.021	3				0.000	0.004	3				0.002	0.828	3				0.000	0.120	3				0.070	0.165
4					0.000	4					0.031	4					0.030	4					0.000	4					0.025
5						5						5						5						5					
X₂-NZ-D₁																													
S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.000	0.000	0.001	0.064	1		0.002	0.025	0.002	0.000	1		0.002	0.000	0.013	0.731	1		0.068	0.007	0.001	0.000	1		0.075	0.487	0.032	0.001
2			0.000	0.001	0.046	2			0.026	0.002	0.000	2			0.000	0.002	0.142	2			0.000	0.000	0.000	2			0.189	0.013	0.000
3				0.016	0.814	3				0.042	0.001	3				0.002	0.102	3				0.000	0.000	3				0.006	0.000
4					0.048	4					0.000	4					0.002	4					0.000	4					0.000

5					5					5					5					5									
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.015	1		0.000	0.000	0.014	0.822	1		0.000	0.002	0.001	0.065	1		0.000	0.014	0.000	0.006
2			0.000	0.000	0.000	2			0.000	0.000	0.004	2			0.000	0.002	0.119	2			0.001	0.001	0.046	2			0.015	0.000	0.001
3				0.000	0.017	3				0.004	0.136	3				0.000	0.021	3				0.009	0.786	3				0.010	0.024
4					0.181	4					0.620	4					0.015	4					0.056	4					0.000
5						5						5						5						5					

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.004	0.000	0.000	1		0.000	0.000	0.001	0.064	1		0.066	0.008	0.000	0.000	1		0.000	0.001	0.013	0.731	1		0.000	0.000	0.000	0.000
2			0.011	0.000	0.000	2			0.000	0.001	0.046	2			0.000	0.000	0.000	2			0.000	0.002	0.143	2			0.000	0.000	0.000
3				0.016	0.000	3				0.016	0.814	3				0.000	0.000	3				0.002	0.101	3				0.000	0.000
4					0.000	4					0.049	4					0.000	4					0.002	4					0.008
5						5						5						5						5					

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.179	0.215	0.009	0.001	1		0.001	0.029	0.000	0.000	1		0.001	0.022	0.000	0.000	1		0.062	0.010	0.000	0.000	1		0.000	0.000	0.000	0.000
2			0.096	0.006	0.001	2			0.003	0.000	0.000	2			0.018	0.000	0.000	2			0.000	0.000	0.000	2			0.000	0.000	0.000
3				0.002	0.000	3				0.011	0.000	3				0.002	0.000	3				0.000	0.000	3				0.000	0.006
4					0.000	4					0.000	4					0.000	4					0.000	4					0.084
5						5						5						5						5					

X₂-NZ-D₂

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.000	0.000	0.001	0.071	1		0.002	0.023	0.002	0.000	1		0.000	0.000	0.010	0.730	1		0.065	0.007	0.000	0.000	1		0.000	0.000	0.000	0.102
2			0.000	0.001	0.049	2			0.026	0.001	0.000	2			0.000	0.002	0.139	2			0.000	0.000	0.000	2			0.000	0.000	0.058
3				0.013	0.815	3				0.040	0.002	3				0.001	0.108	3				0.000	0.000	3				0.001	0.805
4					0.040	4					0.000	4					0.002	4					0.000	4					0.027
5						5						5						5						5					

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.077	0.487	0.031	0.001	1		0.000	0.000	0.001	0.715	1		0.000	0.000	0.001	0.055	1		0.000	0.000	0.000	0.003	1		0.000	0.000	0.010	0.720
2			0.189	0.013	0.001	2			0.000	0.000	0.129	2			0.000	0.000	0.038	2			0.000	0.000	0.000	2			0.000	0.001	0.105
3				0.006	0.000	3				0.000	0.147	3				0.012	0.643	3				0.000	0.000	3				0.001	0.089
4					0.000	4					0.002	4					0.228	4					0.080	4					0.056
5						5						5						5						5					

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5		
1		0.000	0.004	0.000	0.000	1		0.000	0.000	0.001	0.071	1		0.065	0.008	0.000	0.000	1		0.011	0.017	0.011	0.694	1		0.129	0.202	0.006	0.023		
2			0.013	0.000	0.000	2			0.000	0.001	0.048	2			0.000	0.000	0.000	2			0.002	0.002	0.137	2			0.057	0.003	0.016		
3				0.015	0.000	3				0.013	0.815	3				0.000	0.000	3				0.002	0.104	3				0.002	0.015		
4					0.000	4					0.041	4					0.000	4					0.002	4					0.000		
5						5						5						5						5							
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5		
1		0.007	0.076	0.000	0.000	1		0.000	0.000	0.000	0.101	1		0.000	0.000	0.000	0.000	1		0.001	0.015	0.000	0.000	1		0.000	0.000	0.000	0.001		
2			0.000	0.001	0.000	2			0.000	0.000	0.058	2			0.000	0.000	0.000	2			0.017	0.000	0.000	2			0.000	0.000	0.001		
3				0.007	0.003	3				0.001	0.804	3				0.000	0.000	3				0.007	0.000	3				0.000	0.000		
4					0.000	4					0.028	4					0.003	4					0.000	4					0.006		
5						5						5						5						5							
X ₂ -NZ-D ₃																															
S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5		
1		0.002	0.019	0.011	0.016	1		0.003	0.032	0.005	0.043	1		0.067	0.008	0.000	0.001	1		0.033	0.252	0.108	0.261	1		0.000	0.000	0.001	0.146		
2			0.011	0.009	0.014	2			0.003	0.002	0.027	2			0.000	0.000	0.000	2			0.067	0.031	0.076	2			0.000	0.000	0.072		
3				0.167	0.243	3				0.039	0.401	3				0.000	0.000	3				0.021	0.053	3				0.003	0.730		
4					0.009	4					0.014	4					0.000	4					0.000	4					0.033		
5						5						5						5						5							
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5		
1		0.041	0.261	0.028	0.329	1		0.000	0.007	0.018	0.046	1		0.000	0.002	0.008	0.625	1		0.000	0.001	0.004	0.038	1		0.000	0.007	0.001	0.002		
2			0.064	0.007	0.091	2			0.000	0.012	0.030	2			0.000	0.001	0.107	2			0.000	0.000	0.005	2			0.006	0.000	0.003		
3				0.004	0.066	3				0.205	0.524	3				0.002	0.171	3				0.003	0.020	3				0.046	0.041		
4					0.002	4					0.020	4					0.007	4					0.063	4					0.016		
5						5						5						5						5							
T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5		
1		0.000	0.001	0.000	0.000	1		0.000	0.006	0.017	0.045	1		0.065	0.009	0.001	0.001	1		0.152	0.240	0.048	0.065	1		0.000	0.005	0.000	0.000		
2			0.012	0.001	0.000	2			0.003	0.012	0.033	2			0.000	0.000	0.000	2			0.098	0.024	0.034	2			0.014	0.000	0.000		
3				0.036	0.017	3				0.185	0.500	3				0.000	0.000	3				0.008	0.012	3				0.017	0.006		
4					0.000	4					0.050	4					0.000	4					0.000	4					0.000		
5						5						5						5						5							
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5		

