

# Phosphorescent Modulation of Metallophilic Cluster and Recognition of Solvents through Flexible Host-Guest Assembly: A Theoretical Investigation

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## 1. Figure 1S

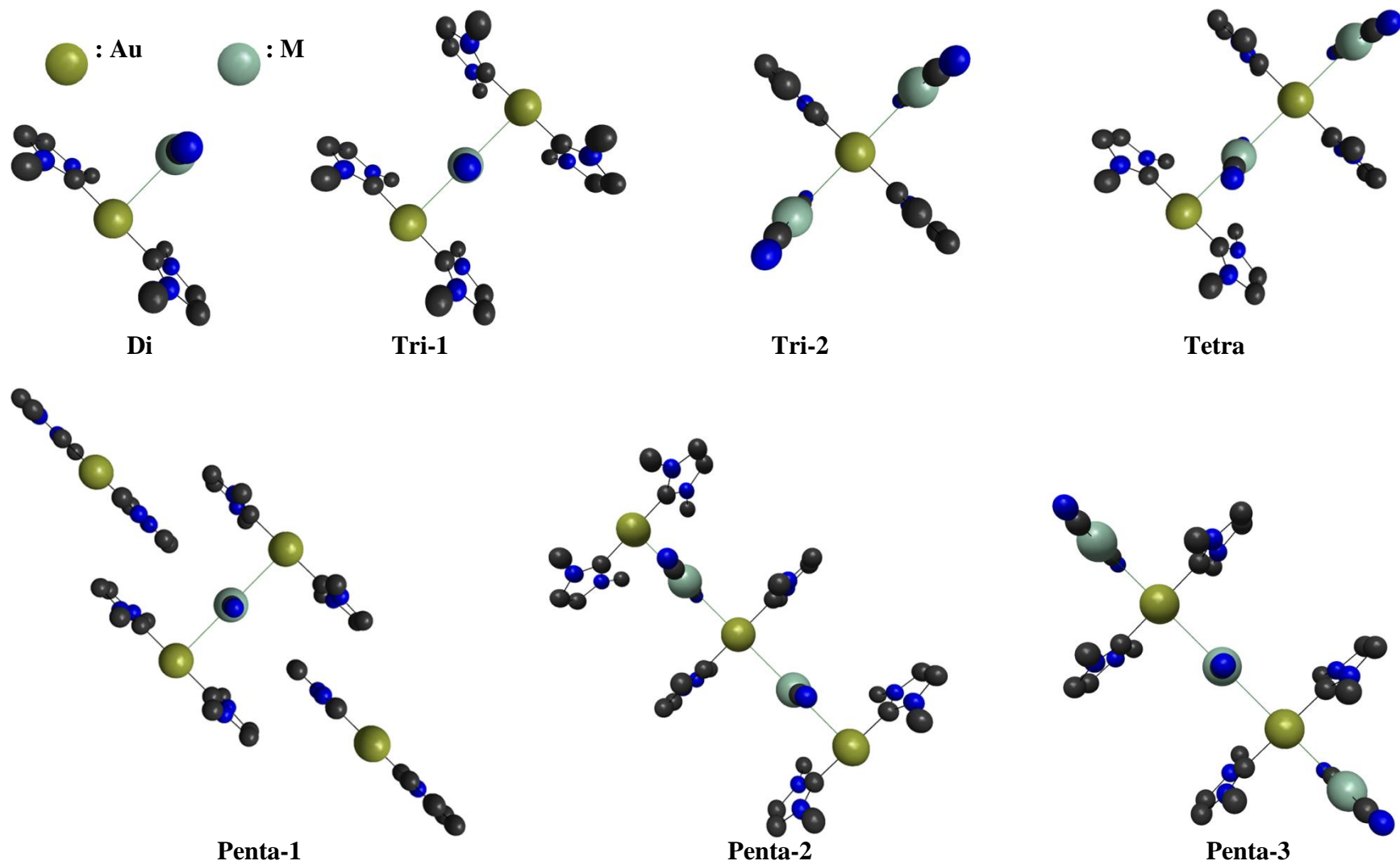


Figure 1S. Structure diagrams of clusters.

## 2. Table 1S

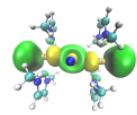
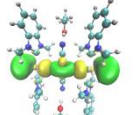
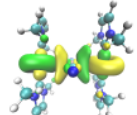
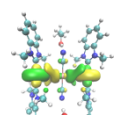
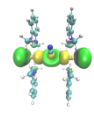
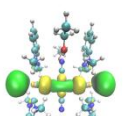
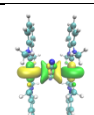
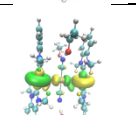
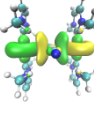
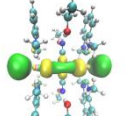
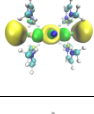
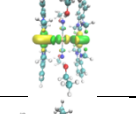
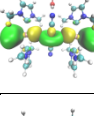
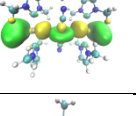
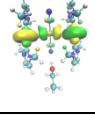
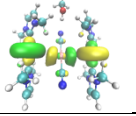
**Table 1S.** Comparing the calculated and experimental parameters for the different oligomeric I (bond length: Å, wavelength: nm).

Cluster	Methods	BS1			BS2	
		$d^{\text{cal}}$ (Au...Au)	$d^{\text{cal}}-d^{\text{exp}}$ *	$\lambda_{\text{max}}^{\text{cal}} - \lambda_{\text{max}}^{\text{exp}}$ **	$d^{\text{cal}}$ (Au...Au)	$d^{\text{cal}}-d^{\text{exp}}$ *
Di	B3LYP	3.21	0.06	-60.07	3.24	0.09
	B3LYP-D3	3.11	-0.04	57.91	3.12	-0.03
	PBE0	3.08	-0.07	-55.38	3.09	-0.06
	$\omega$ B97XD	3.21	0.06	-97.45	3.22	0.07
	M062X	3.20	0.05	-99.38	3.23	0.08
	MP2	2.99	-0.16	-	-	-
Tri-1	B3LYP	3.37	0.22	-11.39	-	-
	B3LYP-D3	3.06	-0.09	-	3.06	-0.09
	PBE0	3.12	-0.03	8.56	3.13	-0.02
	$\omega$ B97XD	3.18	0.03	-51.9	3.11	-0.04
	M062X	3.32	0.17	-	3.37	0.22
	MP2	2.94	-0.21	-	-	-
Tri-2	B3LYP	5.74	2.59	-	5.84	2.69
	B3LYP-D3	4.25	1.10	-	4.20	1.05
	PBE0	3.21	0.06	-	3.23	0.08
	$\omega$ B97XD	4.26	1.11	-	4.23	1.08
	M062X	4.29	1.14	-	4.20	1.05
Tetra	B3LYP	3.26	0.11	88.17	-	-
	PBE0	3.11	-0.04	111.25	-	-
Penta-1	$\omega$ B97XD	3.16	0.01	-57.19	-	-
	M062X	3.23	0.08	-76.66	-	-
	B3LYP	>4.0	-	-	-	-
	B3LYP-D3	-	-	-	-	-
	PBE0	-	-	-	-	-
Penta-2	B3LYP	3.27	0.12	-	-	-
	B3LYP-D3	-	-	-	-	-
	PBE0	3.16	0.01	95.64	-	-
	$\omega$ B97XD	-	-	-	-	-
	M062X	3.54	0.39	-	-	-
Penta-3	B3LYP	-	-	-	-	-
	B3LYP-D3	>3.8	-	-	-	-
	PBE0	>3.3	-	-	-	-
	$\omega$ B97XD	-	-	-	-	-
	M062X	>3.7	-	-	-	-

$$*d^{\text{exp}} = 3.15 \text{ \AA}, **\lambda_{\text{max}}^{\text{exp}} = 448 \text{ nm.}$$

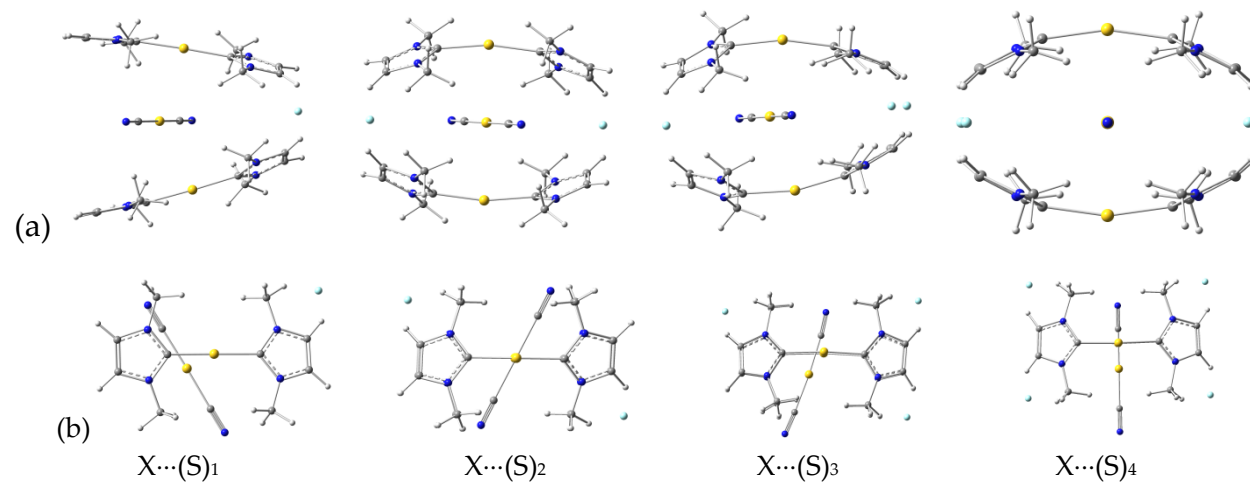
It can be seen from Table 1S, the Au-M distances of **Penta-1** at  $\omega$ B97XD/BS1 and **Penta-2** at PBE0/BS1 are only beyond the experimental data 0.01 Å respectively as well as the **Tri-1** at PBE0/BS1 is shorter by 0.03 Å than the experiment. These cases indicate that the PBE0/BS1 is reliable for the complexes and the **Penta-1**, **Penta-2**, and **Tri-1** can act as plausible cluster unit with the geometrical parameters as the reference. In order to further verify which cluster is the most represented mode for studying, the calculated phosphorescent character of them are listed in Table S1 (ESI<sup>†</sup>). It can be seen that the calculated phosphorescent wavelength of **Tri-1** is the most close to the experiment and the difference only is only about 9 nm.

3. Table 2S

complex	donor	acceptor	Eij		complex	donor	acceptor	Eij	
I	LP(5)(Au2)	LP(7)*(Au1)	32.41		II-2S2	LP(3)(Au2)	LP(7)*(Au1)	15.64	
		LP(7)*(Au3)	30.42				LP(7)*(Au3)	15.64	
	LP(4)(Au1)	LP(6)*(Au2)	29.47			LP(3)(Au1)	LP(6)*(Au2)	14.18	
	LP(4)(Au3)		26.36			LP(3)(Au3)		14.18	
II	LP(5)(Au2)	LP(6)*(Au1)	31.78		II-3S2	LP(4)(Au2)	LP(7)*(Au1)	16.43	
		LP(7)*(Au3)	31.84				LP(7)*(Au3)	16.43	
	LP(4)(Au1)	LP(6)*(Au2)	24.39			LP(4)(Au1)	LP(7)*(Au2)	16.08	
	LP(4)(Au3)		24.44			LP(4)(Au3)		16.08	
III	LP(5)(Ag2)	LP(7)*(Au1)	16.87		II-4S2	LP(5)(Au2)	LP(7)*(Au1)	25.07	
		LP(7)*(Au3)	16.87				LP(7)*(Au3)	25.07	
	LP(4)(Au1)	LP(6)*(Ag2)	26.76			LP(4)(Au1)	LP(7)*(Au2)	21.21	
	LP(4)(Au3)		26.76			LP(4)(Au3)		21.21	
I-S2	LP(3)(Au2)	LP(7)*(Au1)	12.87		III-S2	LP(5)(Ag2)	LP(7)*(Au1)	4.49	
		LP(7)*(Au3)	12.87				LP(7)*(Au3)	4.78	
	LP(3)(Au1)	LP(6)*(Au2)	13.86			LP(3)(Au1)	LP(6)*(Ag2)	13.98	
	LP(3)(Au3)		13.85			LP(3)(Au3)		13.14	

I-2S2	LP(3)(Au2)	LP(7)*(Au1)	14.8		III-2S2	LP(5)(Ag2)	LP(7)*(Au1)	5.39	
		LP(7)*(Au3)	14.81				LP(7)*(Au3)	5.39	
	LP(3)(Au1)	LP(6)*(Au2)	15.78			LP(3)(Au1)	LP(6)*(Ag2)	11.06	
	LP(3)(Au3)		15.75			LP(3)(Au3)		11.06	
I-3S2	LP(3)(Au2)	LP(7)*(Au1)	13.21		III-3S2	LP(5)(Ag2)	LP(7)*(Au1)	4.52	
		LP(7)*(Au3)	13.72				LP(7)*(Au3)	4.64	
	LP(4)(Au1)	LP(7)*(Au2)	13.04			LP(4)(Au1)	LP(6)*(Ag2)	13.09	
	LP(4)(Au3)		14.32			LP(4)(Au3)		14.9	
I-4S2	LP(4)(Au2)	LP(7)*(Au1)	24.43		II-4S2	LP(5)(Ag2)	LP(7)*(Au1)	10.46	
		LP(7)*(Au3)	24.41				LP(7)*(Au3)	10.46	
	LP(4)(Au1)	LP(7)*(Au2)	22.14			LP(4)(Au1)	LP(6)*(Ag2)	19.09	
	LP(4)(Au3)		22.14			LP(4)(Au3)		19.09	
II-S2	LP(3)(Au2)	LP(7)*(Au1)	13.01						
		LP(7)*(Au3)	13.37						
	LP(3)(Au1)	LP(6)*(Au2)	12.42						
	LP(3)(Au3)		12.28						

## 4. Figure 2S



**Figure 2S.** Top view (a) and face view (b) of the representative cluster  $X \cdots (S)_x$  ( $X = \text{I-III}$ ;  $x = 1-4$ )

## 5. Table 3S

**Table 3S.** The key parameters and the phosphorescent character of complexes X···(S)<sub>n</sub> (bond length: Å, bond angle:°, wavelength: nm).

	d0(S <sub>0</sub> )														
	I	I-S1	I-2S1	I-3S1	I-4S1	II	II-S1	II-2S1	II-3S1	II-4S1	III	III-S1	III-2S1	III-3S1	III-4S1
Au1-M2	3.12	3.54	3.46	3.40	3.25	3.15	3.53	3.44	3.36	3.22	3.06	3.56	3.44	3.42	3.22
M2-Au3	3.11	3.54	3.46	3.40	3.25	3.15	3.51	3.44	3.36	3.22	3.06	3.56	3.44	3.39	3.22
Au-C1	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Au-C2	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
M-C3	2.00	1.99	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.05	2.04	2.04	2.04	2.05
M-C4	2.00	1.99	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.05	2.04	2.04	2.04	2.05
Au-C5	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Au-C6	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Au1M2Au3	180.0	168.3	180.0	159.1	180.0	180.0	151.7	180.0	165.5	180.0	180.0	165.9	180.0	157.1	180.0
	d1(T <sub>1</sub> )														
Au1-M2	2.77	2.77	2.84	2.85	2.86	2.76	2.76	2.86	2.86	2.85	2.76	2.76	2.85	2.86	2.87
M2-Au3	2.77	2.77	2.84	2.85	2.86	2.75	2.76	2.86	2.86	2.85	2.76	2.76	2.85	2.86	2.87
Au-C1	2.03	2.03	2.03	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
Au-C2	2.03	2.03	2.03	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
M-C3	1.99	1.99	1.99	1.99	1.98	1.99	1.99	1.99	1.99	1.99	2.02	2.02	2.02	2.02	2.01
M-C4	1.99	1.99	1.99	1.99	1.98	1.99	1.99	1.99	1.99	1.99	2.02	2.02	2.02	2.02	2.01
Au-C5	2.03	2.03	2.03	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
Au-C6	2.03	2.03	2.03	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
Au1M2Au3	180.0	176.8	180.0	173.1	180.0	180.0	178.2	180.0	175.8	180.0	180.0	176.3	180.0	172.4	179.9
λ	457	444	419	418	412	483	478	437	439	443	417	409	383	379	371
Δλ		-13	-38	-39	-45		-5	-46	-44	-40		-8	-34	-38	-46
	d0(S <sub>0</sub> )														
	I	I-S2	I-2S2	I-3S2	I-4S2	II	II-S2	II-2S2	II-3S2	II-4S2	III	III-S2	III-2S2	III-3S2	III-4S2
Au1-M2	3.12	3.50	3.45	3.41	3.25	3.15	3.51	3.45	3.35	3.22	3.06	3.54	3.44	3.42	3.24
M2-Au3	3.11	3.50	3.45	3.41	3.25	3.15	3.54	3.45	3.35	3.22	3.06	3.55	3.44	3.39	3.24
Au-C1	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Au-C2	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
M-C3	2.00	1.99	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.05	2.05	2.04	2.05	2.05
M-C4	2.00	1.99	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.05	2.05	2.04	2.05	2.05
Au-C5	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Au-C6	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Au1M2Au3	180.0	170.3	180.0	159.1	180.0	180.0	152.2	179.9	166.0	180.0	180.0	166.8	180.0	157.2	179.9

d1(T <sub>1</sub> )															
Au1-M2	2.77	2.77	2.84	2.85	2.85	2.76	2.76	2.86	2.85	2.85	2.76	2.76	2.85	2.86	2.87
M2-Au3	2.77	2.77	2.84	2.85	2.85	2.75	2.76	2.86	2.85	2.85	2.76	2.76	2.85	2.86	2.87
Au-C1	2.03	2.03	2.03	2.04	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
Au-C2	2.03	2.03	2.03	2.04	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
M-C3	1.99	1.99	1.99	1.99	1.98	1.99	1.99	1.99	1.99	1.99	2.02	2.02	2.02	2.02	2.01
M-C4	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.02	2.02	2.02	2.02	2.01
Au-C5	2.03	2.03	2.03	2.04	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
Au-C6	2.03	2.03	2.03	2.04	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04
Au1M2Au3	180.0	175.1	180.0	172.4	180.0	180.0	170.9	180.0	175.8	180.0	180.0	174.2	180.0	171.0	180.0
λ	457	444.00	420.00	418.00	412.00	483	476	437	440	443	417	408	383	378	372
Δλ		-13	-37	-39	-45		-7	-46	-43	-40		-9	-34	-39	-45
d0(S <sub>0</sub> )															
	I	I-S3	I-2S3	I-3S3	I-4S3	II	II-S3	II-2S3	II-3S3	II-4S3	III	III-S3	III-2S3	III-3S3	III-4S3
Au1-M2	3.12	3.52	3.49	3.42	3.21	3.15	3.55	3.44	3.57	3.22	3.06	3.56	3.47	3.41	3.20
M2-Au3	3.11	3.52	3.49	3.42	3.21	3.15	3.55	3.44	3.57	3.22	3.06	3.56	3.47	3.41	3.20
Au-C1	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.04	2.04	2.04	2.04
Au-C2	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.04	2.04	2.04	2.04
M-C3	2.00	1.99	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.05	2.05	2.04	2.04	2.05
M-C4	2.00	1.99	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.05	2.04	2.04	2.04	2.05
Au-C5	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.04	2.04	2.04	2.04
Au-C6	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.04	2.04	2.04	2.04
Au1M2Au3	179.98	171.28	179.98	158.67	180.00	180.00	153.10	180.00	149.70	179.99	180.00	168.10	179.98	157.96	180.00
d1(T <sub>1</sub> )															
Au1-M2	2.77	2.77	2.84	2.85	2.80	2.76	2.76	2.84	2.86	2.86	2.76	2.77	2.85	2.86	2.80
M2-Au3	2.77	2.79	2.84	2.85	2.80	2.75	2.79	2.83	2.85	2.86	2.76	2.80	2.85	2.86	2.80
Au-C1	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04	2.03	2.02	2.03	2.03	2.03
Au-C2	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.03	2.02	2.03	2.03	2.03
M-C3	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.98	2.02	2.03	2.02	2.02	2.02
M-C4	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.98	2.02	2.03	2.02	2.02	2.02
Au-C5	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04	2.03	2.03	2.03	2.03	2.03
Au-C6	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.03	2.04	2.03	2.03	2.03
Au1M2Au3	179.99	171.00	179.99	174.26	180.00	179.98	169.80	180.00	173.45	179.99	179.99	163.84	179.99	174.03	180.00
λ	457	450	421	419	435	483	475	444	441	444	417	429	383	380	391
Δλ		-7	-36	-38	-22		-8	-39	-43	-39		12	-34	-37	-26