1	0.000	0.000	0.000	0.005	1	0.030	0.095	0.061	0.312	1	0.019	0.115	0.005	0.024	1	0.000	0.004	0.006	0.032	1	0.000	0.000	0.002	0.142
2		0.000	0.000	0.002	2		0.012	0.011	0.075	2		0.023	0.001	0.011	2		0.000	0.000	0.004	2		0.000	0.001	0.068
3			0.002	0.035	3			0.011	0.116	3			0.012	0.093	3			0.014	0.104	3			0.009	0.691
4				0.027	4				0.037	4				0.002	4				0.054	4				0.030
5					5					5					5					5				

X₂-NZ-D₄

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.001	0.063	1	0.068	0.006	0.000	0.000	1	0.000	0.000	0.014	0.729	1	0.076	0.487	0.033	0.000					
2		0.158	0.000	0.000	2		0.000	0.001	0.046	2		0.000	0.000	0.000	2		0.000	0.003	0.142	2		0.187	0.013	0.000					
3			0.168	0.000	3			0.018	0.813	3			0.000	0.000	3			0.002	0.099	3			0.006	0.000					
4				0.000	4				0.048	4			0.000		4				0.002	4				0.000					
5					5					5					5					5									

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.000	0.000	0.000	0.081	1	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.040	1	0.000	0.012	0.000	0.000	1	0.000	0.000	0.001	0.064					
2		0.000	0.000	0.052	2		0.000	0.000	0.000	2		0.000	0.000	0.029	2		0.014	0.000	0.000	2		0.000	0.001	0.000					
3			0.005	0.821	3			0.000	0.001	3			0.009	0.557	3			0.006	0.000	3			0.007	0.418					
4				0.029	4				0.032	4			0.334		4				0.000	4				0.432					
5					5					5					5					5									

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.075	0.030	0.017	0.007	1	0.007	0.021	0.091	0.226	1	0.002	0.001	0.000	0.000	1	0.118	0.058	0.048	0.064	1	0.050	0.042	0.008	0.002					
2		0.009	0.012	0.007	2		0.013	0.073	0.185	2		0.000	0.000	0.000	2		0.001	0.003	0.005	2		0.055	0.004	0.001					
3			0.007	0.004	3			0.038	0.105	3			0.000	0.000	3			0.001	0.002	3			0.005	0.001					
4				0.000	4				0.047	4			0.000		4				0.000	4				0.000					
5					5					5					5					5									

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.000	0.002	0.001	0.016	1	0.025	0.030	0.035	0.194	1	0.050	0.014	0.008	0.049	1	0.003	0.006	0.011	0.059	1	0.000	0.066	0.005	0.033					
2		0.001	0.001	0.013	2		0.006	0.004	0.046	2		0.002	0.005	0.043	2		0.004	0.004	0.036	2		0.047	0.004	0.232					
3			0.001	0.020	3			0.003	0.013	3			0.001	0.010	3			0.005	0.003	3			0.003	0.115					
4				0.027	4				0.033	4			0.001		4				0.048	4				0.025					
5					5					5					5					5									

X₂-NZ-D₅

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
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1	0.002	0.018	0.005	0.014	1	0.001	0.020	0.001	0.047	1	0.067	0.010	0.000	0.000	1	0.000	0.000	0.000	0.100	1	0.012	0.092	0.039	0.570
2		0.014	0.003	0.014	2		0.005	0.000	0.031	2		0.000	0.000	0.000	2		0.000	0.000	0.057	2		0.018	0.009	0.125
3			0.075	0.265	3			0.008	0.541	3			0.000	0.000	3			0.001	0.798	3			0.006	0.095
4				0.010	4				0.019	4				0.000	4				0.034	4				0.001
5					5					5					5					5				

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.064	0.414	0.024	0.119	1	0.000	0.000	0.000	0.718	1	0.000	0.000	0.000	0.000	1	0.000	0.005	0.011	0.025	1	0.000	0.012	0.000	0.000					
2		0.140	0.009	0.044	2		0.000	0.000	0.129	2		0.000	0.000	0.000	2		0.001	0.010	0.022	2		0.013	0.000	0.000					
3			0.004	0.022	3			0.000	0.143	3			0.000	0.002	3			0.221	0.510	3			0.020	0.005					
4				0.000	4				0.003	4				0.029	4				0.030	4				0.000					
5					5					5					5					5									

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.000	0.003	0.000	0.000	1	0.000	0.001	0.005	0.071	1	0.066	0.008	0.000	0.000	1	0.189	0.216	0.016	0.025	1	0.000	0.009	0.000	0.000					
2		0.009	0.000	0.000	2		0.000	0.004	0.046	2		0.000	0.000	0.000	2		0.099	0.010	0.016	2		0.009	0.000	0.000					
3			0.017	0.005	3			0.056	0.740	3			0.000	0.000	3			0.003	0.006	3			0.014	0.002					
4				0.000	4				0.047	4				0.000	4				0.000	4				0.000					
5					5					5					5					5									