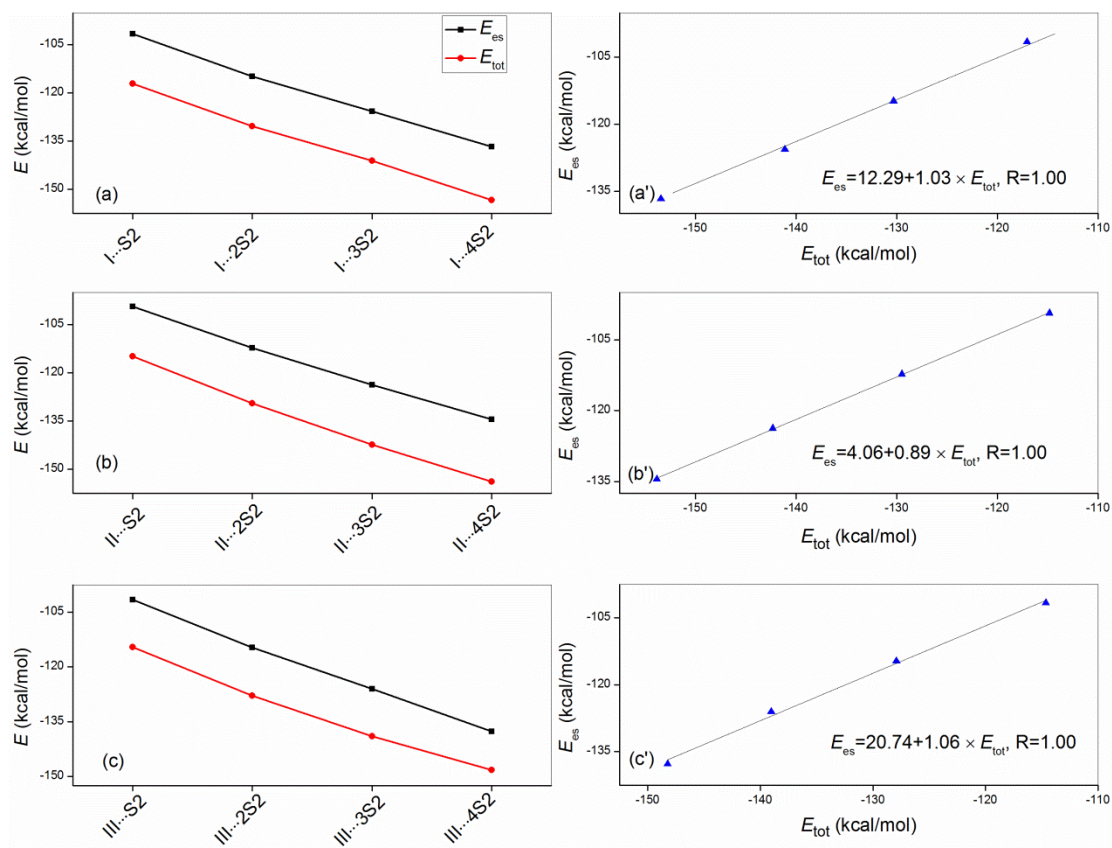
## 6. Table 4S

Table 4S. Selected GKS-EDA results of  $X \cdots (Sn)_x$  (kcal/mol).

		II								I				III			
		S1	(S1)2	(S1)3	(S1)4	S2	(S2)2	(S2)3	(S2)4	S2	(S2)2	(S2)3	(S2)4	S2	(S2)2	(S2)3	(S2)4
$E^{CP1}$	$E_{es}$	-17.1	-15.8	-12.4	-11.7	-17.0	-15.6	-12.1	-11.5	-16.5	-15.6	-11.9	-11.4	-17.5	-16.2	-12.4	-11.8
	$E_{ex}$	-36.1	-34.3	-26.2	-24.5	-36.9	-35.1	-26.3	-24.8	-32.9	-31.3	-24.7	-23.3	-34.9	-32.7	-25.8	-24.1
	$E_{rep}$	61.0	57.5	43.5	40.8	62.0	58.6	43.7	41.1	55.1	52.4	41.3	38.9	58.6	54.7	43.2	40.2
	$E_{pol}$	-11.2	-10.4	-7.5	-7.1	-11.2	-10.4	-7.4	-7.1	-11.0	-10.1	-7.5	-7.1	-12.0	-10.9	-8.0	-7.6
	$E_{disp}$	-7.1	-7.5	-7.2	-6.9	-8.1	-8.6	-8.0	-7.6	-7.2	-7.0	-6.6	-6.1	-7.2	-6.9	-6.6	-6.1
	$E_{corr}$	-4.7	-4.6	-3.9	-3.5	-4.7	-4.7	-3.8	-3.5	-3.9	-3.9	-3.6	-3.3	-3.9	-3.9	-3.6	-3.1
	$E_{tot}$	-15.3	-15.1	-13.7	-13.0	-15.9	-15.8	-14.1	-13.4	-16.5	-15.5	-12.9	-12.2	-16.9	-15.8	-13.3	-12.4
$E^{CP2}$	$E_{es}$		-31.8	-29.2	-23.6		-31.5	-24.6	-23.2		-31.3	-24.0	-23.7		-32.5	-30.0	-23.7
	$E_{ex}$		-68.7	-61.2	-49.1		-70.4	-52.8	-49.6		-62.8	-49.4	-47.5		-65.5	-60.2	-48.1
	$E_{rep}$		115.1	102.2	81.7		117.5	87.2	82.3		105.0	82.3	79.0		109.6	100.9	80.5
	$E_{pol}$		-20.6	-18.4	-14.1		-20.6	-15.1	-14.0		-20.2	-14.8	-14.6		-21.7	-19.8	-15.0
	$E_{disp}$		-15.0	-14.6	-13.7		-17.2	-15.5	-15.2		-13.9	-13.0	-12.0		-13.9	-13.3	-12.2
	$E_{corr}$		-9.2	-8.3	-7.1		-9.4	-7.6	-7.1		-7.9	-7.1	-6.5		-7.9	-7.5	-6.3
	$E_{tot}$		-30.2	-29.6	-25.9		-31.7	-28.3	-26.8		-31.1	-26.0	-25.4		-31.7	-29.8	-24.8
$E^{CP3}$	$E_{es}$			-42.1	-36.7			-41.3	-36.0			-41.0	-35.6			-42.8	-36.9
	$E_{ex}$			-87.4	-74.7			-88.7	-75.4			-82.0	-71.0			-85.9	-73.4
	$E_{rep}$			145.5	123.8			147.2	124.6			136.9	118.3			143.3	122.3
	$E_{pol}$			-26.0	-21.9			-25.8	-21.6			-25.4	-21.7			-27.8	-23.1
	$E_{disp}$			-21.4	-20.4			-24.1	-22.6			-19.7	-18.1			-19.5	-18.0
	$E_{corr}$			-12.1	-10.6			-12.2	-10.6			-11.0	-9.8			-10.7	-9.4
	$E_{tot}$			-43.5	-40.4			-44.9	-41.5			-42.2	-38.0			-43.3	-38.6
$E^{CP4}$	$E_{es}$				-49.9				-48.9				-48.5				-50.3
	$E_{ex}$				-			-					-95.6				-98.8
	$E_{rep}$				100.3				101.2								
	$E_{pol}$				166.1				167.1				159.0				164.3
	$E_{disp}$				-29.5				-29.2				-29.2				-31.2
	$E_{corr}$				-27.0				-29.9				-24.0				-23.9
	$E_{tot}$				-14.2				-14.2				-13.2				-12.6
				-54.8				-56.3				-51.5				-52.4	

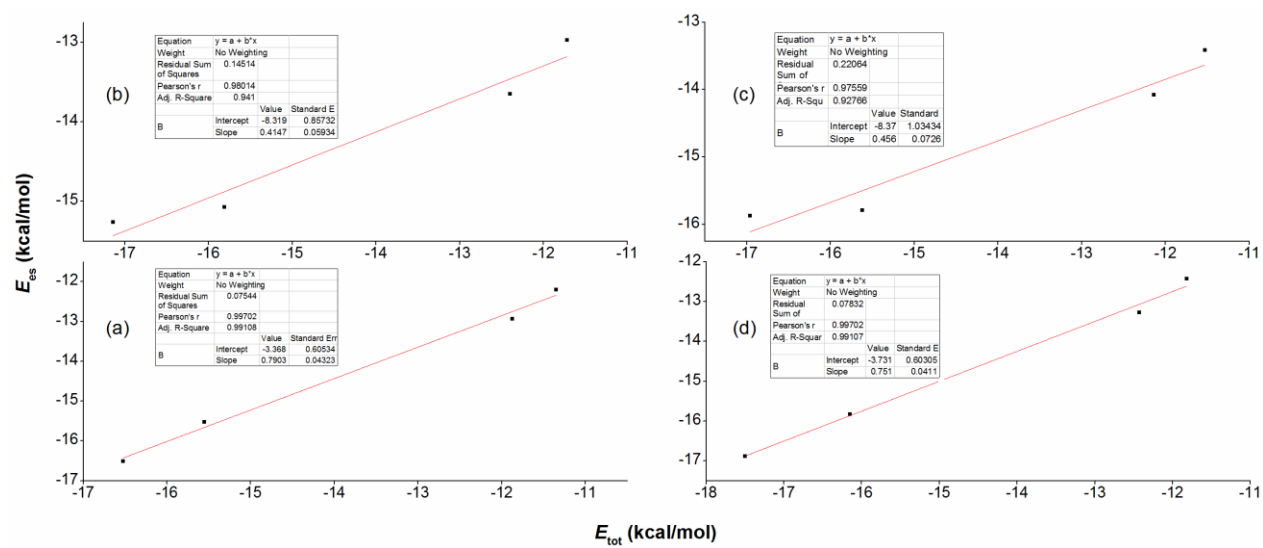


## 7. Figure 3S



**Figure 3S.** Trends of interaction energies (a, b, c) and the relationships between the  $E_{es}$  and  $E_{tot}$  (a', b', c').

## 8. Figure 4S



**Figure 4S.** The relationships between the  $E_{es}$  and  $E_{tot}$  (a) I...( $S_2$ )<sub>x</sub>, (b) II...( $S_1$ )<sub>x</sub>, (c) II...( $S_2$ )<sub>x</sub> and (d) III...( $S_2$ )<sub>x</sub> for the  $E^{CP1}$  of clusters.

## 9. Table 5S

**Table 5S.** Molecular Orbitals and their main consist of natural atomic orbital and the characters.

	HOMO (%)	d (%)	LUMO (%)	p (%)
I	77.23	45.29	35.71	35.34
II	74.71	42.78	26.25	26.03
III	69.50	42.74	34.30	34.10
I-S1	74.32	41.19	39.84	39.51
I-(S1)2	75.24	43.13	41.21	40.77
I-(S1)3	75.48	43.31	39.41	38.63
I-(S1)4	76.02	45.16	38.39	37.86
I-S2	75.44	42.33	39.94	38.30
I-(S2)2	75.21	42.42	41.14	40.68
I-(S2)3	75.54	43.64	39.45	38.46
I-(S2)4	76.05	45.14	38.45	37.92
II-S1	65.22	35.63	27.87	26.75
II-(S1)2	60.31	34.28	29.47	29.61
II-(S1)3	64.86	37.84	27.87	26.14
II-(S1)4	70.06	41.03	26.34	25.99
II-S2	65.05	34.85	27.93	24.02
II-(S2)2	59.99	34.61	29.41	29.03
II-(S2)3	65.38	37.80	27.82	27.43
II-(S2)4	70.12	41.63	26.31	25.96
III-S1	67.71	39.66	39.58	39.34
III-(S1)2	68.44	41.19	41.28	40.94
III-(S1)3	68.44	41.72	39.38	38.95
III-(S1)4	68.68	43.02	37.89	37.51
III-S2	67.97	40.20	39.69	39.24
III-(S2)2	68.47	41.17	41.24	40.91
III-(S2)3	68.44	41.69	39.43	39.17
III-(S2)4	68.62	43.07	38.41	38.11

## 10. Table 6S

**Table 6S.** Calculated phosphorescent emission (in nm) of the studied complexes with the TDDFT method, along with experimental values.

Complex	$\lambda$	E(eV)	Configuration		Character	Exp	
I	457	2.72	HOMO-LUMO	98%	MLCT	448	9*
II	483	2.57	HOMO-LUMO	97%	MLCT	465	18*
III	417	2.98	HOMO-LUMO	97%	MLCT	446	-29*
I-S1	450	2.76	HOMO-LUMO	98%	MLCT		-7
I-(S1)2	418.84	2.96	HOMO-LUMO	98%	MLCT		-38
I-(S1)3	417.98	2.97	HOMO-LUMO	98%	MLCT		-39
I-(S1)4	412.24	3.01	HOMO-LUMO	98%	MLCT		-45
I-S2	449.15	2.76	HOMO-LUMO	98%	MLCT		-8
I-(S2)2	420.38	2.95	HOMO-LUMO	98%	MLCT		-37
I-(S2)3	417.53	2.97	HOMO-LUMO	98%	MLCT		-39
I-(S2)4	412.2	3.01	HOMO-LUMO	98%	MLCT		-45
II-S1	478.46	2.59	HOMO-LUMO	97%	MLCT		-5
II-(S1)2	437.33	2.84	HOMO-LUMO	96%	MLCT		-46
II-(S1)3	439.21	2.82	HOMO-LUMO	96%	MLCT		-44
II-(S1)4	442.89	2.80	HOMO-LUMO	96%	MLCT		-40
II-S2	475.86	2.61	HOMO-LUMO	97%	MLCT		-7
II-(S2)2	436.66	2.84	HOMO-LUMO	96%	MLCT		-46
II-(S2)3	439.54	2.82	HOMO-LUMO	96%	MLCT		-43
II-(S2)4	443.04	2.80	HOMO-LUMO	96%	MLCT		-40
III-S1	408.98	3.03	HOMO-LUMO	97%	MLCT		-8
III-(S1)2	382.75	3.24	HOMO-LUMO	97%	MLCT		-34
III-(S1)3	379.18	3.27	HOMO-LUMO	97%	MLCT		-38
III-(S1)4	371.23	3.34	HOMO-LUMO	97%	MLCT		-46
III-S2	408.44	3.04	HOMO-LUMO	97%	MLCT		-9
III-(S2)2	383.08	3.24	HOMO-LUMO	97%	MLCT		-34
III-(S2)3	378.45	3.28	HOMO-LUMO	97%	MLCT		-39
III-(S2)4	371.68	3.34	HOMO-LUMO	97%	MLCT		-45

$$\delta^* = \lambda_{[X]}^{cal} - \lambda_{[X]}^{exp}$$

$$\delta = \lambda_{[X... (S)_n]}^{cal} - \lambda_{[X]}^{cal}$$

## 11. Figure 5S

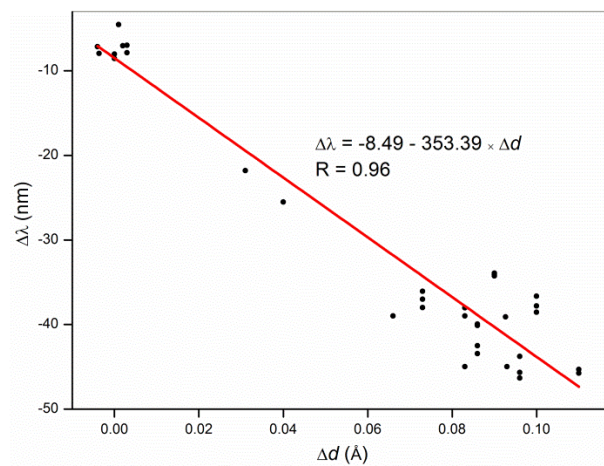


Figure 5S. The relationship between  $\Delta d$  and  $\Delta\lambda$  for complexes  $X \cdots (S)_x$  in T1 states.

12. Figure 6S

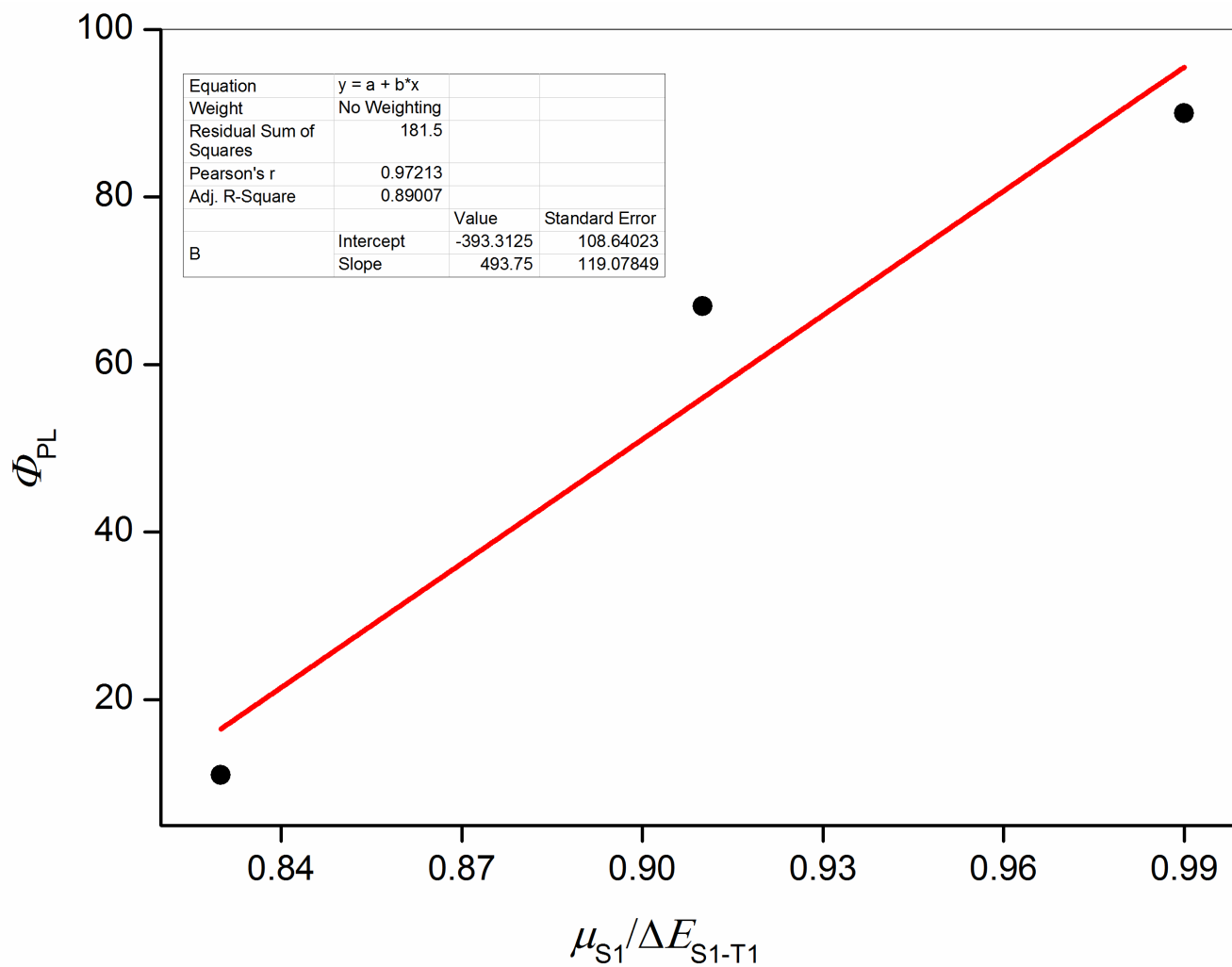


Figure 6S. The relationship between  $\mu_{S1}/\Delta E_{S1-T1}$  values in theory and the  $\Phi_{PL}$  values in experiment.



## 13. Table 7S

**Table 7S.** The singlet-triplet splitting energy ( $\Delta E_{S1-T1}$ , in eV), transition electric dipole moment ( $\mu_{S1}$ , in atomic units), the  $\mu_{S1}/\Delta E_{S1-T1}$ , and the predicted  $\Phi_{PL}$  (> 50%) for complexes  $X \cdots (S)_x$ .

<b>complex</b>	$\Delta E_{S1-T1}$	$\mu_{S1}$	$\mu_{S1}/\Delta E_{S1-T1}$	$\Phi_{PL}(\%)$
I-S1	2.85	2.81	0.99	94.6
II-S1	2.73	2.53	0.92	63.0
II-2S1	3.01	2.82	0.94	69.2
II-3S1	3.00	2.77	0.92	62.9
I-4S1	2.96	2.77	0.94	68.4
II-4S1	2.97	2.72	0.92	59.1
I-S2	2.85	2.80	0.98	92.5
II-3S2	3.00	2.74	0.91	58.2
I-4S2	2.96	2.73	0.92	61.7
II-4S2	2.97	2.68	0.90	52.7
I-S3	2.95	2.79	0.94	73.2
II-S3	2.83	2.68	0.95	74.9
I-2S3	3.12	2.83	0.91	55.1
II-2S3	2.96	2.72	0.92	59.5

## 14. Table 8S

**Table 9S.** The  $E^{\text{CP}}$  of cluster **I** at different calculated levels (kcal/mol).

Mode	MP2			PBE0-D3		PBE0		M06-2X	
	BS1	BS3	BS4	BS3	BS4	BS3	BS4	BS3	BS4
$E^{\text{CP}}_{\text{add}}$	-22.5	-29.2	-30.7	-29.0	-29.0	-19.8	-19.8	-24.3	-24.3
$E^{\text{CP}}_{\text{tot}}$	-88.8	-102.3	-105.1	-102.5	-102.6	-85.9	-85.9	-94.9	-97.1

The binding energies with BSSE corrections of cluster **I** at different calculated levels show that the  $E^{\text{CP}}$  of the PBE0-D3/BS3 and PBE0-D3/BS4 are identical to each other, and they both close to the MP2/BS4 results and the PBE0-D3/BS3 are more financial than PBE0-D3/BS4 in time.

## 15. Table 9S

**Table 10S.** The EDA results of cluster I at different calculated levels (kcal/mol).

		$E_{es}$	$E_{ex}$	$E_{rep}$	$E_{pol}$	$E_{disp}$	$E_{corr}$	$E_{tot}$	$E^{CPa}$
$E_{add}^{CP}$	MP2/BS5 <sup>b</sup>	-23.44	-39.6	64.73	-12.97	-15.34		-26.62	
	MP2/BS6 <sup>b</sup>	-23.01	-39.09	64.16	-13.21	-18.1		-29.25	
	B3LYP-D3/BS5 <sup>c</sup>	-23.29	-46.03	74.84	-15.55	-13.99	-5.56	-29.57	-30.65
	B3LYP-D3/BS6 <sup>c</sup>	-22.87	-45.38	74.1	-15.78	-13.99	-5.46	-29.38	
$E_{tot}^{CP}$	MP2/BS5 <sup>b</sup>	-95.48	-85.14	137.53	-25.19	-28.66		-96.94	
	MP2/BS6 <sup>b</sup>	-95.11	-84.03	136.16	-25.34	-33.97		-102.29	
	B3LYP-D3/BS5 <sup>c</sup>	-95.76	-99.47	159.8	-29.87	-26.23	-12.48	-104.0	-105.10
	B3LYP-D3/BS6 <sup>c</sup>	-95.23	-97.97	157.93	-30.19	-26.23	-12.01	-103.69	

<sup>a</sup> Calculated at the MP2/BS4 with gaussian; <sup>b</sup>LMO-EDA; <sup>c</sup>GKS-EDA.

The LMO-EDA and GKS-EDA results at four calculated levels MP2/BS5, MP2/BS6, B3LYP-D3/BS5 and B3LYP-D3/BS6 show that the GKS-EDA total interaction energies ( $E_{tot}$ ) at B3LYP-D3/BS5 and B3LYP-D3/BS6 levels are very close and they are also consistent with those in MP2/BS6 level with LMO-EDA scheme as well as the  $E^{CP}$  at MP2/BS4 level.