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.000	0.000	0.000	0.099	1	0.000	0.000	0.000	0.000	1	0.015	0.021	0.028	0.655	1	0.002	0.030	0.000	0.000	1	0.000	0.000	0.000	0.013					
2		0.000	0.000	0.057	2		0.000	0.000	0.000	2		0.002	0.005	0.130	2		0.019	0.000	0.000	2		0.000	0.000	0.000					
3			0.001	0.794	3			0.000	0.002	3			0.004	0.107	3			0.002	0.010	3			0.000	0.003					
4				0.035	4				0.030	4				0.008	4				0.000	4				0.004					
5					5					5					5					5									

X₂-NZ-D₆

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.002	0.021	0.004	0.006	1	0.001	0.011	0.002	0.067	1	0.066	0.007	0.001	0.000	1	0.028	0.198	0.044	0.412	1	0.049	0.315	0.018	0.263					
2		0.020	0.003	0.007	2		0.003	0.001	0.042	2		0.000	0.000	0.000	2		0.047	0.012	0.107	2		0.088	0.005	0.082					
3			0.072	0.129	3			0.013	0.671	3			0.000	0.000	3			0.008	0.074	3			0.002	0.052					
4				0.004	4				0.024	4				0.000	4				0.000	4				0.001					
5					5					5					5					5									
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.000	0.003	0.010	0.048	1	0.000	0.000	0.000	0.000	1	0.000	0.012	0.000	0.000	1	0.000	0.016	0.003	0.080	1	0.116	0.032	0.000	0.020					

2	0.001	0.007	0.035	2	0.000	0.000	0.000	2	0.016	0.000	0.000	2	0.003	0.002	0.047	2	0.000	0.000	0.003
3	0.130	0.656	3	0.000	0.001	3	0.011	0.002	3	0.034	0.713	3	0.000	0.010					
4	0.029	4	0.028	4	0.000	4	0.031	4	0.000										
5	5	5	5	5	5	5	5	5	5										

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.000	0.001	0.000	0.000	1	0.000	0.001	0.006	0.074	1	0.065	0.010	0.000	0.000	1	0.188	0.209	0.013	0.016	1	0.000	0.010	0.000	0.000					
2	0.011	0.000	0.000	2	0.001	0.004	0.048	2	0.000	0.000	0.000	2	0.095	0.007	0.010	2	0.006	0.000	0.000										
3	0.020	0.004	3	0.055	0.736	3	0.000	0.000	3	0.001	0.003	3	0.010	0.000															
4	0.000	4	0.042	4	0.000	4	0.000	4	0.000	0.000	4	0.000	4	0.000															
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5															

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.001	0.020	0.000	0.000	1	0.010	0.012	0.039	0.622	1	0.000	0.000	0.000	0.009	1	0.000	0.011	0.023	0.069	1	0.059	0.025	0.002	0.015					
2	0.018	0.000	0.000	2	0.000	0.007	0.124	2	0.000	0.000	0.000	2	0.007	0.008	0.026	2	0.000	0.000	0.001										
3	0.002	0.002	3	0.007	0.124	3	0.000	0.003	3	0.151	0.416	3	0.000	0.000															
4	0.000	4	0.015	4	0.023	4	0.076	4	0.000																				
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5															

X₂-NZ-D₇

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.002	0.023	0.005	0.005	1	0.066	0.008	0.000	0.000	1	0.000	0.009	0.005	0.041	1	0.061	0.405	0.059	0.098	1	0.000	0.000	0.000	0.078					
2	0.020	0.004	0.005	2	0.000	0.000	0.000	2	0.004	0.004	0.033	2	0.138	0.022	0.036	2	0.000	0.000	0.052										
3	0.085	0.103	3	0.000	0.000	3	0.072	0.593	3	0.010	0.018	3	0.001	0.810															
4	0.003	4	0.000	4	0.025	4	0.000	4	0.000	0.000	4	0.039																	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5															

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.024	0.112	0.047	0.531	1	0.000	0.010	0.000	0.000	1	0.119	0.013	0.000	0.002	1	0.000	0.000	0.000	0.001	1	0.010	0.013	0.005	0.001					
2	0.022	0.011	0.121	2	0.016	0.000	0.000	2	0.000	0.000	0.000	2	0.000	0.000	0.000	2	0.180	0.000	0.000										
3	0.006	0.074	3	0.010	0.002	3	0.000	0.000	3	0.000	0.007	3	0.086	0.020															
4	0.001	4	0.000	4	0.000	4	0.056	4	0.000																				
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5															

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.000	0.004	0.000	0.000	1	0.067	0.007	0.001	0.000	1	0.003	0.007	0.020	0.076	1	0.154	0.165	0.023	0.048	1	0.000	0.006	0.000	0.000					
2	0.012	0.000	0.000	2	0.000	0.000	0.000	2	0.014	0.011	0.048	2	0.048	0.012	0.033	2	0.012	0.000	0.000										

3			0.017	0.005	3				0.000	0.000	3			0.122	0.483	3			0.006	0.020	3			0.013	0.003				
4				0.000	4					0.000	4				0.049	4				0.000	4				0.000				
5					5						5					5					5								
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.000	0.013	0.000	0.000	1		0.000	0.000	0.000	0.000	1		0.000	0.000	0.000	0.006	1		0.059	0.009	0.001	0.000	1		0.064	0.075	0.074	0.418
2			0.018	0.000	0.000	2			0.000	0.000	0.001	2			0.000	0.000	0.006	2			0.000	0.000	0.000	2			0.009	0.017	0.104
3				0.002	0.002	3				0.001	0.002	3				0.000	0.087	3				0.000	0.000	3				0.010	0.065
4					0.000	4					0.040	4					0.017	4					0.000	4					0.008
5						5						5						5						5					