## 16. The S<sub>0</sub> .xyz files of I and its complexes

I

```

Au  3.113900 -0.000000 -0.000500
N   2.946500 -2.991000  0.564400
N   3.179300 -2.639800 -1.539700
C   3.107900 -2.006500 -0.348500
C   3.061100 -4.001000 -1.377600
H   3.091700 -4.686000 -2.210800
C   2.919100 -4.224100 -0.046300
H   2.814900 -5.142700  0.510300
C   2.834600 -2.769300  1.996300
H   2.125200 -1.961300  2.190100
H   2.469800 -3.684600  2.465600
C   3.270400 -1.969200 -2.826900
H   3.912100 -1.092700 -2.723200
H   3.715100 -2.654200 -3.551400
H   3.809700 -2.513200  2.419300
H   2.277500 -1.655900 -3.163300
N   2.946000  2.990900 -0.565200
N   3.180300  2.639700  1.538700
C   3.108100  2.006400  0.347500
C   3.061800  4.000800  1.376800
H   3.092800  4.685800  2.210000
C   2.918800  4.224000  0.045600
H   2.814000  5.142600 -0.510900
C   2.833200  2.769200 -1.997000
H   2.122700  1.962100 -2.190400
H   2.469400  3.684900 -2.466200
C   3.272600  1.969000  2.825900
H   3.915000  1.093100  2.721700
H   3.717100  2.654300  3.550100
H   3.807700  2.511800 -2.420300
H   2.280100  1.654900  3.162800
N   -0.006900  0.384600  3.142500
C   -0.003100  0.237500  1.982300
N   -0.010000 -0.385700 -3.141400
C   -0.004800 -0.238000 -1.981300
Au  -0.002300 -0.000100  0.000500
Au  -3.116700  0.000200  0.000200
N   -3.114300 -2.574500  1.639600
N   -3.003100 -3.012300 -0.458200
C   -3.107600 -1.991200  0.421000
C   -2.944400 -4.219400  0.199900
H   -2.872300 -5.160100 -0.323800
C   -3.012800 -3.942100  1.527200
H   -3.008000 -4.593500  2.387500
C   -3.160200 -1.843800  2.896600
H   -2.221300 -1.306700  3.058600
H   -3.988800 -1.133200  2.874000
C   -2.938500 -2.844500 -1.901400
H   -3.857200 -2.377100 -2.263200
H   -2.079800 -2.223800 -2.170700
H   -3.322300 -2.554300  3.708800
H   -2.833300 -3.827800 -2.362700
N   -3.115200  2.574600 -1.639300
N   -3.001300  3.012800  0.458300

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C   -3.107100  1.991600 -0.420600
C   -2.943300  4.219700 -0.200100
H   -2.870400  5.160500  0.323400
C   -3.013400  3.942300 -1.527300
H   -3.009400  4.593500 -2.387700
C   -3.162400  1.843600 -2.896200
H   -2.224100  1.305700 -3.058500
H   -3.991700  1.133900 -2.872900
C   -2.935800  2.845200  1.901500
H   -3.857400  2.384800  2.265100
H   -2.081200  2.218400  2.169600
H   -3.324300  2.554200 -3.708400
H   -2.822500  3.827900  2.362000

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I...S1

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Au  3.521600 -0.131500 -0.027800
N   3.445700 -2.960900  1.122000
N   3.338300 -3.024400 -1.018200
C   3.440100 -2.170500  0.023200
C   3.263000 -4.325200 -0.581300
H   3.143600 -5.154300 -1.261000
C   3.339300 -4.287800  0.771300
H   3.323600 -5.079900  1.504000
C   3.558900 -2.491700  2.488500
H   3.417200 -1.410200  2.496900
H   2.783700 -2.957000  3.102400
C   3.191600 -2.637200 -2.408100
H   3.453300 -1.582500 -2.503900
H   3.865600 -3.233500 -3.028200
H   4.544300 -2.734800  2.897100
H   2.153900 -2.792000 -2.715000
N   2.977400  2.766200 -0.852400
N   4.335400  2.695200  0.803800
C   3.630100  1.906700 -0.040600
C   4.114900  4.026800  0.531000
H   4.576700  4.817000  1.102900
C   3.255000  4.070000 -0.516100
H   2.803100  4.899600 -1.036100
C   2.113900  2.391900 -1.956700
H   1.687600  1.408100 -1.753200
H   1.312500  3.130400 -2.024900
C   5.171500  2.221300  1.889100
H   5.344300  1.152900  1.752800
H   6.130800  2.744600  1.870300
H   2.683600  2.363400 -2.890600
H   4.680300  2.392100  2.851400
N   -0.002500  2.533800  1.086100
C   -0.001300  1.400900  0.802100
N   0.002900 -3.314400 -1.265400
C   0.002100 -2.281200 -0.718900
Au  0.000600 -0.467700  0.107800
Au  -3.521500 -0.135500 -0.027600
N   -3.439200 -2.963200  1.125800
N   -3.333200 -3.029300 -1.014400
C   -3.435900 -2.174300  0.025900
C   -3.255100 -4.329400 -0.575900

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H	-3.134500	-5.159200	-1.254500
C	-3.330500	-4.290400	0.776700
H	-3.312800	-5.081500	1.510500
C	-3.552300	-2.492400	2.491700
H	-3.412000	-1.410700	2.498700
H	-4.537000	-2.736400	2.901300
C	-3.188500	-2.643800	-2.405000
H	-3.451700	-1.589500	-2.501800
H	-2.150800	-2.797500	-2.712700
H	-2.776100	-2.955900	3.105800
H	-3.862300	-3.241800	-3.023600
N	-2.981600	2.762200	-0.854800
N	-4.341800	2.690600	0.799500
C	-3.633900	1.902500	-0.043000
C	-4.123400	4.022400	0.525500
H	-4.587500	4.812300	1.095700
C	-3.262100	4.065900	-0.520500
H	-2.811200	4.895700	-1.041000
C	-2.115900	2.388100	-1.957500
H	-1.688400	1.405200	-1.752500
H	-2.684100	2.357900	-2.892300
C	-5.178800	2.216600	1.884100
H	-5.347800	1.147300	1.749800
H	-4.690200	2.391000	2.847100
H	-1.315500	3.127800	-2.025100
H	-6.139800	2.736700	1.862000
O	-0.003300	4.675200	-0.759600
H	-0.003300	4.017000	-0.030200
C	-0.005500	5.960600	-0.182300
H	0.882800	6.139900	0.441300
H	-0.005700	6.692600	-0.995800
H	-0.895500	6.137600	0.439700

## I...2S1

Au	-3.455700	-0.000900	0.000100
N	-3.009100	2.942600	0.723300
N	-3.982500	2.769100	-1.178600
C	-3.487900	2.035100	-0.155000
C	-3.804400	4.114300	-0.947900
H	-4.118400	4.867300	-1.654200
C	-3.188000	4.222200	0.254600
H	-2.849000	5.083800	0.807700
C	-2.372000	2.639100	1.991800
H	-1.993800	1.616000	1.958500
H	-1.540500	3.334000	2.132800
C	-4.571900	2.227900	-2.387500
H	-4.724700	1.156800	-2.248400
H	-5.535700	2.707400	-2.577100
H	-3.090400	2.738900	2.811200
H	-3.905900	2.392400	-3.239300
N	-3.006800	-2.944100	-0.723300
N	-3.979800	-2.771300	1.178900
C	-3.486000	-2.036900	0.155200
C	-3.800800	-4.116300	0.948200
H	-4.114100	-4.869600	1.654600
C	-3.184600	-4.223900	-0.254500
H	-2.845300	-5.085200	-0.807700
C	-2.370300	-2.640200	-1.991900

H	-1.993500	-1.616600	-1.959100
H	-1.537800	-3.334000	-2.132700
C	-4.569000	-2.230500	2.388100
H	-4.723900	-1.159800	2.248500
H	-5.531700	-2.711700	2.578900
H	-3.088600	-2.741400	-2.811300
H	-3.901900	-2.393200	3.239300
N	0.001600	-3.006900	0.967200
C	0.001000	-1.880300	0.658500
N	-0.001600	3.006600	-0.967300
C	-0.001000	1.880000	-0.658700
Au	0.000000	-0.000200	-0.000200
Au	3.455700	0.001000	0.000200
N	3.006400	2.944100	0.723600
N	3.981100	2.771600	-1.177800
C	3.486400	2.037000	-0.154600
C	3.801800	4.116600	-0.947000
H	4.115700	4.869900	-1.653000
C	3.184600	4.223900	0.255200
H	2.844700	5.085100	0.808200
C	2.369100	2.640000	1.991800
H	1.991300	1.616700	1.958200
H	3.087100	2.740000	2.811500
C	4.571200	2.230900	-2.386600
H	4.726600	1.160300	-2.246800
H	3.904600	2.393300	-3.238200
H	1.537200	3.334400	2.132700
H	5.533900	2.712500	-2.576800
N	3.009000	-2.942300	-0.723900
N	3.981700	-2.769400	1.178500
C	3.487500	-2.035000	0.154900
C	3.803700	-4.114500	0.947400
H	4.117400	-4.867700	1.653600
C	3.187700	-4.222100	-0.255400
H	2.848900	-5.083500	-0.808800
C	2.372300	-2.638600	-1.992500
H	1.995000	-1.615100	-1.959400
H	3.090700	-2.739100	-2.811800
C	4.570700	-2.228500	2.387800
H	4.722300	-1.157100	2.249400
H	3.905000	-2.394300	3.239500
H	1.540300	-3.332800	-2.133400
H	5.535100	-2.707100	2.576800
O	0.001900	-4.907600	-1.136500
H	0.001900	-4.364200	-0.320000
C	0.002000	-6.266800	-0.767700
H	-0.885900	-6.543900	-0.179400
H	0.001700	-6.860900	-1.686100
H	0.890100	-6.543900	-0.179900
O	-0.002100	4.908200	1.135600
H	-0.002100	4.364200	0.319500
C	-0.002200	6.267100	0.765800
H	-0.001700	6.861800	1.683800
H	0.885500	6.543700	0.177100
H	-0.890500	6.543800	0.178100

## I-3S1

Au	-3.331000	0.312000	0.043900
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N	-3.419300	-2.620700	-0.840300	C	2.303900	2.476100	2.101400
N	-3.562100	-2.468200	1.295100	H	1.765000	1.546000	1.912100
C	-3.442400	-1.724400	0.172300	H	2.922300	2.367000	2.997600
C	-3.604800	-3.808500	0.991200	C	5.044500	2.060000	-1.959000
H	-3.698100	-4.568300	1.751800	H	5.091000	0.974700	-1.860100
C	-3.515500	-3.904400	-0.358300	H	4.512800	2.319700	-2.878900
H	-3.517300	-4.764800	-1.009700	H	1.591200	3.293600	2.232400
C	-3.205000	-2.308200	-2.241700	H	6.060600	2.460800	-1.997100
H	-3.072900	-1.229700	-2.337600	O	0.366600	5.095000	1.252200
H	-2.300600	-2.816700	-2.590900	H	0.357600	4.615800	0.395500
C	-3.524800	-1.956100	2.653800	C	0.493700	6.473700	0.988400
H	-3.625200	-0.870400	2.615900	H	-0.343600	6.866200	0.392200
H	-4.356600	-2.373100	3.227600	H	1.425700	6.714800	0.455900
H	-4.068100	-2.623900	-2.834800	H	0.503500	6.997100	1.948800
H	-2.569900	-2.228800	3.115300	O	-0.132100	-4.183600	-2.403200
N	-2.697500	3.213800	0.777900	H	-0.163300	-3.853800	-1.485300
N	-3.800000	3.127200	-1.057900	C	-0.362400	-5.571800	-2.390900
C	-3.281000	2.349100	-0.080100	H	0.398300	-6.123300	-1.817000
C	-3.533900	4.456600	-0.819600	H	-1.348300	-5.834200	-1.977500
H	-3.849300	5.238000	-1.493700	H	-0.326600	-5.921700	-3.426000
C	-2.835700	4.509600	0.341400	C	-0.415100	-4.705900	3.284700
H	-2.409200	5.339800	0.881700	O	-0.367100	-3.331700	2.984100
C	-2.011000	2.850000	2.003700	H	0.473100	-5.248600	2.925500
H	-1.605500	1.842600	1.893700	H	-1.303600	-5.200300	2.863100
H	-1.195200	3.559500	2.161100	H	-0.345200	-3.234900	2.012200
C	-4.490800	2.640100	-2.235700	H	-0.454500	-4.805800	4.372800
H	-4.735700	1.588000	-2.083900				
H	-5.414500	3.205700	-2.382400				
H	-2.703400	2.877100	2.850700				
H	-3.853700	2.742500	-3.118800				
N	0.296300	3.374100	-0.985500	I-4S1			
C	0.195600	2.215800	-0.878900	Au	-3.251900	0.000000	0.000000
N	-0.243700	-2.811600	1.484400	N	-3.281600	2.868300	1.072700
C	-0.144800	-1.674900	-0.110400	N	-3.281600	2.868300	-1.072700
Au	0.024600	0.262300	-0.528900	C	-3.279600	2.044200	0.000000
Au	3.341100	-0.149700	0.079700	C	-3.277300	4.185000	-0.677800
N	2.956700	-2.985300	-1.006400	H	-3.277100	4.998300	-1.387100
N	3.051500	-3.006500	1.136800	C	-3.277300	4.185000	0.677800
C	3.101700	-2.178400	0.069000	H	-3.277100	4.998300	1.387100
C	2.869800	-4.309300	0.736000	C	-3.183900	2.452200	2.460400
H	2.799300	-5.123700	1.440500	H	-3.248000	1.364200	2.498400
C	2.810800	-4.295600	-0.618700	H	-2.223400	2.780700	2.871500
H	2.677300	-5.093000	-1.333000	C	-3.183900	2.452200	-2.460400
C	2.880300	-2.550400	-2.389500	H	-3.248000	1.364200	-2.498400
H	2.811500	-1.461700	-2.406500	H	-4.009000	2.880900	-3.035800
H	3.772000	-2.868900	-2.937700	H	-4.009000	2.880900	3.035800
C	3.048800	-2.586600	2.527100	H	-2.223400	2.780700	-2.871500
H	3.361900	-1.542500	2.572600	N	-3.281600	-2.868300	-1.072700
H	2.039700	-2.690900	2.940400	N	-3.281600	-2.868300	1.072700
H	1.982900	-2.981700	-2.842000	C	-3.279600	-2.044200	0.000000
H	3.754800	-3.196800	3.096600	C	-3.277300	-4.185000	0.677800
N	3.133100	2.778300	0.949400	H	-3.277100	-4.998300	1.387100
N	4.348200	2.598100	-0.806800	C	-3.277300	-4.185000	-0.677800
C	3.634700	1.870900	0.083800	H	-3.277100	-4.998300	-1.387100
C	4.282500	3.940400	-0.508300	C	-3.183900	-2.452200	-2.460400
H	4.773200	4.689900	-1.110000	H	-3.248000	-1.364200	-2.498400
C	3.512900	4.052800	0.602100	H	-2.223400	-2.780700	-2.871500
H	3.186600	4.915600	1.161000	C	-3.183900	-2.452200	2.460400
				H	-3.248000	-1.364200	2.498400
				H	-4.009000	-2.880900	3.035800

H	-4.009000	-2.880900	-3.035800	H	0.889600	-5.735700	2.707700
H	-2.223400	-2.780700	2.871500	H	-0.889600	-5.735700	2.707700
N	0.000000	-3.160200	0.000000	H	0.000000	-3.724900	1.864700
C	0.000000	-1.990000	0.000000	H	0.000000	-5.345700	4.194300
N	0.000000	3.160200	0.000000				
C	0.000000	1.990000	0.000000	I-S2			
Au	0.000000	0.000000	0.000000				
Au	3.251900	0.000000	0.000000	N	-0.000200	-3.317400	-1.472900
N	3.281600	2.868300	1.072700	C	-0.000100	-2.314700	-0.872100
N	3.281600	2.868300	-1.072700	N	0.000100	2.392700	1.198700
C	3.279600	2.044200	0.000000	C	0.000000	1.276800	0.852900
C	3.277300	4.185000	-0.677800	Au	-0.000100	-0.550600	0.055900
H	3.277100	4.998300	-1.387100	Au	3.486600	-0.257000	0.009600
C	3.277300	4.185000	0.677800	N	2.988800	2.671300	-0.736400
H	3.277100	4.998300	1.387100	N	4.296700	2.533800	0.955700
C	3.183900	2.452200	2.460400	C	3.609300	1.779900	0.066100
H	3.248000	1.364200	2.498400	C	4.097400	3.875600	0.719200
H	4.009000	2.880900	3.035800	C	3.269100	3.960700	-0.350500
C	3.183900	2.452200	-2.460400	C	2.148400	2.341500	-1.872600
H	3.248000	1.364200	-2.498400	C	5.094000	2.017100	2.050600
H	2.223400	2.780700	-2.871500	N	3.357600	-3.122500	1.063000
H	2.223400	2.780700	2.871500	N	3.333900	-3.116200	-1.080700
H	4.009000	2.880900	-3.035800	C	3.397000	-2.296900	-0.009000
N	3.281600	-2.868300	-1.072700	C	3.238000	-4.430100	-0.689600
N	3.281600	-2.868300	1.072700	C	3.261000	-4.436900	0.665500
C	3.279600	-2.044200	0.000000	C	3.410600	-2.697700	2.447400
C	3.277300	-4.185000	0.677800	C	3.245700	-2.683500	-2.462300
H	3.277100	-4.998300	1.387100	H	4.549600	4.642400	1.329200
C	3.277300	-4.185000	-0.677800	H	2.843600	4.811700	-0.858000
H	3.277100	-4.998300	-1.387100	H	1.722000	1.348800	-1.718900
C	3.183900	-2.452200	-2.460400	H	1.345500	3.079800	-1.924900
H	3.248000	-1.364200	-2.498400	H	2.736500	2.353400	-2.795400
H	4.009000	-2.880900	-3.035800	H	5.254900	0.950400	1.888700
C	3.183900	-2.452200	2.460400	H	6.060900	2.525900	2.074800
H	3.248000	-1.364200	2.498400	H	4.576700	2.167900	3.002600
H	2.223400	-2.780700	2.871500	H	3.146000	-5.236600	-1.400200
H	2.223400	-2.780700	-2.871500	H	3.215700	-5.252400	1.370900
H	4.009000	-2.880900	3.035800	H	3.326000	-1.610700	2.479200
O	0.000000	-3.844500	-2.832900	H	2.576100	-3.136300	3.000600
H	0.000000	-3.724900	-1.864700	H	4.355300	-3.004400	2.906000
C	0.000000	-5.225600	-3.107800	H	3.514900	-1.627600	-2.512200
H	-0.889600	-5.735700	-2.707700	H	3.942500	-3.262600	-3.073400
H	0.889600	-5.735700	-2.707700	H	2.220800	-2.822400	-2.816500
H	0.000000	-5.345700	-4.194300	Au	-3.486600	-0.256700	0.009600
O	0.000000	3.844500	2.832900	N	-2.988600	2.671500	-0.736200
H	0.000000	3.724900	1.864700	N	-4.296400	2.534100	0.955900
C	0.000000	5.225600	3.107800	C	-3.609100	1.780200	0.066200
H	0.889600	5.735700	2.707700	C	-4.096900	3.875900	0.719500
H	-0.889600	5.735700	2.707700	C	-3.268700	3.960900	-0.350300
H	0.000000	5.345700	4.194300	C	-2.148300	2.341800	-1.872600
C	0.000000	5.225600	-3.107800	C	-5.093600	2.017400	2.050800
O	0.000000	3.844500	-2.832900	N	-3.357900	-3.122300	1.062900
H	0.889600	5.735700	-2.707700	N	-3.334200	-3.115900	-1.080900
H	-0.889600	5.735700	-2.707700	C	-3.397300	-2.296700	-0.009100
H	0.000000	3.724900	-1.864700	C	-3.238400	-4.429900	-0.689800
H	0.000000	5.345700	-4.194300	C	-3.261500	-4.436800	0.665300
C	0.000000	-5.225600	3.107800	C	-3.410900	-2.697600	2.447200
O	0.000000	-3.844500	2.832900	C	-3.245900	-2.683100	-2.462400

H	-4.549000	4.642700	1.329500
H	-2.843200	4.812000	-0.857700
H	-1.721900	1.348900	-1.718900
H	-2.736400	2.353700	-2.795300
H	-1.345300	3.079900	-1.924900
H	-5.254700	0.950700	1.888800
H	-4.576300	2.168100	3.002800
H	-6.060500	2.526400	2.075100
H	-3.146500	-5.236300	-1.400500
H	-3.216200	-5.252200	1.370600
H	-3.326200	-1.610600	2.479100
H	-4.355600	-3.004200	2.905900
H	-2.576400	-3.136200	3.000400
H	-3.515100	-1.627200	-2.512300
H	-2.221100	-2.822000	-2.816600
H	-3.942700	-3.262100	-3.073600
C	0.000300	5.851200	-0.052700
C	0.000400	6.883900	-1.159300
O	0.000200	4.561200	-0.632700
H	0.884200	5.988400	0.590400
H	-0.883600	5.988600	0.590400
H	-0.884100	6.772100	-1.796300
H	0.000500	7.897600	-0.746000
H	0.884800	6.771900	-1.796300
H	0.000200	3.898400	0.092400

## I-2S2

Au	3.446300	0.206800	-0.001700
N	2.813200	3.161200	-0.513900
N	3.793700	2.912200	1.375900
C	3.347700	2.224400	0.299200
C	3.531400	4.256600	1.241700
C	2.910500	4.412200	0.046800
C	2.196000	2.910000	-1.803400
C	4.413700	2.323300	2.546600
N	3.183400	-2.800800	0.513600
N	4.153400	-2.437200	-1.363000
C	3.608100	-1.807200	-0.296800
C	4.059900	-3.803600	-1.225500
C	3.445500	-4.031700	-0.038800
C	2.523900	-2.624600	1.794600
C	4.714800	-1.778900	-2.526300
H	3.795400	4.974800	2.002600
H	2.516800	5.288100	-0.443800
H	1.863100	1.871200	-1.836400
H	1.334700	3.574600	-1.906000
H	2.912200	3.092500	-2.610400
H	4.627600	1.274900	2.334300
H	5.348500	2.842900	2.772600
H	3.739400	2.390000	3.405000
H	4.424300	-4.485600	-1.978200
H	3.159200	-4.948600	0.451400
H	2.063600	-1.635500	1.819300
H	1.750800	-3.391000	1.890000
H	3.247900	-2.713800	2.610400
H	4.798700	-0.712200	-2.313600
H	5.708300	-2.182800	-2.737600

H	4.066100	-1.926400	-3.394300
Au	-3.445900	-0.206500	0.001500
N	-3.183600	2.801200	-0.513900
N	-4.153300	2.437500	1.362800
C	-3.607900	1.807600	0.296600
C	-4.060100	3.803900	1.225300
C	-3.445800	4.032000	0.038500
C	-2.524100	2.625200	-1.794900
C	-4.714400	1.779000	2.526200
N	-2.813400	-3.161000	0.514000
N	-3.793300	-2.911800	-1.376100
C	-3.347400	-2.224100	-0.299300
C	-3.531200	-4.256300	-1.241900
C	-2.910700	-4.412000	-0.046700
C	-2.196500	-2.909900	1.803700
C	-4.412600	-2.322800	-2.547000
H	-4.424500	4.485900	1.978000
H	-3.159800	4.949000	-0.451700
H	-2.064100	1.635800	-1.819900
H	-3.247900	2.714900	-2.610700
H	-1.750600	3.391300	-1.890000
H	-4.798400	0.712400	2.313400
H	-4.065400	1.926500	3.394000
H	-5.707800	2.183000	2.737800
H	-3.795100	-4.974400	-2.002900
H	-2.517400	-5.288000	0.444000
H	-1.863800	-1.871100	1.837000
H	-2.912800	-3.092700	2.610400
H	-1.335100	-3.574400	1.906300
H	-4.627400	-1.274600	-2.334500
H	-3.737500	-2.388700	-3.404900
H	-5.346900	-2.842900	-2.774100
N	0.179700	-2.927400	-1.175100
C	0.112400	-1.827400	-0.787800
Au	-0.000100	-0.000600	-0.000300
N	-0.179700	2.926200	1.174800
C	-0.112500	1.826200	0.787300
C	0.493600	-7.227200	1.531900
C	0.395700	-6.308600	0.333200
O	0.305200	-4.973200	0.789700
H	0.562700	-8.273000	1.216100
H	1.378800	-6.988200	2.131200
H	-0.386000	-7.118200	2.175300
H	1.275900	-6.441400	-0.316400
H	-0.484200	-6.575500	-0.274600
H	0.265000	-4.376800	0.011700
C	-0.396300	6.308200	-0.330900
C	-0.495900	7.227800	-1.528700
O	-0.305800	4.973300	-0.788700
H	0.484100	6.574900	0.276200
H	-1.275900	6.440000	0.319700
H	-1.381700	6.989000	-2.127300
H	-0.565100	8.273400	-1.211900
H	0.383000	7.119800	-2.173300
H	-0.265300	4.376200	-0.011200

## I-3S2



Au	-0.334500	3.336000	-0.025200
N	-3.254700	2.795800	-0.780700
N	-3.045200	2.988700	1.345800
C	-2.341300	3.018000	0.191700
C	-4.375700	2.743400	1.100800
H	-5.104800	2.679500	1.893800
C	-4.507800	2.622400	-0.243100
H	-5.375600	2.433400	-0.856100
C	-2.963600	2.639200	-2.194200
H	-1.886300	2.735100	-2.336600
H	-3.285400	1.645200	-2.521200
C	-2.479800	3.075700	2.680700
H	-1.439300	3.392300	2.594300
H	-3.031700	3.814900	3.267500
H	-3.477800	3.411900	-2.773000
H	-2.534000	2.092300	3.159400
N	2.664600	3.313500	0.575000
N	2.271600	4.379700	-1.242200
C	1.661100	3.709500	-0.237600
C	3.636800	4.390700	-1.065400
H	4.306000	4.860900	-1.769400
C	3.883700	3.715000	0.083800
H	4.807100	3.465200	0.581700
C	2.503900	2.565300	1.808100
H	1.606100	1.949200	1.731200
H	3.379400	1.924100	1.934500
C	1.600700	4.960800	-2.388400
H	0.528500	4.982200	-2.188600
H	1.956500	5.982100	-2.545900
H	2.409800	3.247800	2.658300
H	1.792900	4.363100	-3.284000
N	3.370400	0.400800	-1.184600
C	2.221900	0.262000	-1.027100
N	-2.738800	-0.335000	0.222100
C	-1.618300	-0.199700	-0.085800
Au	0.292200	0.030100	-0.590300
Au	0.601900	-3.295000	0.036500
N	-2.299700	-3.514800	-0.910900
N	-2.201300	-3.577500	1.231300
C	-1.431000	-3.475500	0.124700
C	-3.530900	-3.670500	0.893700
H	-4.309100	-3.753700	1.636700
C	-3.592700	-3.631600	-0.460400
H	-4.433400	-3.673100	-1.135200
C	-1.954200	-3.372800	-2.313900
H	-0.904500	-3.084100	-2.384000
H	-2.108900	-4.319100	-2.840800
C	-1.726400	-3.467900	2.599300
H	-0.638500	-3.549100	2.594000
H	-2.025700	-2.499500	3.014800
H	-2.579900	-2.588700	-2.749800
H	-2.142800	-4.281400	3.199400
N	3.462300	-2.479900	0.761000
N	3.452100	-3.720200	-0.986800
C	2.637300	-3.165800	-0.059500
C	4.764600	-3.375200	-0.755400
H	5.569000	-3.704300	-1.394900
C	4.769200	-2.589900	0.349700
H	5.571900	-2.087000	0.865400
C	3.051300	-1.721800	1.928200
H	2.024100	-1.382600	1.782900
H	3.109700	-2.344000	2.826500
C	3.014200	-4.521600	-2.112800
H	1.969200	-4.794100	-1.958900
H	3.109700	-3.953700	-3.042600
H	3.713300	-0.857900	2.024100
H	3.616800	-5.431400	-2.175300
O	5.171600	0.711000	0.975700
H	4.670200	0.612900	0.137300
C	6.543700	0.870900	0.667500
H	6.700300	1.756800	0.031400
H	6.919000	0.005100	0.098800
C	7.318800	1.017700	1.958900
H	7.188700	0.132900	2.591200
H	8.387500	1.143800	1.758200
H	6.968800	1.888700	2.523200
O	-4.158100	-0.748900	-2.281400
H	-3.812900	-0.642500	-1.374700
C	-5.568900	-0.814100	-2.230400
H	-5.902700	-1.652900	-1.597300
H	-5.989700	0.102200	-1.784100
C	-6.096100	-0.988400	-3.637700
H	-7.189600	-1.041300	-3.639900
H	-5.787600	-0.149400	-4.269700
H	-5.704400	-1.908600	-4.083600
C	-4.515800	-0.529800	3.450000
O	-3.172700	-0.293200	3.080000
H	-4.861800	-1.506300	3.071700
H	-5.184100	0.230800	3.013400
H	-3.116000	-0.303900	2.104400
C	-4.616400	-0.499700	4.959300
H	-4.298600	0.473900	5.347000
H	-5.645600	-0.682400	5.284700
H	-3.971600	-1.265400	5.402800
I-4S2			
C	4.185000	3.265400	0.677800
C	2.451800	3.180100	2.460200
C	2.451800	3.180100	-2.460200
N	-2.868300	3.275500	-1.072700
N	-2.868300	3.275500	1.072700
C	-2.044200	3.276800	0.000000
C	-4.185000	3.265400	0.677800
C	-4.185000	3.265400	-0.677800
C	-2.451800	3.180100	-2.460200
C	-2.451800	3.180100	2.460200
Au	0.000000	3.251800	0.000000
N	2.868300	3.275500	1.072700
N	2.868300	3.275500	-1.072700
C	2.044200	3.276800	0.000000
C	4.185000	3.265400	-0.677800
H	4.998300	3.259900	1.387100
H	1.363700	3.243000	2.497600
H	2.781400	2.220800	2.873200

H	2.879100	4.007000	3.034200	C	-5.424300	0.000000	-4.621800
H	1.363700	3.243000	-2.497600	O	-3.851600	0.000000	-2.837700
H	2.879100	4.007000	-3.034200	C	-5.237100	0.000000	-3.120700
H	2.781400	2.220800	-2.873200	H	-4.959200	-0.885600	-5.067000
H	-4.998300	3.259900	1.387100	H	-6.487900	0.000000	-4.881100
H	-4.998300	3.259900	-1.387100	H	-4.959200	0.885600	-5.067000
H	-1.363700	3.243000	-2.497600	H	-3.733100	0.000000	-1.869200
H	-2.781400	2.220800	-2.873200	H	-5.727500	0.884200	-2.681200
H	-2.879100	4.007000	-3.034200	H	-5.727500	-0.884200	-2.681200
H	-1.363700	3.243000	2.497600	C	5.237100	0.000000	-3.120700
H	-2.879100	4.007000	3.034200	O	3.851600	0.000000	-2.837700
H	-2.781400	2.220800	2.873200	C	5.424300	0.000000	-4.621800
H	4.998300	3.259900	-1.387100	H	5.727500	-0.884200	-2.681200
N	-3.160300	0.000000	0.000000	H	5.727500	0.884200	-2.681200
C	-1.990200	0.000000	0.000000	H	3.733100	0.000000	-1.869200
N	3.160300	0.000000	0.000000	H	4.959200	0.885600	-5.067000
C	1.990200	0.000000	0.000000	H	6.487900	0.000000	-4.881100
Au	0.000000	0.000000	0.000000	H	4.959200	-0.885600	-5.067000
Au	0.000000	-3.251800	0.000000	O	3.851600	0.000000	2.837700
N	2.868300	-3.275500	1.072700	C	5.237100	0.000000	3.120700
N	2.868300	-3.275500	-1.072700	C	5.424300	0.000000	4.621800
C	2.044200	-3.276800	0.000000	H	3.733100	0.000000	1.869200
C	4.185000	-3.265400	-0.677800	H	5.727500	0.884200	2.681200
C	4.185000	-3.265400	0.677800	H	5.727500	-0.884200	2.681200
C	2.451800	-3.180100	2.460200	H	6.487900	0.000000	4.881100
C	2.451800	-3.180100	-2.460200	H	4.959200	0.885600	5.067000
N	-2.868300	-3.275500	-1.072700	H	4.959200	-0.885600	5.067000
N	-2.868300	-3.275500	1.072700				
C	-2.044200	-3.276800	0.000000				
C	-4.185000	-3.265400	0.677800				
C	-4.185000	-3.265400	-0.677800				
C	-2.451800	-3.180100	-2.460200				
C	-2.451800	-3.180100	2.460200				
H	4.998300	-3.259900	-1.387100				
H	4.998300	-3.259900	1.387100				
H	1.363700	-3.243000	2.497600				
H	2.879100	-4.007000	3.034200				
H	2.781400	-2.220800	2.873200				
H	1.363700	-3.243000	-2.497600				
H	2.781400	-2.220800	-2.873200				
H	2.879100	-4.007000	-3.034200				
H	-4.998300	-3.259900	1.387100				
H	-4.998300	-3.259900	-1.387100				
H	-1.363700	-3.243000	-2.497600				
H	-2.879100	-4.007000	-3.034200				
H	-2.781400	-2.220800	-2.873200				
H	-1.363700	-3.243000	2.497600				
H	-2.781400	-2.220800	2.873200				
H	-2.879100	-4.007000	3.034200				
O	-3.851600	0.000000	2.837700				
C	-5.424300	0.000000	4.621800				
C	-5.237100	0.000000	3.120700				
H	-3.733100	0.000000	1.869200				
H	-6.487900	0.000000	4.881100				
H	-4.959200	-0.885600	5.067000				
H	-4.959200	0.885600	5.067000				
H	-5.727500	-0.884200	2.681200				
H	-5.727500	0.884200	2.681200				

17. The S<sub>0</sub>.xyz files of II and its complexes

II

Au	0.003100	-0.207200	0.009400
N	0.026700	-0.287900	3.056500
N	2.041400	-0.095600	2.274100
C	0.742300	-0.174200	1.912300
C	0.867900	-0.284700	4.156900
C	0.618300	-0.365000	5.524200
H	-0.389600	-0.444100	5.919100
C	1.724500	-0.333400	6.364200
H	1.576600	-0.390600	7.438200
C	3.029500	-0.227100	5.857200
H	3.866100	-0.207800	6.548800
C	3.276500	-0.144600	4.492700
H	4.287000	-0.067600	4.105000
C	2.167200	-0.170700	3.651800
C	3.165300	-0.023200	1.360900
H	2.796800	0.308600	0.389200
H	3.628400	-1.008500	1.251800
H	3.888000	0.706600	1.735200
C	-1.412800	-0.405300	3.140000
H	-1.814800	-0.497500	2.130400
H	-1.840300	0.476400	3.627600
H	-1.679600	-1.301400	3.707900
N	-0.020300	-0.351400	-3.035300
N	-2.035600	-0.149600	-2.256900
C	-0.736200	-0.216300	-1.893600
C	-0.861500	-0.374000	-4.135500
C	-0.611600	-0.481900	-5.500900
H	0.396600	-0.565700	-5.894100
C	-1.717800	-0.471600	-6.341200
H	-1.569800	-0.550600	-7.413800
C	-3.023300	-0.359100	-5.836400
H	-3.859900	-0.357000	-6.528200
C	-3.270500	-0.249000	-4.473900
H	-4.281300	-0.167400	-4.087800
C	-2.161100	-0.253800	-3.632700
C	-3.159700	-0.062000	-1.345300
H	-2.792300	0.291200	-0.380800
H	-3.884800	0.657300	-1.734800
H	-3.619500	-1.046400	-1.215700
C	1.419600	-0.465700	-3.116400
H	1.821900	-0.535200	-2.105100
H	1.689500	-1.372500	-3.665400
H	1.844100	0.407000	-3.622500
N	-3.128300	-3.370400	-0.376800
C	-1.971600	-3.365400	-0.209100
N	3.145000	-3.351200	0.462100
C	1.988300	-3.353500	0.294300
Au	0.008300	-3.358600	0.042600
Au	0.013600	-6.507500	0.075500
N	-0.000600	-6.359800	3.120000
N	2.024000	-6.564600	2.366700
C	0.729100	-6.497300	1.987500
C	0.827100	-6.336500	4.230400
C	0.560500	-6.226500	5.592500
H	-0.452400	-6.141400	5.973100
C	1.656300	-6.236500	6.446400
H	1.495100	-6.156000	7.516900
C	2.967800	-6.350800	5.957800
H	3.795800	-6.352600	6.659900

C	3.231700	-6.463000	4.598600
H	4.247000	-6.546100	4.225200
C	2.132700	-6.458500	3.743800
C	3.158800	-6.654500	1.468600
H	2.803400	-7.013500	0.501800
H	3.880600	-7.370500	1.870200
H	3.618500	-5.670100	1.339200
C	-1.441400	-6.243900	3.183100
H	-1.830900	-6.172300	2.167000
H	-1.716900	-5.337300	3.729800
H	-1.873300	-7.116700	3.682700
N	0.027500	-6.424200	-2.971600
N	-1.996500	-6.619600	-2.214000
C	-0.701800	-6.540100	-1.836300
C	-0.800300	-6.427100	-4.082100
C	-0.534000	-6.345000	-5.446200
H	0.478600	-6.264700	-5.828700
C	-1.629800	-6.376700	-6.299600
H	-1.468900	-6.318300	-7.371700
C	-2.940900	-6.484900	-5.808700
H	-3.768900	-6.504300	-6.510500
C	-3.204400	-6.569200	-4.447400
H	-4.219500	-6.647700	-4.072200
C	-2.105500	-6.543000	-3.593000
C	-3.131000	-6.694200	-1.314100
H	-2.774400	-7.031600	-0.339900
H	-3.593900	-5.708800	-1.205300
H	-3.850500	-7.420800	-1.700400
C	1.467800	-6.304900	-3.037200
H	1.857100	-6.210600	-2.022800
H	1.902600	-7.186700	-3.518200
H	1.740500	-5.409300	-3.602900

II-S1

97

Molecule Name

Au	-0.304500	3.395200	-0.068800
N	2.615700	3.682500	0.785600
N	2.426800	3.733300	-1.373600
C	1.722100	3.606800	-0.223000
C	3.777100	3.881000	-1.102500
C	2.315300	3.569500	2.197400
H	1.245000	3.391700	2.308800
H	2.857700	2.717100	2.613200
C	1.872100	3.721900	-2.708500
H	0.788000	3.626200	-2.633000
H	2.115100	4.655400	-3.225300
H	2.591500	4.495000	2.712100
H	2.273100	2.877100	-3.277100
N	-3.201200	2.919300	-0.910100
N	-3.099600	3.777000	1.079200
C	-2.343400	3.333500	0.046500
C	-4.446700	3.647500	0.785100
C	-2.839000	2.333500	-2.185300
H	-1.773700	2.100100	-2.167300
H	-3.409400	1.411000	-2.334500
C	-2.597800	4.298700	2.331100
H	-1.508800	4.333600	2.281100
H	-2.982800	5.309300	2.497900
H	-3.048500	3.038700	-2.996500
H	-2.901800	3.650600	3.158600
C	3.898200	3.841600	0.289200

C	5.134200	3.959100	0.918000
C	4.884300	4.046300	-1.930100
C	6.240400	4.123900	0.094800
H	5.232400	3.916000	1.997600
C	6.118000	4.168800	-1.303500
H	4.793200	4.080400	-3.011100
H	7.224600	4.219200	0.542800
H	7.009200	4.301400	-1.909000
C	-4.510600	3.096700	-0.497700
C	-5.727300	2.842600	-1.124400
C	-5.596200	3.961400	1.505300
C	-6.875600	3.158600	-0.409000
H	-5.775800	2.413100	-2.119400
C	-6.811400	3.706900	0.882500
H	-5.550600	4.386100	2.503100
H	-7.847000	2.979500	-0.859700
H	-7.733800	3.938600	1.405900
N	-2.920900	-0.352000	0.110300
C	-1.793500	-0.214500	0.377700
N	3.178800	0.416300	1.559900
C	2.061200	0.270700	1.251200
Au	0.138300	0.025900	0.795900
Au	0.640400	-3.362000	-0.060800
N	3.507000	-2.890400	0.889300
N	3.411900	-3.019900	-1.272900
C	2.658900	-3.058600	-0.146900
C	4.745400	-2.816000	-0.958400
C	3.137800	-2.834200	2.288100
H	2.054200	-2.933300	2.362800
H	3.621900	-3.649800	2.834200
C	2.918100	-3.169300	-2.623400
H	1.844100	-3.356300	-2.581500
H	3.106400	-2.257000	-3.197800
H	3.431000	-1.865000	2.698200
H	3.411200	-4.014900	-3.112800
N	-2.267300	-3.547400	-0.973900
N	-1.994800	-4.501800	0.954400
C	-1.352200	-3.810300	-0.017100
C	-3.326400	-4.683800	0.620200
C	-2.028600	-2.810400	-2.199100
H	-1.083500	-2.274800	-2.101400
H	-1.979600	-3.498300	-3.049800
C	-1.403200	-4.978800	2.184900
H	-0.335700	-4.755400	2.166700
H	-1.863900	-4.480900	3.043500
H	-2.837600	-2.089200	-2.348800
H	-1.542000	-6.060600	2.272700
C	4.804400	-2.726400	0.435000
C	6.007500	-2.516600	1.102700
C	7.147000	-2.407600	0.316400
H	6.054200	-2.433600	2.183300
C	5.886100	-2.707500	-1.748900
C	7.088200	-2.503300	-1.083500
H	8.107200	-2.242900	0.795300
H	5.843800	-2.779800	-2.831100
H	8.004400	-2.414500	-1.659100
C	-3.500500	-4.070000	-0.623200
C	-4.731200	-4.072500	-1.273600
C	-5.778300	-4.713600	-0.623600
H	-4.866700	-3.586800	-2.233800
C	-4.375700	-5.322500	1.275600
C	-5.604500	-5.326700	0.628200
H	-6.755900	-4.742500	-1.095100
H	-4.244800	-5.796600	2.243100

H	-6.450700	-5.816000	1.100500
O	-4.652200	-0.581700	-2.075000
H	-4.182800	-0.526200	-1.214600
C	-6.029700	-0.736200	-1.820300
H	-6.445100	0.102700	-1.243800
H	-6.542900	-0.774600	-2.786600
H	-6.253100	-1.665000	-1.275800

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## Molecule Name

Au	-0.220000	-3.436200	-0.001800
N	2.733300	-3.393100	-0.798300
N	2.458800	-4.267100	1.167700
C	1.804200	-3.677000	0.138800
C	3.811700	-4.364700	0.889500
C	2.493200	-2.721700	-2.060400
H	1.486800	-2.300900	-2.043400
H	3.223100	-1.914600	-2.179400
C	1.857200	-4.726400	2.400300
H	0.778500	-4.576300	2.337700
H	2.064400	-5.791000	2.544900
H	2.582500	-3.432400	-2.888700
H	2.254600	-4.159000	3.247400
N	-3.148100	-3.062300	0.801600
N	-2.977400	-3.930200	-1.178800
C	-2.258400	-3.436100	-0.142300
C	-4.332300	-3.876100	-0.898800
C	-2.832300	-2.438200	2.071300
H	-1.780300	-2.149300	2.064000
H	-3.454600	-1.545900	2.194300
C	-2.433900	-4.435600	-2.420200
H	-1.345100	-4.403300	-2.361900