X₂-NZ-D₈

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1		0.002	0.026	0.005	0.003	1		0.064	0.008	0.000	0.000	1		0.001	0.012	0.010	0.074	1		0.060	0.429	0.056	0.055	1		0.011	0.063	0.042	0.597
2			0.019	0.004	0.002	2			0.000	0.000	0.000	2			0.000	0.005	0.040	2			0.149	0.021	0.021	2			0.011	0.008	0.122
3				0.081	0.049	3				0.000	0.000	3				0.078	0.598	3				0.012	0.012	3				0.007	0.099
4					0.001	4					0.000	4					0.028	4					0.000	4					0.005
5						5						5						5						5					
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1		0.000	0.008	0.000	0.000	1		0.115	0.015	0.004	0.003	1		0.001	0.010	0.006	0.008	1		0.000	0.001	0.003	0.015	1		0.046	0.008	0.037	0.022
2			0.014	0.000	0.001	2			0.000	0.000	0.001	2			0.027	0.001	0.003	2			0.004	0.001	0.001	2			0.236	0.012	0.010
3				0.016	0.001	3				0.000	0.000	3				0.135	0.143	3				0.024	0.167	3				0.190	0.109
4					0.000	4					0.000	4					0.019	4					0.042	4					0.003
5						5						5						5						5					
T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1		0.000	0.002	0.000	0.000	1		0.063	0.007	0.000	0.000	1		0.135	0.192	0.032	0.052	1		0.001	0.001	0.003	0.010	1		0.000	0.005	0.000	0.000
2			0.011	0.000	0.000	2			0.000	0.000	0.000	2			0.074	0.015	0.027	2			0.030	0.005	0.032	2			0.014	0.000	0.000
3				0.027	0.006	3				0.000	0.000	3				0.004	0.010	3				0.085	0.292	3				0.014	0.002
4					0.000	4					0.000	4					0.001	4					0.046	4					0.000
5						5						5						5						5					
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1		0.000	0.002	0.000	0.000	1		0.001	0.002	0.009	0.055	1		0.056	0.013	0.002	0.000	1		0.004	0.018	0.007	0.042	1		0.058	0.096	0.062	0.246
2			0.016	0.000	0.000	2			0.002	0.002	0.016	2			0.000	0.000	0.000	2			0.000	0.000	0.001	2			0.005	0.017	0.069
3				0.001	0.010	3				0.033	0.211	3				0.000	0.000	3				0.000	0.000	3				0.023	0.096

4	0.000	4	0.026	4	0.000	4	0.000	4	0.003
5		5		5		5		5	

X₂-NZ-D₉

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.002	0.022	0.003	0.001		1	0.066	0.010	0.001	0.000		1	0.000	0.003	0.005	0.066		1	0.074	0.466	0.038	0.026		1	0.000	0.007	0.020	0.142	
2		0.026	0.002	0.001		2		0.000	0.000	0.000		2		0.001	0.003	0.045		2		0.173	0.015	0.010		2		0.002	0.008	0.054	
3			0.053	0.028		3			0.000	0.000		3			0.053	0.727		3			0.007	0.005		3			0.086	0.605	
4				0.001		4				0.000		4				0.032		4				0.000		4				0.028	
5						5						5						5						5					

S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
1	0.004	0.013	0.016	0.594		1	0.000	0.000	0.000	0.129		1	0.000	0.012	0.000	0.000		1	0.118	0.016	0.001	0.000		1	0.001	0.003	0.001	0.062	
2		0.001	0.003	0.112		2		0.000	0.000	0.066		2		0.014	0.000	0.000		2		0.000	0.000	0.000		2		0.011	0.000	0.043	
3			0.006	0.230		3			0.000	0.775		3			0.014	0.000		3			0.000	0.000		3			0.010	0.764	
4				0.006		4				0.026		4				0.000		4				0.000		4				0.036	
5						5						5						5						5					

T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
1	0.000	0.004	0.000	0.000		1	0.065	0.010	0.001	0.000		1	0.153	0.205	0.010	0.005		1	0.003	0.053	0.000	0.000		1	0.000	0.001	0.009	0.051	
2		0.009	0.000	0.000		2		0.000	0.000	0.000		2		0.074	0.006	0.003		2		0.003	0.001	0.000		2		0.005	0.006	0.037	
3			0.015	0.002		3			0.000	0.000		3			0.003	0.001		3			0.014	0.000		3			0.117	0.642	
4				0.000		4				0.000		4				0.000		4				0.000		4				0.062	
5						5						5						5						5					

T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
1	0.001	0.023	0.000	0.000		1	0.065	0.011	0.001	0.000		1	0.006	0.073	0.024	0.152		1	0.006	0.080	0.009	0.104		1	0.000	0.000	0.000	0.004	
2		0.021	0.001	0.000		2		0.000	0.000	0.000		2		0.000	0.006	0.023		2		0.000	0.000	0.002		2		0.000	0.000	0.000	
3			0.006	0.000		3			0.000	0.000		3			0.072	0.296		3			0.003	0.016		3			0.000	0.014	
4				0.000		4				0.000		4				0.051		4				0.002		4				0.029	
5						5						5						5						5					

X₂-NZ-D₁₀

S ₁	1	2	3	4	5	S ₂	1	2	3	4	5	S ₃	1	2	3	4	5	S ₄	1	2	3	4	5	S ₅	1	2	3	4	5
1	0.002	0.021	0.002	0.001		1	0.068	0.008	0.000	0.001		1	0.000	0.003	0.004	0.067		1	0.077	0.462	0.035	0.026		1	0.000	0.000	0.000	0.100	
2		0.028	0.002	0.001		2		0.000	0.000	0.000		2		0.001	0.002	0.046		2		0.175	0.014	0.010		2		0.000	0.000	0.059	
3			0.047	0.024		3			0.000	0.000		3			0.040	0.751		3			0.007	0.005		3			0.000	0.804	