H	-2.755300	-5.469700	-2.577500
H	-3.016600	-3.139300	2.892100
H	-2.771000	-3.817200	-3.257700
C	3.987300	-3.802800	-0.377800
C	5.237800	-3.750600	-0.986700
C	4.878600	-4.892700	1.611600
C	6.303100	-4.282100	-0.270500
H	5.373800	-3.308100	-1.967500
C	6.127400	-4.841600	1.005800
H	4.745800	-5.326400	2.597600
H	7.296500	-4.266100	-0.708400
H	6.988100	-5.244800	1.530500
C	-4.441100	-3.318600	0.378000
C	-5.676800	-3.134300	0.991600
C	-5.453500	-4.266200	-1.626300
C	-6.796700	-3.527900	0.269800
H	-5.760600	-2.697200	1.980700
C	-6.687600	-4.082300	-1.016100
H	-5.372300	-4.696400	-2.619400
H	-7.781300	-3.405900	0.711000
H	-7.589300	-4.375500	-1.544700
N	-3.116400	0.169700	-0.484700
C	-1.958600	0.107400	-0.346400
N	3.116200	-0.169400	0.483500
C	1.958500	-0.107100	0.345100
Au	-0.000100	0.000200	-0.000700
Au	0.220300	3.436300	0.002400
N	3.148200	3.063500	-0.802000
N	2.978000	3.929500	1.179300
C	2.258800	3.436400	0.142500

C	4.332800	3.875800	0.898900
C	2.832200	2.440300	-2.072100
H	1.780600	2.149600	-2.064000
H	3.014400	3.142500	-2.892300
C	2.434800	4.433600	2.421400
H	1.346000	4.401500	2.363100
H	2.772000	3.814200	3.258000
H	3.455700	1.549100	-2.196600
H	2.756300	5.467500	2.579700
N	-2.733000	3.391900	0.799000
N	-2.458700	4.267600	-1.166300
C	-1.803900	3.676800	-0.137900
C	-3.811600	4.364600	-0.888100
C	-2.492600	2.719800	2.060700
H	-1.485500	2.300500	2.043900
H	-2.583400	3.429600	2.889500
C	-1.857300	4.728300	-2.398400
H	-0.778500	4.578400	-2.336000
H	-2.254500	4.161800	-3.246100
H	-3.221300	1.911600	2.178600
H	-2.064600	5.793100	-2.541800
C	4.441300	3.319600	-0.378500
C	5.676800	3.136000	-0.992600
C	6.797000	3.528800	-0.270800
H	5.760500	2.699900	-1.982200
C	5.454200	4.265300	1.626400
C	6.688200	4.081900	1.015700
H	7.781400	3.407200	-0.712400
H	5.373300	4.694500	2.619900
H	7.590000	4.374600	1.544400
C	-3.987000	3.801400	0.378800
C	-5.237600	3.748100	0.987500
C	-6.303000	4.279900	0.271700
H	-5.373500	3.304400	1.967800
C	-4.878700	4.892800	-1.609700
C	-6.127500	4.840700	-1.004000
H	-7.296500	4.263000	0.709600
H	-4.746000	5.327400	-2.595300
H	-6.988300	5.244100	-1.528400
O	-4.901700	0.287200	1.707100
H	-4.439300	0.256900	0.843800
C	-6.289100	0.361400	1.466200
H	-6.662400	-0.508300	0.907700
H	-6.791200	0.385500	2.438700
H	-6.568600	1.268600	0.912200
O	4.898300	-0.285900	-1.709900
H	4.436200	-0.255700	-0.846300
C	6.285700	-0.361700	-1.469600
H	6.787300	-0.387200	-2.442300
H	6.660400	0.508000	-0.912000
H	6.564300	-1.268700	-0.915000

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Molecule Name

Au	0.005900	0.089300	3.329300
N	-0.975600	-2.799300	3.297900
N	1.192700	-2.715700	3.344600
C	0.078300	-1.952000	3.284900
C	0.856700	-4.057000	3.397300
C	-2.366900	-2.427200	3.137600
H	-2.427100	-1.340400	3.063400
H	-2.759000	-2.875600	2.217700

C	2.555700	-2.234100	3.239700
H	2.543200	-1.145500	3.312400
H	3.156300	-2.639600	4.059200
H	-2.948800	-2.765900	4.000500
H	2.974600	-2.537100	2.273300
N	0.865600	3.021000	3.186600
N	-1.006500	2.801800	4.259200
C	-0.053400	2.115600	3.583500
C	-0.698800	4.151400	4.295500
C	2.060500	2.739400	2.416100
H	1.977500	1.733200	2.002700
H	2.136500	3.464300	1.599800
C	-2.196800	2.234200	4.852900
H	-2.160800	1.150400	4.734800
H	-2.236200	2.477800	5.918900
H	2.946200	2.803000	3.056900
H	-3.089800	2.625100	4.355800
C	-0.539900	-4.110500	3.368600
C	-1.226400	-5.320400	3.431300
C	1.630100	-5.211600	3.488100
C	-0.456000	-6.473500	3.519200
H	-2.310700	-5.362700	3.418800
C	0.9947000	-6.420100	3.547200
H	2.714300	-5.172200	3.519100
H	-0.950300	-7.438500	3.575500
H	1.510600	-7.344900	3.623800
C	0.507800	4.291700	3.604700
C	1.124400	5.530700	3.454700
C	-1.349500	5.243700	4.863400
C	0.479300	6.621000	4.024600
H	2.055100	5.639500	2.908800
C	-0.735400	6.480600	4.715800
H	-2.288700	5.138800	5.396900
H	0.925300	7.606800	3.934700
H	-1.205400	7.360200	5.144800
N	-0.625600	3.343300	0.000000
C	-0.597600	2.176700	0.000000
N	0.014300	-2.937800	0.000000
C	-0.149700	-1.779400	0.000000
Au	-0.404100	0.194700	0.000000
Au	0.005900	0.089300	-3.329300
N	-0.975600	-2.799300	-3.297900
N	1.192700	-2.715700	-3.344600
C	0.078300	-1.952000	-3.284900
C	0.856700	-4.057000	-3.397300
C	-2.366900	-2.427200	-3.137600
H	-2.427100	-1.340400	-3.063400
H	-2.948800	-2.765900	-4.000500
C	2.555700	-2.234100	-3.239700
H	2.543200	-1.145500	-3.312400
H	2.974600	-2.537100	-2.273300
H	-2.759000	-2.875600	-2.217700
H	3.156300	-2.639600	-4.059200
N	0.865600	3.021000	-3.186600
N	-1.006500	2.801800	-4.259200
C	-0.053400	2.115600	-3.583500
C	-0.698800	4.151400	-4.295500
C	2.060500	2.739400	-2.416100
H	1.977500	1.733200	-2.002700
H	2.946200	2.803000	-3.056900
C	-2.196800	2.234200	-4.852900
H	-2.160800	1.150400	-4.734800
H	-3.089800	2.625100	-4.355800
H	2.136500	3.464300	-1.599800

H	-2.236200	2.477800	-5.918900
C	-0.539900	-4.110500	-3.368600
C	-1.226400	-5.320400	-3.431300
C	-0.456000	-6.473500	-3.519200
H	-2.310700	-5.362700	-3.418800
C	1.630100	-5.211600	-3.488100
C	0.947000	-6.420100	-3.547200
H	-0.950300	-7.438500	-3.575500
H	2.714300	-5.172200	-3.519100
H	1.510600	-7.344900	-3.623800
C	0.507800	4.291700	-3.604700
C	1.124400	5.530700	-3.454700
C	0.479300	6.621000	-4.024600
H	2.055100	5.639500	-2.908800
C	-1.349500	5.243700	-4.863400
C	-0.735400	6.480600	-4.715800
H	0.925300	7.606800	-3.934700
H	-2.288700	5.138800	-5.396900
H	-1.205400	7.360200	-5.144800
O	1.591000	5.095000	0.000000
H	0.723500	4.638300	0.000000
C	1.357200	6.486000	0.000000
H	0.802900	6.814200	0.890600
H	2.331800	6.984400	0.000000
H	0.802900	6.814200	-0.890600
O	-2.727000	-3.984500	0.000000
H	-1.769800	-3.799900	0.000000
C	-2.912100	-5.382700	0.000000
H	-3.989800	-5.569200	0.000000
H	-2.478100	-5.862200	-0.889100
H	-2.478100	-5.862200	0.889100
H	1.916600	-3.416200	0.000000
O	2.890800	-3.473800	0.000000
C	3.249900	-4.837900	0.000000
H	4.342500	-4.888600	0.000000
H	2.879200	-5.368000	0.889100
H	2.879200	-5.368000	-0.889100

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Molecule Name

Au	0.000000	3.219900	0.000000
N	2.850200	3.334300	1.085000
N	2.850200	3.334300	-1.085000
C	2.043800	3.286700	0.000000
C	4.176700	3.409800	-0.698800
C	2.428500	3.200500	2.464700
H	1.338300	3.206800	2.494400
H	2.802100	2.253500	2.871100
C	2.428500	3.200500	-2.464700
H	1.338300	3.206800	-2.494400
H	2.807700	4.041300	-3.053200
H	2.807700	4.041300	3.053200
H	2.802100	2.253500	-2.871100
N	-2.850200	3.334300	-1.085000
N	-2.850200	3.334300	1.085000
C	-2.043800	3.286700	0.000000
C	-4.176700	3.409800	0.698800
C	-2.428500	3.200500	-2.464700
H	-1.338300	3.206800	-2.494400
H	-2.802100	2.253500	-2.871100
C	-2.428500	3.200500	2.464700
H	-1.338300	3.206800	2.494400

H	-2.807700	4.041300	3.053200
H	-2.807700	4.041300	-3.053200
H	-2.802100	2.253500	2.871100
C	4.176700	3.409800	0.698800
C	5.359100	3.492700	1.429700
C	5.359100	3.492700	-1.429700
C	6.540100	3.572800	0.702200
H	5.360700	3.499900	2.514900
C	6.540100	3.572800	-0.702200
H	5.360700	3.499900	-2.514900
H	7.485400	3.643500	1.231500
H	7.485400	3.643500	-1.231500
C	-4.176700	3.409800	-0.698800
C	-5.359100	3.492700	-1.429700
C	-5.359100	3.492700	1.429700
C	-6.540100	3.572800	-0.702200
H	-5.360700	3.499900	-2.514900
C	-6.540100	3.572800	0.702200
H	-5.360700	3.499900	2.514900
H	-7.485400	3.643500	-1.231500
H	-7.485400	3.643500	1.231500
N	-3.160000	0.000000	0.000000
C	-1.990300	0.000000	0.000000
N	3.160000	0.000000	0.000000
C	1.990300	0.000000	0.000000
Au	0.000000	0.000000	0.000000
Au	0.000000	-3.219900	0.000000
N	2.850200	-3.334300	1.085000
N	2.850200	-3.334300	-1.085000
C	2.043800	-3.286700	0.000000
C	4.176700	-3.409800	-0.698800
C	2.428500	-3.200500	2.464700
H	1.338300	-3.206800	2.494400
H	2.807700	-4.041300	3.053200
C	2.428500	-3.200500	-2.464700
H	1.338300	-3.206800	-2.494400
H	2.802100	-2.253500	-2.871100
H	2.802100	-2.253500	2.871100
H	2.807700	-4.041300	-3.053200
N	-2.850200	-3.334300	-1.085000
N	-2.850200	-3.334300	1.085000
C	-2.043800	-3.286700	0.000000
C	-4.176700	-3.409800	0.698800
C	-2.428500	-3.200500	-2.464700
H	-1.338300	-3.206800	-2.494400
H	-2.807700	-4.041300	-3.053200
C	-2.428500	-3.200500	2.464700
H	-1.338300	-3.206800	2.494400
H	-2.802100	-2.253500	2.871100
H	-2.802100	-2.253500	-2.871100
H	-2.807700	-4.041300	3.053200
C	4.176700	-3.409800	0.698800
C	5.359100	-3.492700	1.429700
C	6.540100	-3.572800	0.702200
H	5.360700	-3.499900	2.514900
C	5.359100	-3.492700	-1.429700
C	6.540100	-3.572800	-0.702200
H	7.485400	-3.643500	1.231500
H	5.360700	-3.499900	-2.514900
H	7.485400	-3.643500	-1.231500
C	-4.176700	-3.409800	-0.698800
C	-5.359100	-3.492700	-1.429700
C	-6.540100	-3.572800	-0.702200
H	-5.360700	-3.499900	-2.514900

C	-5.359100	-3.492700	1.429700
C	-6.540100	-3.572800	0.702200
H	-7.485400	-3.643500	-1.231500
H	-5.360700	-3.499900	2.514900
H	-7.485400	-3.643500	1.231500
O	-3.834500	0.000000	-2.858700
H	-3.744700	0.000000	-1.888000
C	-5.209900	0.000000	-3.171800
H	-5.726800	0.889300	-2.783100
H	-5.297300	0.000000	-4.262000
H	-5.726800	-0.889300	-2.783100
O	3.834500	0.000000	2.858700
H	3.744700	0.000000	1.888000
C	5.209900	0.000000	3.171800
H	5.297300	0.000000	4.262000
H	5.726800	-0.889300	2.783100
H	5.726800	0.889300	2.783100
H	3.744700	0.000000	-1.888000
O	3.834500	0.000000	-2.858700
C	5.209900	0.000000	-3.171800
H	5.297300	0.000000	-4.262000
H	5.726800	0.889300	-2.783100
H	5.726800	-0.889300	-2.783100
H	-3.744700	0.000000	1.888000
O	-3.834500	0.000000	2.858700
C	-5.209900	0.000000	3.171800
H	-5.726800	-0.889300	2.783100
H	-5.297300	0.000000	4.262000
H	-5.726800	0.889300	2.783100

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Molecule Name

Au	-0.620000	3.386100	0.019800
N	-3.532800	3.002600	-0.824300
N	-3.356500	3.146500	1.332000
C	-2.643400	3.152200	0.179600
C	-4.706000	2.981300	1.066900
C	-3.216300	2.924800	-2.234900
H	-2.134700	3.004300	-2.350600
H	-3.541900	1.956900	-2.623500
C	-2.810100	3.291400	2.662600
H	-1.735200	3.458700	2.580000
H	-3.269200	4.147900	3.165800
H	-3.705800	3.743400	-2.771600
H	-2.993500	2.385000	3.247900
N	2.320500	3.478000	0.834600
N	2.016100	4.434700	-1.087900
C	1.383700	3.766700	-0.093500
C	3.362700	4.576200	-0.797100
C	2.097800	2.752700	2.069600
H	1.134200	2.245900	2.003300
H	2.888800	2.007500	2.197100
C	1.400300	4.926000	-2.300800
H	0.328100	4.732300	-2.249300
H	1.566400	6.003400	-2.395600
H	2.096100	3.444600	2.918500
H	1.820500	4.413800	-3.171700
C	-4.817500	2.882400	-0.322700
C	-6.049500	2.704900	-0.945300
C	-5.820700	2.914500	1.898200
C	-7.163000	2.637500	-0.118300
H	-6.137200	2.614500	-2.022800

C	-7.051400	2.742500	1.277600
H	-5.737800	2.993600	2.977500
H	-8.144300	2.498600	-0.561500
H	-7.948700	2.686600	1.886200
C	3.557500	3.960600	0.442400
C	4.808100	3.927000	1.052800
C	4.409600	5.180500	-1.488100
C	5.853000	4.534100	0.367500
H	4.959600	3.440400	2.010300
C	5.658000	5.148900	-0.880200
H	4.262200	5.656000	-2.452500
H	6.845700	4.533700	0.807300
H	6.503200	5.610600	-1.381200
N	2.814600	0.245600	-0.252300
C	1.673700	0.143000	-0.474400
N	-3.355700	-0.322400	-1.477100
C	-2.224000	-0.216000	-1.206000
Au	-0.279100	-0.035900	-0.819300
Au	0.111900	-3.422000	0.034200
N	-2.834800	-3.604200	-0.754500
N	-2.599600	-3.670300	1.399800
C	-1.916900	-3.563600	0.234000
C	-3.959900	-3.769900	1.158700
C	-2.562400	-3.495200	-2.172200
H	-1.490200	-3.347500	-2.306900
H	-2.876600	-4.410500	-2.683400
C	-2.014800	-3.683500	2.721800
H	-0.930200	-3.622300	2.622200
H	-2.375500	-2.829200	3.302900
H	-3.089700	-2.626600	-2.573600
H	-2.276200	-4.611400	3.239900
N	3.043700	-3.023400	0.794200
N	2.863000	-3.927000	-1.169000
C	2.148500	-3.431700	-0.130000
C	4.220700	-3.836500	-0.911400
C	2.732900	-2.396600	2.063600
H	1.679500	-2.113800	2.059800
H	2.925000	-3.094800	2.885100
C	2.312300	-4.463100	-2.394100
H	1.224600	-4.465400	-2.314000
H	2.612000	-3.844000	-3.245200
H	3.347500	-1.498500	2.183100
H	2.663500	-5.488200	-2.546200
C	-4.110600	-3.720500	-0.229800
C	-5.363600	-3.792000	-0.831400
C	-6.456300	-3.921400	0.015700
H	-5.484000	-3.740500	-1.908300
C	-5.053600	-3.900000	2.010200
C	-6.304400	-3.976500	1.410700
H	-7.453000	-3.980000	-0.410400
H	-4.940000	-3.941900	3.088800
H	-7.186000	-4.080500	2.035600
C	4.335700	-3.256400	0.354800
C	5.576200	-3.029500	0.944400
C	6.694200	-3.403000	0.209300
H	5.665200	-2.577800	1.926800
C	5.339800	-4.207900	-1.651700
C	6.578600	-3.980400	-1.065800
H	7.682300	-3.246200	0.631100
H	5.254000	-4.655300	-2.636700
H	7.479000	-4.256600	-1.605700
O	4.639300	0.444900	1.861300
H	4.137700	0.396500	1.018400
C	6.017800	0.548700	1.562100

H	6.224500	1.463200	0.984800
H	6.347700	-0.299900	0.943400
C	6.793600	0.572900	2.861900
H	6.611900	-0.340700	3.438900
H	7.869200	0.654900	2.673500
H	6.485900	1.422500	3.481600

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## Molecule Name

N	3.087400	0.002200	0.652800
C	1.937100	0.001400	0.452600
Au	-0.002500	-0.000000	-0.000100
C	-1.942200	-0.001400	-0.452500
N	-3.092700	-0.002300	-0.652100
Au	0.003600	-3.448500	-0.000200
N	-2.976200	-3.235300	0.659000
N	-2.661900	-4.123800	-1.294400
C	-2.022700	-3.571500	-0.235300
C	-4.029400	-4.144500	-1.078800
C	-2.756200	-2.577600	1.932000
C	-2.031600	-4.616400	-2.499500
N	2.982900	-3.230900	-0.659800
N	2.670200	-4.120500	1.293400
C	2.030000	-3.568700	0.234600
C	4.037600	-4.139600	1.077400
C	2.761900	-2.572800	-1.932400
C	2.040800	-4.614200	2.498500
C	-4.230800	-3.573600	0.180800
C	-5.503000	-3.451900	0.732000
C	-5.090200	-4.611300	-1.850300
C	-6.562700	-3.922400	-0.033400
C	-6.360600	-4.490400	-1.302000
C	4.238000	-3.568000	-0.182000
C	5.509900	-3.444800	-0.733700
C	5.099200	-4.605500	1.848400
C	6.570300	-3.914500	0.031200
C	6.369200	-4.483100	1.299700
H	-1.728000	-2.213800	1.961200
H	-3.444500	-1.730900	-2.019300
H	-2.922000	-3.281800	2.754100
H	-0.950200	-4.526800	-2.387800
H	-2.291200	-5.667800	-2.655800
H	-2.357800	-4.027800	-3.362500
H	1.732900	-2.211400	-1.961800
H	3.448300	-1.724500	-2.018700
H	2.929800	-3.276000	-2.754900
H	0.959200	-4.526500	2.386800
H	2.302100	-5.665200	2.654700
H	2.365900	-4.025200	3.361500
H	-5.658800	-3.003900	1.707600
H	-4.937000	-5.051600	-2.830400
H	-7.572500	-3.850300	0.358900
H	-7.217600	-4.844300	-1.866600
H	5.665000	-2.996300	-1.709100
H	4.946800	-5.046300	2.828400
H	7.580000	-3.841300	-0.361400
H	7.226900	-4.836200	1.863900
Au	-0.002500	3.448600	-0.000300
N	-2.982100	3.231000	0.658500
N	-2.668800	4.120000	-1.294900
C	-2.028900	3.568700	-0.235700
C	-4.036400	4.138700	-1.079400

C	-2.761200	2.573700	1.931500
C	-2.039100	4.613500	-2.499900
N	2.977300	3.235100	-0.659300
N	2.662900	4.124500	1.293800
C	2.023700	3.571700	0.234900
C	4.030400	4.145400	1.078000
C	2.757400	2.576700	-1.931900
C	2.032600	4.617600	2.498600
C	-4.237100	3.567500	0.180100
C	-5.509200	3.443900	0.731200
C	-6.569500	3.912800	-0.034400
C	-5.097800	4.603900	-1.851100
C	-6.368000	4.481000	-1.302900
C	4.231800	3.574000	-0.181300
C	5.504000	3.452300	-0.732600
C	6.563600	3.923400	0.032500
C	5.091200	4.612800	1.849200
C	6.361500	4.491900	1.300800
H	-1.732500	2.211600	1.961000
H	-2.928500	3.277500	2.753600
H	-3.448100	1.725700	2.018600
H	-0.957500	4.525900	-2.387900
H	-2.364000	4.024400	-3.362800
H	-2.300500	5.664500	-2.656400
H	1.729000	2.213700	-1.961400
H	2.924300	3.280200	-2.754400
H	3.445100	1.729400	-2.018200
H	0.951100	4.528200	2.386800
H	2.358400	4.029200	3.361800
H	2.292400	5.669000	2.654700
H	-5.664500	2.995800	1.706800
H	-7.579300	3.839100	0.357800
H	-4.945100	5.044400	-2.831200