4				0.001	4					0.000	4				0.033	4				0.000	4							0.029	
5					5						5					5					5								
S ₆	1	2	3	4	5	S ₇	1	2	3	4	5	S ₈	1	2	3	4	5	S ₉	1	2	3	4	5	S ₁₀	1	2	3	4	5
	1	0.004	0.025	0.031	0.623		1	0.000	0.001	0.002	0.113		1	0.000	0.006	0.016	0.084		1	0.000	0.000	0.000	0.116		1	0.000	0.000	0.000	0.721
	2		0.004	0.006	0.123		2		0.000	0.001	0.060		2		0.003	0.007	0.037		2		0.000	0.000	0.062		2		0.000	0.000	0.128
	3			0.007	0.154		3			0.013	0.775		3			0.120	0.633		3			0.002	0.787		3			0.000	0.145
	4				0.006		4				0.026		4				0.025		4				0.027		4				0.003
	5						5						5						5						5				
T ₁	1	2	3	4	5	T ₂	1	2	3	4	5	T ₃	1	2	3	4	5	T ₄	1	2	3	4	5	T ₅	1	2	3	4	5
	1	0.000	0.004	0.000	0.000		1	0.066	0.009	0.001	0.001		1	0.061	0.164	0.004	0.004		1	0.038	0.144	0.002	0.000		1	0.000	0.000	0.001	0.058
	2		0.010	0.000	0.000		2		0.000	0.000	0.000		2		0.017	0.001	0.003		2		0.005	0.000	0.000		2		0.005	0.005	0.041
	3			0.017	0.002		3			0.000	0.000		3			0.001	0.006		3			0.000	0.000		3			0.084	0.693
	4				0.000		4				0.000		4				0.000		4				0.000		4				0.057
	5						5						5						5						5				
T ₆	1	2	3	4	5	T ₇	1	2	3	4	5	T ₈	1	2	3	4	5	T ₉	1	2	3	4	5	T ₁₀	1	2	3	4	5
	1	0.001	0.025	0.000	0.000		1	0.000	0.000	0.000	0.099		1	0.000	0.000	0.000	0.000		1	0.063	0.011	0.000	0.000		1	0.002	0.002	0.001	0.000
	2		0.023	0.000	0.000		2		0.000	0.000	0.059		2		0.000	0.000	0.000		2		0.000	0.000	0.000		2		0.000	0.000	0.000
	3			0.004	0.000		3			0.001	0.796		3			0.000	0.003		3			0.000	0.000		3			0.000	0.000
	4				0.000		4				0.030		4				0.032		4				0.000		4				0.000
	5						5						5						5						5				

SIIV: The excitation energy (E_S , E_T) and transition dipole moments (λ) of the S_1 - S_{10} and T_1 - T_{10} of the X_1 -NZ- D_{1-10} and X_2 -NZ- D_{1-10}

	X_1 -B ₂ -D ₁				X_1 -B ₂ -D ₂				X_1 -B ₂ -D ₃				X_1 -B ₂ -D ₄				X_1 -B ₂ -D ₅			
	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)
1	<u>2.34</u>	<u>36.39</u>	1.36	4.29	<u>2.51</u>	<u>39.29</u>	1.37	3.95	<u>2.45</u>	<u>17.63</u>	1.31	6.30	<u>2.64</u>	<u>6.55</u>	1.36	4.37	<u>2.62</u>	<u>37.34</u>	1.35	4.31
2	<u>2.71</u>	4.78	<u>2.34</u>	<u>36.38</u>	<u>2.72</u>	<u>7.12</u>	<u>2.51</u>	<u>39.38</u>	<u>2.85</u>	<u>28.94</u>	<u>2.66</u>	<u>31.60</u>	<u>2.71</u>	<u>32.28</u>	<u>2.64</u>	<u>33.34</u>	<u>2.74</u>	5.12	<u>2.73</u>	<u>37.47</u>
3	<u>2.75</u>	<u>26.32</u>	<u>2.75</u>	<u>31.04</u>	<u>2.74</u>	<u>26.83</u>	<u>2.73</u>	<u>33.43</u>	<u>2.98</u>	<u>22.41</u>	<u>2.85</u>	<u>30.10</u>	<u>2.75</u>	<u>37.96</u>	<u>2.75</u>	<u>40.90</u>	<u>2.89</u>	<u>30.97</u>	<u>2.79</u>	<u>30.95</u>
4	3.61	5.10	2.99	2.47	<u>3.22</u>	<u>43.79</u>	3.06	2.82	<u>3.57</u>	<u>45.90</u>	3.08	4.86	<u>3.68</u>	<u>33.65</u>	3.06	3.26	<u>3.21</u>	<u>41.58</u>	3.06	3.57
5	<u>3.75</u>	<u>18.50</u>	3.06	3.39	<u>3.90</u>	<u>33.25</u>	3.22	3.12	<u>3.87</u>	<u>34.35</u>	3.24	5.58	3.85	4.74	3.20	2.65	3.76	6.09	<u>3.20</u>	<u>5.20</u>
6	3.99	3.61	3.24	3.44	3.95	2.66	3.24	2.28	3.94	3.14	3.25	4.80	<u>3.99</u>	<u>7.99</u>	3.24	3.38	3.97	2.89	3.23	3.92
7	<u>4.01</u>	<u>10.20</u>	3.32	3.49	<u>3.98</u>	<u>9.46</u>	3.27	1.66	3.99	4.32	3.30	6.00	<u>4.00</u>	<u>9.16</u>	3.32	2.37	<u>3.98</u>	<u>15.10</u>	3.25	3.66
8	4.04	2.93	3.53	3.28	<u>4.00</u>	<u>7.72</u>	3.32	2.96	4.01	6.59	<u>3.37</u>	<u>8.88</u>	<u>4.00</u>	<u>2.60</u>	3.51	2.94	<u>4.01</u>	<u>26.85</u>	<u>3.32</u>	<u>22.67</u>
9	<u>4.10</u>	<u>35.60</u>	3.64	3.12	4.04	2.20	3.50	1.66	<u>4.05</u>	<u>9.68</u>	<u>3.57</u>	<u>40.32</u>	<u>4.04</u>	<u>33.27</u>	3.68	2.96	4.04	3.26	3.48	2.44
10	<u>4.11</u>	<u>11.90</u>	3.70	2.99	<u>4.06</u>	<u>29.33</u>	3.57	0.88	4.07	4.26	<u>3.62</u>	<u>25.82</u>	<u>4.13</u>	4.70	3.71	1.67	4.10	<u>30.24</u>	3.59	4.19
	X_1 -B ₂ -D ₆				X_1 -B ₂ -D ₇				X_1 -B ₂ -D ₈				X_1 -B ₂ -D ₉				X_1 -B ₂ -D ₁₀			
	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)	E_S (eV)	μ_S (Debye)	E_T (eV)	μ_T (Debye)
1	<u>2.65</u>	<u>11.40</u>	1.35	3.91	<u>2.64</u>	<u>9.25</u>	1.35	5.26	2.64	<u>8.14</u>	1.34	5.46	<u>2.68</u>	<u>12.34</u>	1.36	5.21	<u>2.66</u>	<u>27.02</u>	1.36	4.69
2	<u>2.74</u>	<u>31.82</u>	<u>2.73</u>	<u>33.75</u>	<u>2.77</u>	<u>30.35</u>	<u>2.77</u>	<u>30.49</u>	<u>2.81</u>	<u>30.35</u>	<u>2.81</u>	<u>30.38</u>	<u>2.72</u>	<u>22.67</u>	<u>2.70</u>	<u>34.54</u>	<u>2.71</u>	<u>11.82</u>	<u>2.67</u>	<u>36.73</u>
3	<u>2.97</u>	<u>30.80</u>	<u>2.90</u>	<u>40.86</u>	<u>3.13</u>	<u>31.36</u>	<u>2.99</u>	<u>32.50</u>	<u>3.29</u>	<u>40.21</u>	<u>3.06</u>	<u>11.67</u>	<u>3.34</u>	<u>38.94</u>	3.06	4.28	<u>3.33</u>	<u>39.50</u>	3.06	3.85
4	<u>3.72</u>	<u>46.95</u>	3.06	2.77	<u>3.73</u>	<u>40.45</u>	3.07	4.88	3.99	3.68	<u>3.08</u>	<u>18.80</u>	<u>3.81</u>	<u>38.43</u>	3.24	3.27	<u>3.60</u>	<u>47.37</u>	3.25	2.42
5	3.93	3.08	<u>3.24</u>	<u>46.02</u>	3.99	1.36	3.24	4.64	<u>4.03</u>	4.54	3.24	4.94	<u>3.98</u>	<u>15.82</u>	<u>3.27</u>	<u>33.31</u>	<u>3.96</u>	<u>17.67</u>	<u>3.28</u>	<u>34.93</u>
6	<u>3.98</u>	<u>29.51</u>	3.32	2.11	<u>4.01</u>	<u>10.91</u>	3.32	4.52	4.04	<u>14.00</u>	3.32	5.09	4.00	5.11	3.32	4.17	<u>3.99</u>	<u>32.49</u>	3.32	3.42
7	<u>4.01</u>	<u>9.16</u>	3.38	2.25	4.04	3.96	3.34	2.78	<u>4.11</u>	<u>10.56</u>	<u>3.43</u>	<u>20.80</u>	<u>4.03</u>	<u>54.61</u>	3.62	2.61	4.00	6.20	3.51	3.44
8	4.04	8.04	3.54	2.94	4.09	2.53	3.52	5.71	<u>4.14</u>	<u>16.78</u>	3.67	1.85	4.04	3.70	<u>3.66</u>	<u>9.94</u>	<u>4.03</u>	<u>53.23</u>	<u>3.59</u>	<u>42.67</u>
9	4.14	2.11	3.56	2.96	4.19	3.78	<u>3.74</u>	<u>25.39</u>	<u>4.33</u>	<u>16.02</u>	<u>3.73</u>	<u>10.30</u>	4.19	5.90	<u>3.67</u>	<u>12.35</u>	4.04	3.36	3.63	2.92
10	4.21	5.34	3.60	1.67	4.39	3.96	<u>3.75</u>	<u>18.73</u>	4.40	3.26	3.85	5.26	<u>4.23</u>	<u>29.52</u>	3.68	3.19	<u>4.05</u>	<u>55.24</u>	<u>3.70</u>	3.02

E_S and the E_T are the energy of the singlet and triplet excited states, μ_S and the μ_T are the dipole moment of the singlet and triplet excited states.