H	-7.225600	4.833600	-1.867700
H	5.659800	3.003800	-1.707900
H	7.573500	3.851500	-0.359800
H	4.937900	5.053500	2.829200
H	7.218500	4.846200	1.865200
O	4.983200	0.003700	-1.452300
C	6.366400	0.004700	-1.152500
C	7.141000	0.005000	-2.453000
H	4.480500	0.003300	-0.610900
H	6.635500	-0.879400	-0.555100
H	6.634200	0.889500	-0.555400
H	8.219600	0.005900	-2.264500
H	6.895800	-0.879300	-3.051800
H	6.894500	0.888700	-3.052200
O	-4.983200	-0.004300	1.457700
C	-6.367400	-0.004800	1.162800
C	-7.137400	-0.004800	2.466000
H	-4.483200	-0.003800	0.614600
H	-6.638300	0.879400	0.566300
H	-6.637700	-0.889400	0.566600
H	-8.216700	-0.005300	2.281300
H	-6.889100	-0.888600	3.064300
H	-6.889800	0.879400	3.064000

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## Molecule Name

Au	-0.132400	-3.324300	-0.041700
N	2.781800	-3.295200	-0.944100



N	2.639700	-3.344100	1.221000
C	1.906400	-3.282700	0.086600
C	3.989600	-3.397300	0.921400
C	2.447100	-3.132700	-2.344600
H	1.362700	-3.053000	-2.433200
H	2.909900	-2.214500	-2.723900
C	2.121600	-3.239900	2.570500
H	1.033400	-3.308200	2.528300
H	2.507300	-4.062100	3.180500
H	2.796900	-3.996900	-2.917900
H	2.416900	-2.275500	2.999200
N	-3.085000	-3.189300	0.744000
N	-2.818900	-4.238400	-1.135300
C	-2.156800	-3.575300	-0.156800
C	-4.175900	-4.277600	-0.862400
C	-2.833000	-2.432300	1.954100
H	-1.824600	-2.019300	1.900800
H	-3.558500	-1.615700	2.021100
C	-2.221800	-4.816900	-2.318700
H	-1.139000	-4.703300	-2.252300
H	-2.467600	-5.881300	-2.379700
H	-2.918900	-3.082900	2.830800
H	-2.587300	-4.305600	-3.214500
C	4.080700	-3.367200	-0.473300
C	5.308600	-3.430300	-1.126800
C	5.122800	-3.489500	1.725500
C	6.440400	-3.520300	-0.325800
H	5.380400	-3.416400	-2.209600
C	6.349200	-3.549300	1.075100
H	5.054500	-3.520600	2.808200
H	7.418400	-3.576600	-0.794000
H	7.258300	-3.626800	1.663500
C	-4.346300	-3.602300	0.349200
C	-5.600500	-3.461200	0.936400
C	-5.251300	-4.836800	-1.547500
C	-6.674200	-4.022600	0.257100
H	-5.732700	-2.929300	1.872400
C	-6.503300	-4.697400	-0.962900
H	-5.122700	-5.358200	-2.490700
H	-7.670900	-3.938600	0.679600
H	-7.370700	-5.120200	-1.460500
N	-3.364700	0.000100	-0.741900
C	-2.199200	0.000000	-0.683400
N	2.898300	0.000000	0.056100
C	1.744300	0.000000	-0.135800
Au	-0.222900	0.000000	-0.439200
Au	-0.131800	3.324300	-0.041900
N	2.782400	3.294900	-0.944100
N	2.640300	3.343900	1.221000
C	1.907000	3.282600	0.086500
C	3.990100	3.396800	0.921400
C	2.447800	3.132300	-2.344600
H	1.363300	3.052900	-2.433300
H	2.797900	3.996300	-2.918100
C	2.122000	3.239900	2.570400
H	1.033900	3.308200	2.528100
H	2.417400	2.275500	2.999300
H	2.910400	2.213900	-2.723800
H	2.507700	4.062100	3.180400
N	-3.084300	3.189700	0.743900
N	-2.818200	4.238600	-1.135600
C	-2.156100	3.575500	-0.157000
C	-4.175200	4.278000	-0.862500
C	-2.832400	2.432900	1.954100
H	-1.824000	2.019900	1.901000
H	-2.918500	3.083600	2.830700
C	-2.221100	4.816800	-2.319000
H	-1.138300	4.703100	-2.252700
H	-2.586800	4.305500	-3.214700
H	-3.557900	1.616200	2.021100
H	-2.466800	5.881300	-2.380200
C	4.081300	3.366800	-0.473200
C	5.309200	3.429600	-1.126700
C	6.441100	3.519400	-0.325700
H	5.381100	3.415700	-2.209500
C	5.123300	3.488900	1.725600
C	6.349800	3.548400	1.075200
H	7.419100	3.575500	-0.793800
H	5.055000	3.520000	2.808300
H	7.258900	3.625800	1.663700
C	-4.345700	3.602900	0.349100
C	-5.599800	3.461900	0.936400
C	-6.673600	4.023400	0.257000
H	-5.732100	2.930200	1.872400
C	-5.250600	4.837200	-1.547700
C	-6.502600	4.698000	-0.963000
H	-7.670200	3.939500	0.679600
H	-5.122000	5.358400	-2.491000
H	-7.369900	5.120800	-1.460600
O	-5.158800	0.000500	1.446000
H	-4.687900	0.000500	0.585800
C	-6.551800	0.000600	1.193900
H	-6.839200	-0.884500	0.606100
H	-6.839100	0.885700	0.606100
C	-7.283300	0.000500	2.518900
H	-7.019200	0.884600	3.110100
H	-8.367400	0.000600	2.365100
H	-7.019200	-0.883500	3.110100
O	4.025400	-0.000300	-2.657000
H	3.820000	-0.000200	-1.703600
C	5.432000	-0.000400	-2.819300
H	5.879800	0.883500	-2.339500
H	5.879700	-0.884100	-2.339000
C	5.743100	-0.000900	-4.300100
H	5.316600	0.884100	-4.784400
H	6.824700	-0.000900	-4.470300
H	5.316600	-0.886100	-4.783900
H	3.345300	-0.000000	1.971200
O	3.376400	-0.000100	2.947000
C	4.733600	-0.000300	3.350800
H	5.257700	-0.884200	2.955500
H	5.258100	0.883300	2.955200
C	4.784800	-0.000000	4.863100
H	5.821000	-0.000200	5.217200
H	4.281800	0.885100	5.266900
H	4.281400	-0.884800	5.267200
II-4S2			
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Molecule Name			
Au	0.000000	0.000000	-3.219300
N	-1.084900	2.850200	-3.333000
N	1.084900	2.850200	-3.333000
C	0.000000	2.043700	-3.285800
C	0.698800	4.176800	-3.407400

C	-2.464500	2.428000	-3.199800	H	-2.493900	-1.337800	3.206600
H	-2.493900	1.337800	-3.206600	H	-2.871500	-2.801100	2.252800
H	-2.871400	2.801100	-2.252800	H	2.871500	-2.801100	2.252800
C	2.464500	2.428000	-3.199800	H	-3.052700	-2.807300	4.040800
H	2.493900	1.337800	-3.206600	C	-0.698800	4.176800	3.407400
H	3.052700	2.807300	-4.040800	C	-1.429700	5.359200	3.489100
H	-3.052700	2.807300	-4.040800	C	-0.702200	6.540300	3.568300
H	2.871400	2.801100	-2.252800	H	-2.514900	5.361100	3.495600
N	1.084900	-2.850200	-3.333000	C	1.429700	5.359200	3.489100
N	-1.084900	-2.850200	-3.333000	C	0.702200	6.540300	3.568300
C	0.000000	-2.043700	-3.285800	H	-1.231500	7.485600	3.637600
C	-0.698800	-4.176800	-3.407400	H	2.514900	5.361100	3.495600
C	2.464500	-2.428000	-3.199800	H	1.231500	7.485600	3.637600
H	2.493900	-1.337800	-3.206600	C	0.698800	-4.176800	3.407400
H	2.871400	-2.801100	-2.252800	C	1.429700	-5.359200	3.489100
C	-2.464500	-2.428000	-3.199800	C	0.702200	-6.540300	3.568300
H	-2.493900	-1.337800	-3.206600	H	2.514900	-5.361100	3.495600
H	-3.052700	-2.807300	-4.040800	C	-1.429700	-5.359200	3.489100
H	3.052700	-2.807300	-4.040800	C	-0.702200	-6.540300	3.568300
H	-2.871400	-2.801100	-2.252800	H	1.231500	-7.485600	3.637600
C	-0.698800	4.176800	-3.407400	H	-2.514900	-5.361100	3.495600
C	-1.429700	5.359200	-3.489100	H	-1.231500	-7.485600	3.637600
C	1.429700	5.359200	-3.489100	O	2.863900	-3.839800	0.000000
C	-0.702200	6.540300	-3.568300	H	1.892500	-3.753700	0.000000
H	-2.514900	5.361100	-3.495700	C	3.189700	-5.217900	0.000000
C	0.702200	6.540300	-3.568300	H	2.764400	-5.718200	-0.883900
H	2.514900	5.361100	-3.495700	H	2.764400	-5.718200	0.883900
H	-1.231500	7.485600	-3.637600	C	4.696500	-5.354700	0.000000
H	1.231500	7.485600	-3.637600	H	5.127600	-4.874900	0.885200
C	0.698800	-4.176800	-3.407400	H	4.991500	-6.409200	0.000000
C	1.429700	-5.359200	-3.489100	H	5.127600	-4.874900	-0.885100
C	-1.429700	-5.359200	-3.489100	O	-2.863900	3.839800	0.000000
C	0.702200	-6.540300	-3.568300	H	-1.892500	3.753700	0.000000
H	2.514900	-5.361100	-3.495700	C	-3.189700	5.217900	0.000000
C	-0.702200	-6.540300	-3.568300	H	-2.764400	5.718200	0.883900
H	-2.514900	-5.361100	-3.495700	H	-2.764400	5.718200	-0.883900
H	1.231500	-7.485600	-3.637600	C	-4.696500	5.354700	0.000000
H	-1.231500	-7.485600	-3.637600	H	-5.127600	4.874900	0.885200
N	0.000000	-3.160200	-0.000000	H	-4.991500	6.409200	0.000000
C	0.000000	-1.990500	-0.000000	H	-5.127600	4.874900	-0.885100
N	0.000000	3.160200	-0.000000	H	1.892500	3.753700	0.000000
C	0.000000	1.990500	-0.000000	O	2.863900	3.839800	0.000000
Au	0.000000	0.000000	-0.000000	C	3.189700	5.217900	0.000000
Au	0.000000	0.000000	3.219300	H	2.764400	5.718200	-0.883900
N	-1.084900	2.850200	3.332900	H	2.764400	5.718200	0.883900
N	1.084900	2.850200	3.332900	C	4.696500	5.354700	0.000000
C	0.000000	2.043700	3.285800	H	4.991500	6.409200	0.000000
C	0.698800	4.176800	3.407400	H	5.127600	4.874900	0.885200
C	-2.464500	2.428000	3.199800	H	5.127600	4.874900	-0.885100
H	-2.493900	1.337800	3.206600	H	-1.892500	-3.753700	0.000000
H	-3.052700	2.807300	4.040800	O	-2.863900	-3.839800	0.000000
C	2.464500	2.428000	3.199800	C	-3.189700	-5.217900	0.000000
H	2.493900	1.337800	3.206600	H	-2.764400	-5.718200	0.883900
H	2.871500	2.801100	2.252800	H	-2.764400	-5.718200	-0.883900
H	-2.871500	2.801100	2.252800	C	-4.696500	-5.354700	0.000000
H	3.052700	2.807300	4.040800	H	-4.991500	-6.409200	0.000000
N	1.084900	-2.850200	3.332900	H	-5.127600	-4.874900	0.885200
N	-1.084900	-2.850200	3.332900	H	-5.127600	-4.874900	-0.885100
C	0.000000	-2.043700	3.285800				
C	-0.698800	-4.176800	3.407400				
C	2.464500	-2.428000	3.199800				
H	2.493900	-1.337800	3.206600				
H	3.052700	-2.807300	4.040800				
C	-2.464500	-2.428000	3.199800				

## 18. The S<sub>0</sub>.xyz files of III and its complexes

III

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Au  0.004700 -0.078400  0.002000
N   0.035400 -0.188900  3.050400
N   2.037000 -0.185800  2.274700
C   0.740200 -0.129700  1.898700
C   2.144500 -0.278800  3.643000
H   3.098200 -0.326400  4.145600
C   0.878300 -0.280200  4.133800
H   0.512600 -0.328000  5.147900
C  -1.417800 -0.179500  3.122800
H  -1.829200 -1.030400  2.573100
H  -1.714700 -0.247300  4.170600
C   3.159200 -0.183600  1.348400
H   3.126100  0.717400  0.732000
H   4.086100 -0.186900  1.924200
H  -1.803900  0.752000  2.702600
H   3.123900 -1.069300  0.707900
N  -0.027900 -0.101000 -3.048400
N  -2.028900 -0.059700 -2.272100
C  -0.731100 -0.053400 -1.895200
C  -2.138500 -0.110400 -3.642400
H  -3.093000 -0.115000 -4.145700
C  -0.872700 -0.136000 -4.133500
H  -0.508200 -0.165800 -5.148700
C   1.424900 -0.133300 -3.121000
H   1.810400 -1.011500 -2.596000
H   1.720100 -0.180100 -4.170500
C  -3.150900 -0.050200 -1.345600
H  -3.091000  0.831400 -0.703700
H  -4.077200 -0.009300 -1.920800
H   1.838700  0.773800 -2.674600
H  -3.142500 -0.954400 -0.730600
N  -3.065600 -3.109100  1.062700
C  -1.966300 -3.119900  0.661300
N   2.983000 -3.168700 -1.146000
C   1.883700 -3.157800 -0.744600
Ag  -0.041300 -3.138900 -0.041700
Au  -0.087400 -6.199400 -0.085300
N  -0.177300 -6.197100  2.964100
N   1.853500 -6.195500  2.268300
C   0.572000 -6.223600  1.839800
C   1.907400 -6.152800  3.642200
H   2.840800 -6.135700  4.183500
C   0.622700 -6.153200  4.082400
H   0.217400 -6.135300  5.082300
C  -1.632200 -6.181300  2.978700
H  -2.006400 -5.273500  2.497300
H  -2.015300 -7.059800  2.454800
C   3.011600 -6.189000  1.387500
H   3.024600 -7.100300  0.785200
H   2.983300 -5.314300  0.732100
H  -1.970500 -6.209800  4.015700
H   3.914300 -6.154000  1.999500
N   0.003800 -6.112900 -3.133500
N  -2.026200 -6.070000 -2.437000
C  -0.746400 -6.148900 -2.010000
C  -2.078300 -5.986600 -3.809100
H  -3.010400 -5.926000 -4.349300
C  -0.794000 -6.013100 -4.249700
H  -0.387900 -5.978800 -5.248800

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C   1.458600 -6.140400 -3.148200
H   1.859700 -5.258400 -2.641200
H   1.814900 -7.044600 -2.649700
C  -3.184100 -6.053800 -1.555900
H  -3.224700 -6.981000 -0.979800
H  -3.129700 -5.199300 -0.875800
H   1.796300 -6.149500 -4.185700
H  -4.085000 -5.974200 -2.166300

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III-S1

73

Molecule Name

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N   0.007000  2.541200  1.024800
C   0.003200  1.389800  0.825400
N  -0.009700 -3.414000 -1.272400
C  -0.007500 -2.399900 -0.689600
Ag  -0.002900 -0.549800  0.176300
Au   3.535300 -0.166100 -0.023800
N   3.464500 -2.996500  1.122800
N   3.324700 -3.056400 -1.015900
C   3.444100 -2.204500  0.025000
C   3.251400 -4.357200 -0.579800
H   3.116500 -5.184500 -1.258700
C   3.349000 -4.322400  0.771600
H   3.341600 -5.115600  1.503200
C   3.603000 -2.530500  2.487900
H   3.458200 -1.449400  2.502600
H   2.841700 -3.000500  3.115600
C   3.155100 -2.668200 -2.403100
H   3.421500 -1.615200 -2.504100
H   3.814600 -3.268600 -3.034700
H   4.596900 -2.771300  2.876800
H   2.110700 -2.818400 -2.689300
N   2.990600  2.730800 -0.849600
N   4.340200  2.661800  0.813500
C   3.640800  1.872500 -0.034900
C   4.118000  3.993100  0.540400
H   4.574800  4.783900  1.115300
C   3.263200  4.034900 -0.511000
H   2.811300  4.863400 -1.032600
C   2.130300  2.356000 -1.956100
H   1.705200  1.371800 -1.753700
H   1.328200  3.093500 -2.026100
C   5.170900  2.189600  1.903600
H   5.342900  1.120600  1.771200
H   6.131200  2.711200  1.887700
H   2.702500  2.327900 -2.888500
H   4.675600  2.363700  2.863200
Au  -3.535700 -0.153000 -0.024500
N  -3.484700 -2.988200  1.111500
N  -3.342000 -3.040900 -1.027200
C  -3.457600 -2.192200  0.016800
C  -3.277500 -4.343700 -0.595900
H  -3.146800 -5.169300 -1.277800
C  -3.376900 -4.313500  0.755400
H  -3.375600 -5.109500  1.484000
C  -3.622200 -2.526700  2.478200
H  -3.473400 -1.446100  2.496700
H  -4.617200 -2.765100  2.865700
C  -3.167200 -2.648400 -2.412500
H  -3.429600 -1.594000 -2.510600

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H	-2.122700	-2.801300	-2.696600
H	-2.863000	-3.001600	3.104600
H	-3.827200	-3.244200	-3.048000
N	-2.976700	2.743800	-0.841600
N	-4.319400	2.676400	0.827000
C	-3.628600	1.886200	-0.027600
C	-4.090100	4.007400	0.558300
H	-4.539400	4.798600	1.138400
C	-3.239600	4.048100	-0.496700
H	-2.784600	4.875900	-1.016800
C	-2.123600	2.368100	-1.953400
H	-1.702100	1.381300	-1.755800
H	-2.700300	2.345200	-2.883100
C	-5.147300	2.204800	1.919500
H	-5.333900	1.139200	1.779100
H	-4.642300	2.364100	2.876700
H	-1.318400	3.102100	-2.025300
H	-6.100900	2.738600	-1.915800
O	0.011000	4.663000	-0.813500
H	0.009800	4.006700	-0.080200
C	0.017500	5.950900	-0.242700
H	0.907800	6.128300	0.378900
H	0.019900	6.679700	-1.059100
H	-0.869900	6.136500	0.380700

## III-2S1

79

## Molecule Name

Au	-3.435200	-0.000200	0.000000
N	-3.009800	2.949400	0.714700
N	-3.925400	2.759900	-1.214100
C	-3.461100	2.034600	-0.170400
C	-3.754100	4.106700	-0.989400
H	-4.046000	4.853800	-1.711300
C	-3.174200	4.224800	0.230200
H	-2.852300	5.091100	0.785800
C	-2.402600	2.657900	2.000100
H	-2.050400	1.625100	1.994300
H	-1.557100	3.335700	2.142400
C	-4.471800	2.208800	-2.438700
H	-4.651100	1.143100	-2.290200
H	-5.417300	2.702500	-2.677200
H	-3.132600	2.790900	2.804400
H	-3.766700	2.347400	-3.263100
N	-3.009200	-2.949800	-0.714700
N	-3.924800	-2.760500	1.214200
C	-3.460700	-2.035100	0.170400
C	-3.753100	-4.107200	0.989500
H	-4.044900	-4.854400	1.711300
C	-3.173300	-4.225200	-0.230100
H	-2.851200	-5.091500	-0.785800
C	-2.402100	-2.658200	-2.000100
H	-2.050200	-1.625300	-1.994400
H	-1.556500	-3.335800	-2.142500
C	-4.471400	-2.209500	2.438700
H	-4.651000	-1.143800	2.290200
H	-5.416900	-2.703300	2.677200
H	-3.132200	-2.791400	-2.804400
H	-3.766300	-2.348000	3.263200
N	0.000300	-3.064100	0.955300
C	0.000200	-1.928100	0.679800
N	-0.000400	3.064100	-0.955300

C	-0.000200	1.928100	-0.679800
Ag	0.000000	-0.000000	-0.000000
Au	3.435200	0.000200	0.000000
N	3.009200	2.949800	0.714700
N	3.924800	2.760400	-1.214100
C	3.460700	2.035100	-0.170400
C	3.753200	4.107200	-0.989400
H	4.044900	4.854400	-1.711300
C	3.173300	4.225200	0.230200
H	2.851200	5.091500	0.785800
C	2.402000	2.658200	2.000100
H	2.050000	1.625400	1.994300
H	3.132000	2.791300	2.804400
C	4.471500	2.209500	-2.438600
H	4.651000	1.143800	-2.290100
H	3.766400	2.348000	-3.263100
H	1.556400	3.335900	2.142400
H	5.417000	2.703300	-2.677000
N	3.009800	-2.949400	-0.714800
N	3.925300	-2.759900	1.214200
C	3.461100	-2.034600	0.170400
C	3.753900	-4.106700	0.989400
H	4.045800	-4.853800	1.711300
C	3.174100	-4.224800	-0.230200
H	2.852200	-5.091100	-0.785800
C	2.402700	-2.657900	-2.000200
H	2.050600	-1.625100	-1.994500
H	3.132800	-2.791000	-2.804500
C	4.471700	-2.208800	2.438700
H	4.651200	-1.143100	2.290200