	X ₂ -B ₂ -D ₁				X ₂ -B ₂ -D ₂				X ₂ -B ₂ -D ₃				X ₂ -B ₂ -D ₄				X ₂ -B ₂ -D ₅			
	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)
1	<u>2.27</u>	<u>40.35</u>	1.35	4.52	<u>2.43</u>	<u>43.70</u>	1.36	<u>43.76</u>	<u>2.37</u>	<u>21.29</u>	1.29	7.05	<u>2.56</u>	<u>41.28</u>	1.35	4.58	<u>2.56</u>	<u>17.55</u>	1.34	4.02
2	2.67	6.14	<u>2.27</u>	<u>40.36</u>	2.67	5.43	<u>2.43</u>	2.23	<u>2.91</u>	<u>28.62</u>	<u>2.59</u>	<u>36.00</u>	2.66	6.33	<u>2.56</u>	<u>41.39</u>	<u>2.81</u>	<u>33.10</u>	<u>2.70</u>	<u>45.52</u>
3	<u>2.88</u>	<u>68.04</u>	2.84	1.35	<u>3.01</u>	<u>71.85</u>	2.83	<u>68.88</u>	3.03	2.97	2.84	2.89	3.03	1.30	2.84	1.21	3.03	2.16	2.84	2.27
4	3.03	1.37	<u>2.88</u>	<u>67.87</u>	3.03	2.13	<u>3.01</u>	<u>16.16</u>	<u>3.08</u>	<u>50.09</u>	<u>2.86</u>	<u>31.03</u>	<u>3.19</u>	<u>69.33</u>	<u>3.02</u>	<u>18.17</u>	<u>3.11</u>	<u>52.55</u>	<u>3.01</u>	<u>19.97</u>
5	<u>3.44</u>	<u>28.01</u>	3.00	2.78	<u>3.13</u>	<u>49.45</u>	<u>3.03</u>	<u>5.40</u>	<u>3.46</u>	<u>54.02</u>	3.06	5.83	<u>3.43</u>	<u>28.86</u>	3.05	4.72	<u>3.24</u>	<u>67.45</u>	3.05	3.06
6	3.61	6.16	<u>3.02</u>	<u>17.29</u>	<u>3.46</u>	<u>27.13</u>	<u>3.05</u>	<u>49.39</u>	<u>3.49</u>	<u>52.31</u>	3.25	7.59	<u>3.60</u>	<u>46.03</u>	<u>3.19</u>	<u>69.20</u>	<u>3.47</u>	<u>36.32</u>	<u>3.11</u>	<u>51.88</u>
7	3.74	<u>19.74</u>	3.05	4.56	<u>3.62</u>	<u>74.61</u>	3.13	1.87	<u>3.80</u>	<u>39.07</u>	<u>3.27</u>	<u>45.09</u>	3.85	6.35	3.20	5.51	<u>3.61</u>	<u>78.37</u>	3.23	2.26
8	<u>3.87</u>	<u>72.58</u>	3.33	3.92	<u>3.83</u>	<u>40.59</u>	3.27	3.24	<u>3.90</u>	<u>71.47</u>	<u>3.32</u>	<u>15.16</u>	<u>3.96</u>	<u>35.26</u>	3.33	4.17	3.77	3.34	<u>3.28</u>	<u>70.30</u>
9	<u>4.03</u>	<u>40.70</u>	3.52	1.59	3.95	3.51	3.33	1.90	3.95	7.53	<u>3.38</u>	<u>13.22</u>	4.03	4.19	3.52	1.75	<u>3.91</u>	<u>33.86</u>	3.33	3.61
10	4.03	3.84	3.53	3.80	<u>3.97</u>	<u>71.12</u>	3.50		4.00	7.15	<u>3.47</u>	<u>50.60</u>	4.07	2.81	3.52	3.02	4.02	2.60	3.48	3.79
	X ₂ -B ₂ -D ₆				X ₂ -B ₂ -D ₇				X ₂ -B ₂ -D ₈				X ₂ -B ₂ -D ₉				X ₂ -B ₂ -D ₁₀			
	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)	E _S (eV)	μ _S (Debye)	E _T (eV)	μ _T (Debye)
1	<u>2.60</u>	<u>10.43</u>	1.34	4.50	<u>2.58</u>	<u>11.84</u>	1.34	5.60	2.59	<u>10.55</u>	1.33	5.89	2.64	6.31	1.35	5.24	2.65	4.87	1.35	4.65
2	<u>2.89</u>	<u>41.50</u>	<u>2.82</u>	<u>45.76</u>	3.03	2.00	2.84	1.89	3.03	2.30	2.84	2.22	3.03	4.22	2.83	4.33	3.02	4.97	2.83	5.15
3	3.03	2.37	2.84	2.45	<u>3.06</u>	<u>34.42</u>	<u>2.91</u>	<u>35.74</u>	<u>3.21</u>	<u>45.50</u>	<u>2.95</u>	<u>25.23</u>	<u>3.27</u>	<u>43.71</u>	<u>3.03</u>	<u>14.34</u>	<u>3.25</u>	<u>44.16</u>	<u>3.04</u>	<u>7.08</u>
4	<u>3.33</u>	<u>56.81</u>	<u>3.01</u>	<u>18.19</u>	<u>3.35</u>	<u>37.20</u>	<u>2.99</u>	<u>22.63</u>	<u>3.32</u>	<u>35.10</u>	<u>3.02</u>	<u>29.90</u>	3.45	<u>27.69</u>	3.05	4.60	<u>3.48</u>	<u>25.86</u>	3.06	5.91
5	<u>3.48</u>	<u>45.92</u>	3.05	3.63	<u>3.65</u>	<u>45.08</u>	3.06	5.05	<u>3.74</u>	<u>73.66</u>	3.06	5.62	<u>3.71</u>	<u>46.33</u>	<u>3.20</u>	<u>38.43</u>	<u>3.50</u>	<u>52.97</u>	<u>3.20</u>	<u>40.69</u>
6	<u>3.65</u>	<u>37.62</u>	3.33	3.86	<u>3.71</u>	<u>61.83</u>	3.33	5.06	4.02	5.60	3.32	6.09	<u>3.85</u>	<u>70.57</u>	3.33	4.33	<u>3.81</u>	<u>70.16</u>	3.33	3.67
7	3.92	5.04	<u>3.38</u>	<u>69.03</u>	4.03	4.98	3.34	3.13	4.07	3.28	<u>3.39</u>	<u>22.54</u>	<u>3.93</u>	<u>60.89</u>	3.51	3.86	<u>3.93</u>	<u>57.44</u>	<u>3.50</u>	<u>52.21</u>
8	4.03	3.13	3.38	2.77	4.07	2.88	3.51	2.53	<u>4.10</u>	<u>15.60</u>	3.52	2.83	4.03	3.73	<u>3.60</u>	<u>32.99</u>	<u>3.94</u>	<u>42.24</u>	3.51	4.40
9	<u>4.07</u>	<u>40.89</u>	<u>3.51</u>	<u>31.15</u>	4.09	2.93	<u>3.52</u>	<u>9.11</u>	<u>4.12</u>	<u>16.71</u>	<u>3.61</u>	<u>10.77</u>	4.07	3.68	3.61	4.05	<u>3.95</u>	<u>60.53</u>	3.51	3.25
10	4.07	2.01	3.52	1.92	4.16	4.73	<u>3.59</u>	<u>51.57</u>	<u>4.26</u>	<u>14.79</u>	<u>3.62</u>	<u>39.89</u>	4.14	<u>38.78</u>	3.62	2.30	<u>4.01</u>	<u>78.67</u>	3.61	2.96

E_S and the E_T are the energy of the singlet and triplet excited excited states, μ_S and the μ_T are the dipole moment of the the singlet and triplet excited excited states.

SV: The SOC between the excited states of the X_1 -NZ- D_{1-10} and X_2 -NZ- D_{1-10}

X_1 -NZ- D_n										
	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	D ₁₀
S ₁ -T ₁	0.27	0.05	0.14	0.11	0.09	0.09	0.08	0.13	0.13	0.14
S ₁ -T ₂	0.01	0.68	0.47	0.01	0.06	0.02	0.01	0.33	0.03	0.00
S ₁ -T ₃	0.28	0.01	0.02	0.45	0.04	0.11	0.11	0.01	0.40	0.40
S ₂ -T ₁	0.11	0.26	0.31	0.28	0.28	0.27	0.26	0.27	0.26	0.26
S ₂ -T ₂	0.44	0.06	0.07	0.00	0.26	0.26	0.24	0.01	0.26	0.27
S ₂ -T ₃	0.02	0.22	0.26	0.01	0.01	0.08	0.08	0.24	0.06	0.06
S ₃ -T ₁	0.26	0.02	0.13	0.26	0.21	0.20	0.24	0.13	0.15	0.14
S ₃ -T ₂	0.03	0.18	0.29	0.23	0.02	0.00	0.01	0.27	0.00	0.01
S ₃ -T ₃	0.00	0.00	0.08	0.00	0.12	0.12	0.20	0.00	0.08	0.08
S ₃ -T ₄	0.26	0.01	0.12	0.00	0.13	0.11	0.32	0.31	0.15	0.10
S ₃ -T ₅	0.07	0.00	0.27	0.08	0.13	0.14	1.26	1.99	1.61	1.30
S ₄ -T ₂	1.02	0.09	0.95	0.00	0.00	0.00	0.00	0.02	0.00	0.00
S ₄ -T ₃	0.19	0.05	0.00	0.38	0.08	0.17	0.04	0.02	0.06	0.00
S ₄ -T ₄	0.00	0.02	0.04	0.11	0.02	0.07	0.08	0.01	0.16	0.01
S ₄ -T ₅	0.01	0.67	0.13	0.06	0.02	0.25	0.44	0.02	4.31	0.09
S ₅ -T ₃	0.88	0.01	0.04	0.58	1.60	0.06	0.01	0.01	0.99	1.07
S ₅ -T ₄	0.00	0.46	0.01	1.10	0.01	0.02	0.88	0.59	0.02	0.01
S ₅ -T ₅	0.07	0.07	0.02	0.02	0.00	1.60	0.20	0.85	0.06	0.05
S ₅ -T ₆	0.00	0.41	0.32	0.02	0.03	0.39	0.00	0.39	0.00	0.00
S ₅ -T ₇	0.12	0.82	0.88	0.12	0.07	0.42	0.09	0.11	0.00	0.00
X_2 -NZ- D_n										
	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	D ₁₀
S ₁ -T ₁	0.26	0.03	0.11	0.09	0.08	0.07	0.05	0.05	0.07	0.10
S ₁ -T ₂	0.02	0.49	0.52	0.43	0.71	0.68	0.68	0.43	0.68	0.66
S ₁ -T ₃	0.29	0.34	0.48	0.68	0.05	0.06	0.06	0.62	0.06	0.06
S ₂ -T ₁	0.05	0.02	0.21	0.28	0.22	0.03	0.03	0.02	0.03	0.03
S ₂ -T ₂	0.42	0.12	0.40	0.03	0.22	0.19	0.20	0.09	0.18	0.19
S ₂ -T ₃	0.01	0.17	0.20	0.06	0.02	0.00	0.01	0.16	0.00	0.01
S ₃ -T ₁	0.02	0.03	0.03	0.02	0.02	0.19	0.25	0.17	0.11	0.11
S ₃ -T ₂	0.00	0.13	0.05	0.01	0.18	0.13	0.15	0.27	0.07	0.08
S ₃ -T ₃	0.00	0.07	0.20	0.18	0.01	0.01	0.01	0.06	0.01	0.00
S ₃ -T ₄	0.19	0.01	0.01	0.00	0.03	0.18	0.28	0.02	0.12	0.08
S ₃ -T ₅	0.01	0.12	0.00	0.00	0.02	0.18	1.14	0.36	1.40	1.11
S ₄ -T ₂	0.67	0.10	0.30	0.66	0.07	0.09	0.09	0.13	0.17	0.20
S ₄ -T ₃	0.08	0.55	0.08	0.14	0.00	0.39	0.40	0.16	0.46	0.49
S ₄ -T ₄	0.11	0.04	0.28	0.03	0.37	0.39	0.38	0.36	0.45	0.46
S ₄ -T ₅	0.01	0.19	0.03	0.03	0.28	0.13	1.08	0.34	0.97	0.95
S ₅ -T ₃	0.01	0.18	0.19	0.15	0.29	0.20	0.00	3.74	0.01	0.00
S ₅ -T ₄	0.16	0.52	0.03	0.44	0.35	0.15	0.02	3.68	0.19	0.01
S ₅ -T ₅	0.45	0.29	0.04	0.01	0.21	0.24	0.37	1.32	3.53	0.09
S ₅ -T ₆	0.39	0.35	0.12	0.39	0.36	1.26	0.11	0.66	0.07	0.08
S ₅ -T ₇	0.86	0.14	0.48	0.88	0.94	0.42	0.52	2.41	0.01	0.01