H	3.766600	-2.347300	3.263100
H	1.557200	-3.335600	-2.142600
H	5.417200	-2.702600	2.677300
O	0.000500	-4.900000	-1.184400
H	0.000400	-4.370900	-0.356900
C	0.000500	-6.265400	-0.840800
H	-0.887200	-6.553600	-0.257700
H	0.000600	-6.843400	-1.769500
H	0.888200	-6.553600	-0.257600
O	-0.000400	4.900100	1.184300
H	-0.000400	4.370900	0.356900
C	-0.000500	6.265400	0.840600
H	-0.000500	6.843600	1.769100
H	0.887100	6.553600	0.257200
H	-0.888300	6.553500	0.257300

## III-3S1

85

## Molecule Name

Au	-3.313800	0.413400	0.007600
N	-3.518700	-2.526500	-0.837600
N	-3.637700	-2.338200	1.296400
C	-3.498100	-1.615900	0.162100
C	-3.734200	-3.679900	1.012400
H	-3.851000	-4.424700	1.784500
C	-3.659400	-3.798400	-0.336300
H	-3.699000	-4.667400	-0.974900
C	-3.295700	-2.243300	-2.243700
H	-3.165100	-1.166800	-2.361800
H	-2.389000	-2.757900	-2.578200
C	-3.567000	-1.809500	2.647400
H	-3.628100	-0.721500	2.595800

H	-4.407000	-2.188000	3.235700
H	-4.155400	-2.572100	-2.834400
H	-2.617300	-2.110800	3.101700
N	-2.583200	3.296700	0.721500
N	-3.660700	3.231400	-1.130100
C	-3.182200	2.444900	-0.138400
C	-3.353900	4.553000	-0.898200
H	-3.631700	5.338700	-1.583800
C	-2.671200	4.592200	0.272400
H	-2.224600	5.412400	0.811800
C	-1.923000	2.921300	1.958300
H	-1.557000	1.897300	1.864400
H	-1.081100	3.600000	2.115400
C	-4.351000	2.758600	-2.313900
H	-4.625300	1.713900	-2.162000
H	-5.258000	3.347400	-2.472800
H	-2.622100	2.985100	2.797700
H	-3.701500	2.841600	-3.190000
N	0.442600	3.460100	-0.992800
C	0.297900	2.301600	-0.945900
N	-0.342100	-2.807800	0.110900
C	-0.204600	-1.678600	-0.165600
Ag	0.046300	0.301000	-0.613200
Au	3.327900	-0.228800	0.050400
N	2.876800	-3.062800	-1.014600
N	2.944500	-3.065600	1.129800
C	3.031900	-2.250000	0.055000
C	2.726600	-4.365700	0.739100
H	2.622300	-5.170500	1.450500
C	2.684400	-4.363700	-0.616300
H	2.534600	-5.163700	-1.324400
C	2.831800	-2.640300	-2.402700
H	2.822000	-1.549800	-2.431400
H	3.709300	-3.011200	-2.940500
C	2.941200	-2.633900	2.516500
H	3.294200	-1.602500	2.558200
H	1.924000	-2.697700	2.918300
H	1.916300	-3.029700	-2.857400
H	3.617100	-3.265900	3.098700
N	3.238300	2.706500	0.923100
N	4.350100	2.490000	-0.896300
C	3.667200	1.784300	0.034600
C	4.336000	3.834000	-0.600000
H	4.811300	4.568900	-1.231100
C	3.631800	3.969400	0.550500
H	3.359800	4.842000	1.122800
C	2.455000	2.433900	2.113600
H	1.919800	1.493200	1.973600
H	3.106400	2.357100	2.989500
C	4.954000	1.933100	-2.090800
H	5.026400	0.851100	-1.972500
H	4.342300	2.163900	-2.967700
H	1.740000	3.249500	2.246300
H	5.956600	2.346900	-2.223500
O	0.544200	5.076300	1.300200
H	0.533300	4.626400	0.425900
C	0.695500	6.460900	1.087200
H	-0.125600	6.887000	0.491400
H	1.639500	6.707100	0.578200
H	0.697100	6.951000	2.065000
O	-0.229200	-4.160600	-2.447500
H	-0.261000	-3.827300	-1.530400
C	-0.511800	-5.539000	-2.434100
H	0.222000	-6.117300	-1.851500

H	-1.510800	-5.762500	-2.029300
H	-0.479700	-5.893200	-3.467900
C	-0.558400	-4.650400	3.261700
O	-0.456100	-3.282400	2.947800
H	0.309700	-5.230700	2.912400
H	-1.463000	-5.114100	2.839800
H	-0.433800	-3.195800	1.974000
H	-0.607200	-4.738400	4.350500

## III-4S1

91

## Molecule Name

Au	-3.224800	-0.021700	-0.000000
N	-3.392700	2.973200	0.596700
N	-3.095200	2.644700	-1.502400
C	-3.248500	1.995200	-0.326400
C	-3.132400	4.005900	-1.317800
H	-3.022500	4.699100	-2.137100
C	-3.319000	4.213700	0.009100
H	-3.402100	5.126700	0.578300
C	-3.463000	2.768400	2.032300
H	-3.721500	1.725500	2.221300
H	-2.494300	2.998900	2.489300
C	-2.835300	2.023800	-2.788700
H	-2.705200	0.951800	-2.634700
H	-3.676100	2.193600	-3.467600
H	-4.240100	3.409900	2.455600
H	-1.917700	2.450200	-3.205300
N	-3.351800	-3.018800	-0.596700
N	-3.058900	-2.686100	1.502400
C	-3.221000	-2.038900	0.326400
C	-3.077600	-4.047700	1.317900
H	-2.958300	-4.739400	2.137300
C	-3.261300	-4.258100	-0.009000
H	-3.332000	-5.172200	-0.578200
C	-3.424700	-2.815000	-2.032300
H	-3.697000	-1.775700	-2.221400
H	-2.452900	-3.032600	-2.489200
C	-2.807600	-2.061800	2.788700
H	-2.692000	-0.988100	2.634600
H	-3.646000	-2.242900	3.467600
H	-4.193100	-3.466900	-2.455600
H	-1.884200	-2.475600	3.205300
N	0.021900	-3.218600	0.000000
C	0.014000	-2.047500	-0.000000
N	-0.021900	3.218700	0.000000
C	-0.013900	2.047600	-0.000100
Ag	0.000000	0.000000	-0.000100
Au	3.224800	0.021700	0.000000
N	3.058900	2.686100	1.502400
N	3.351800	3.018800	-0.596700
C	3.221000	2.038900	0.326400
C	3.261300	4.258100	-0.009000
H	3.332100	5.172100	-0.578200
C	3.077700	4.047700	1.317900
H	2.958400	4.739400	2.137300
C	2.807500	2.061800	2.788800
H	2.691900	0.988100	2.634700
H	3.645900	2.242900	3.467700
C	3.424700	2.815000	-2.032200
H	3.697100	1.775700	-2.221400
H	2.453000	3.032600	-2.489100
H	1.884200	2.475600	3.205300

H	4.193200	3.466900	-2.455600
N	3.095200	-2.644600	-1.502400
N	3.392700	-2.973300	0.596700
C	3.248500	-1.995200	-0.326400
C	3.319000	-4.213700	0.009000
H	3.402200	-5.126700	0.578300
C	3.132400	-4.005900	-1.317800
H	3.022500	-4.699100	-2.137200
C	2.835300	-2.023800	-2.788700
H	2.705200	-0.951700	-2.634600
H	3.676100	-2.193600	-3.467600
C	3.462900	-2.768500	2.032300
H	3.721400	-1.725600	2.221400
H	2.494200	-2.999000	2.489300
H	1.917700	-2.450100	-3.205300
H	4.240100	-3.409900	2.455600
O	-0.067700	-3.848100	-2.843800
H	-0.019500	-3.736800	-1.875500
C	-0.178600	-5.223500	-3.124800
H	-1.092600	-5.668000	-2.702000
H	0.680700	-5.801900	-2.752400
H	-0.219600	-5.336700	-4.211400
O	-0.120100	3.846700	2.843900
H	-0.070400	3.736100	1.875600
C	-0.249500	5.220500	3.124900
H	0.601800	5.810500	2.752400
H	-1.169500	5.652500	2.702300
H	-0.292000	5.333100	4.211500
C	0.178600	5.223500	-3.124900
O	0.067700	3.848100	-2.843800
H	1.092600	5.668000	-2.702100
H	-0.680700	5.801900	-2.752600
H	0.019500	3.736800	-1.875500
H	0.219700	5.336600	-4.211500
C	0.249400	-5.220600	3.124800
O	0.119900	-3.846800	2.843800
H	1.169400	-5.652600	2.702300
H	-0.601900	-5.810600	2.752300
H	0.070300	-3.736200	1.875500
H	0.291700	-5.333200	4.211400

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Molecule Name

N	-0.215400	-3.462600	-1.411700
C	-0.158300	-2.473200	-0.790400
N	0.169800	2.383900	1.125000
C	0.089800	1.244800	0.876700
Ag	-0.042700	-0.662600	0.149000
Au	3.499100	-0.448900	0.008000
N	3.152100	2.482600	-0.808700
N	4.504100	2.313100	0.845500
C	3.744300	1.578000	0.000000
C	4.377300	3.657400	0.575800
C	3.520800	3.762800	-0.469700
C	2.254300	2.174800	-1.906300
C	5.305500	1.779800	1.929300
N	3.214500	-3.266000	1.155000
N	3.132000	-3.323500	-0.986900
C	3.275000	-2.477600	0.056000
C	2.965100	-4.615900	-0.551300
C	3.025600	-4.583100	0.802400
C	3.334700	-2.804700	2.523500

C	3.035500	-2.931000	-2.379900
H	4.894400	4.412100	1.148300
H	3.131300	4.623700	-0.989300
H	1.789600	1.205900	-1.718400
H	1.484700	2.948800	-1.941500
H	2.806900	2.143600	-2.850400
H	5.387800	0.699700	1.800800
H	6.305000	2.221000	1.901000
H	4.835800	1.997900	2.892800
H	2.800200	-5.435400	-1.233100
H	2.948000	-5.372100	1.534500
H	3.321600	-1.713900	2.523900
H	2.490600	-3.171700	3.112900
H	4.270800	-3.158400	2.965700
H	3.344200	-1.888400	-2.467800
H	3.698300	-3.555500	-2.984100
H	1.999000	-3.041500	-2.709600
Au	-3.540700	-0.116700	0.001400
N	-2.828500	2.790200	-0.639800
N	-4.087500	2.687100	1.091100
C	-3.494200	1.918900	0.147900
C	-3.784600	4.017000	0.902000
C	-2.987200	4.080100	-0.192400
C	-2.053500	2.441500	-1.815900
C	-4.886600	2.190600	2.193700
N	-3.709200	-3.028500	0.915800
N	-3.520900	-2.926300	-1.217300
C	-3.602900	-2.154300	-0.112400
C	-3.554200	-4.259800	-0.888300
C	-3.682200	-4.326800	0.459200
C	-3.840000	-2.666100	2.312500
C	-3.292300	-2.441300	-2.564900
H	-4.150000	4.790900	1.559300
H	-2.504400	4.913000	-0.678200
H	-1.674800	1.424800	-1.699100
H	-2.676400	2.503800	-2.713400
H	-1.215300	3.137600	-1.887500
H	-5.146800	1.150400	1.992900
H	-4.324100	2.252200	3.129700
H	-5.803900	2.778800	2.278300
H	-3.465900	-5.037600	-1.630600
H	-3.751300	-5.174600	1.123200
H	-3.678300	-1.591600	2.408000
H	-4.838300	-2.918800	2.681900
H	-3.087300	-3.194200	2.903500
H	-3.470600	-1.365200	-2.580700
H	-2.257600	-2.651300	-2.848300
H	-3.984900	-2.931500	-3.253600
C	0.395800	5.825700	-0.101000
C	0.441200	6.857700	-1.207700
O	0.262700	4.542000	-0.678500
H	1.312100	5.885600	0.507700
H	-0.447200	6.037900	0.576200
H	-0.473500	6.822800	-1.809700
H	0.543600	7.866700	-0.795700
H	1.287500	6.672100	-1.878500
H	0.240000	3.877400	0.047000

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Molecule Name

Au	3.446000	0.514200	-0.030200
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N	2.542400	3.426000	-0.337600
N	3.510100	3.128300	1.551700
C	3.150400	2.485100	0.416600
C	3.119600	4.447800	1.511900
H	3.300100	5.128100	2.330000
C	2.506400	4.633800	0.317000
H	2.036200	5.502400	-0.116500
C	1.975600	3.216900	-1.657200
H	1.730700	2.159700	-1.769900
H	1.064600	3.815000	-1.737600
C	4.164500	2.513700	2.690300
H	4.506100	1.519200	2.399400
H	5.025900	3.115600	2.991600
H	2.691600	3.513100	-2.430000
H	3.465700	2.427700	3.527600
N	3.577100	-2.533700	0.291100
N	4.330600	-1.934100	-1.625100
C	3.802900	-1.446400	-0.477800
C	4.422400	-3.306000	-1.577800
H	4.804000	-3.888700	-2.402100
C	3.945000	-3.682900	-0.366600
H	3.829600	-4.659900	0.076000
C	2.982700	-2.526000	1.615600
H	2.555600	-1.538400	1.796900
H	2.189400	-3.278700	1.657400
C	4.705100	-1.139900	-2.778400
H	4.660400	-0.085200	-2.502100
H	5.724400	-1.388100	-3.085700
H	3.744300	-2.738000	2.372100
H	4.015500	-1.328500	-3.606300
N	0.543300	-3.195800	-1.122200
C	0.360600	-2.079100	-0.827400
N	-0.460900	2.759800	1.050000
C	-0.272400	1.663100	0.693400
Ag	0.049300	-0.200200	-0.083500
Au	-3.463600	-0.446300	-0.064900
N	-3.432600	2.577100	-0.568700
N	-4.459000	2.122700	1.257600
C	-3.812200	1.546700	0.217400
C	-4.471900	3.493200	1.128500
H	-4.928900	4.137800	1.863600
C	-3.820600	3.778800	-0.026000
H	-3.584800	4.719000	-0.498500
C	-2.697800	2.465800	-1.815300
H	-2.173800	1.509100	-1.828300
H	-3.383700	2.521500	-2.666400
C	-5.025800	1.413300	2.388100
H	-4.972500	0.342600	2.186600
H	-4.461900	1.639700	3.297600
H	-1.972600	3.281900	-1.861200
H	-6.071700	1.702600	2.522600
N	-2.565300	-3.315000	0.512000
N	-3.475100	-3.184500	-1.425100
C	-3.152500	-2.445000	-0.338700
C	-3.083700	-4.493700	-1.259500
H	-3.232500	-5.240900	-2.023800
C	-2.507800	-4.574400	-0.034500
H	-2.028200	-5.392200	0.479600
C	-2.050200	-2.992200	1.830600
H	-1.823700	-1.925200	1.868300
H	-2.792700	-3.234400	2.597200
C	-4.099400	-2.674600	-2.630200
H	-4.415500	-1.646300	-2.448600
H	-3.388600	-2.694900	-3.461500

H	-1.138000	-3.570400	1.995900
H	-4.974200	-3.281100	-2.880400
O	0.534300	-4.956900	1.096800
H	0.565800	-4.492300	0.232800
C	1.032600	-6.271100	0.943000
H	2.101100	-6.258000	0.668100
H	0.505200	-6.799500	0.132600
C	0.854200	-7.012500	2.249900
H	1.255000	-8.029000	2.179900
H	1.373400	-6.489700	3.060600
H	-0.206800	-7.077700	2.514900
O	-0.720300	4.979500	-0.646900
H	-0.653000	4.298000	0.058800
C	-0.947500	6.236500	-0.042000
H	-1.868400	6.219100	0.563600
H	-0.126900	6.495100	0.647700
C	-1.061000	7.287800	-1.125500
H	-1.891100	7.057200	-1.803000
H	-1.234700	8.277500	-0.689700
H	-0.143100	7.329300	-1.722900

## III-3S2

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## Molecule Name

Au	-0.402400	3.318700	-0.078200
N	-3.324200	2.730700	-0.790800
N	-3.089500	2.948300	1.330800
C	-2.401600	2.975800	0.167200
C	-4.419100	2.679800	1.106000
H	-5.136600	2.613000	1.909300
C	-4.566900	2.542800	-0.234800
H	-5.439900	2.334200	-0.833900
C	-3.049100	2.560800	-2.205900
H	-1.980100	2.704700	-2.368300
H	-3.329300	1.547300	-2.511200
C	-2.507500	3.054000	2.657200
H	-1.478400	3.401700	2.556000
H	-3.072900	3.777400	3.250700
H	-3.607700	3.298900	-2.788700
H	-2.526700	2.069900	3.137000
N	2.600600	3.365700	0.503000
N	2.178600	4.349600	-1.353600
C	1.586100	3.708700	-0.319800
C	3.543900	4.394200	-1.184700
H	4.200800	4.846900	-1.911200
C	3.809100	3.770200	-0.010700
H	4.739700	3.556700	0.490600
C	2.463000	2.660100	1.763700
H	1.565500	2.040200	1.723500
H	3.342800	2.026100	1.897800
C	1.492500	4.868000	-2.520700
H	0.421600	4.889400	-2.313900
H	1.836800	5.883900	-2.729900
H	2.379900	3.371300	2.591200
H	1.684000	4.229800	-3.388100
N	3.467600	0.463800	-1.212400
C	2.314900	0.301800	-1.110400
N	-2.728300	-0.388000	0.203300
C	-1.616600	-0.234500	-0.129700
Ag	0.335700	0.028900	-0.679000
Au	0.690600	-3.273400	0.009700
N	-2.216000	-3.594400	-0.895000

N	-2.088800	-3.593900	1.246700
C	-1.335700	-3.503400	0.127300
C	-3.419700	-3.728100	0.929600
H	-4.186000	-3.809200	1.685000
C	-3.499800	-3.728900	-0.424100
H	-4.348000	-3.810600	-1.085700
C	-1.894000	-3.480100	-2.306000
H	-0.840700	-3.211800	-2.399400
H	-2.073100	-4.432500	-2.813700
C	-1.600800	-3.434600	2.605100
H	-0.511400	-3.491200	2.589400
H	-1.918900	-2.462200	2.996800
H	-2.515200	-2.693500	-2.744600
H	-1.991100	-4.240300	3.232500
N	3.540200	-2.406500	0.717800
N	3.533300	-3.589600	-1.069200
C	2.719600	-3.084500	-0.113300
C	4.840300	-3.221300	-0.844800
H	5.642600	-3.509300	-1.506500
C	4.842700	-2.472100	0.284900
H	5.641400	-1.967200	0.804800
C	3.129700	-1.688300	1.910000
H	2.084800	-1.393500	1.799400
H	3.239200	-2.324000	2.794100
C	3.098300	-4.361400	-2.216600
H	2.063500	-4.667500	-2.057400
H	3.164300	-3.757800	-3.126200
H	3.755900	-0.797900	2.004900
H	3.723300	-5.252000	-2.321000
O	5.157900	0.830900	1.008100
H	4.689600	0.709900	0.151900
C	6.536000	1.021300	0.750800
H	6.692900	1.881900	0.080900
H	6.963100	0.143800	0.238800
C	7.250600	1.251000	2.064900
H	7.117100	0.393000	2.732300
H	8.323200	1.398500	1.903400
H	6.853100	2.136900	2.571600
O	-4.099400	-0.863600	-2.323100
H	-3.754300	-0.738900	-1.418400
C	-5.508500	-0.953500	-2.265400
H	-5.824400	-1.792200	-1.623100
H	-5.943300	-0.040600	-1.825600
C	-6.039300	-1.150200	-3.668400
H	-7.131700	-1.221700	-3.664700
H	-5.748200	-0.312100	-4.309800
H	-5.634200	-2.067800	-4.107600
C	-4.461300	-0.580000	3.438200
O	-3.127900	-0.310100	3.056900
H	-4.780400	-1.572300	3.077700
H	-5.154200	0.152800	2.992800
H	-3.077600	-0.331800	2.080300
C	-4.555800	-0.528600	4.947400
H	-4.268200	0.460800	5.318200
H	-5.577000	-0.739400	5.281100
H	-3.884400	-1.265800	5.399800

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Molecule Name

Au	0.000700	3.239700	-0.000600
N	2.867600	3.265700	1.073700

N	2.868700	3.266600	-1.071800
C	2.044400	3.262700	0.000500
C	4.184900	3.261800	-0.676200
H	4.998800	3.258900	-1.384900
C	4.184200	3.261300	0.679500
H	4.997300	3.257800	1.389000
C	2.451200	3.164700	2.460800
H	1.363000	3.227000	2.498800
H	2.781600	2.203900	2.870000
C	2.453800	3.166300	-2.459500
H	1.365700	3.229900	-2.498600
H	2.882200	3.990900	-3.035900
H	2.878000	3.989700	3.037900
H	2.783500	2.205200	-2.868400
N	-2.866300	3.265000	-1.074800
N	-2.867300	3.267200	1.070700
C	-2.043100	3.262700	-0.001700
C	-4.183500	3.262200	0.675100
H	-4.997400	3.259500	1.383800
C	-4.182900	3.260900	-0.680600
H	-4.996000	3.256800	-1.390100
C	-2.449900	3.163900	-2.462000
H	-1.361600	3.225200	-2.499800
H	-2.781100	2.203500	-2.871300
C	-2.452300	3.168200	2.458400
H	-1.364200	3.230200	2.497300
H	-2.879400	3.994200	3.033800
H	-2.875900	3.989400	-3.038900
H	-2.783300	2.208100	2.868800
N	-3.221800	0.000100	0.002900
C	-2.050700	0.000100	0.001900
N	3.215500	-0.000100	-0.001400
C	2.044400	-0.000100	-0.000500
Ag	-0.003200	0.000000	0.000700
Au	0.000300	-3.239700	-0.000600
N	2.867300	-3.265900	1.073700
N	2.868400	-3.266700	-1.071800
C	2.044100	-3.262800	0.000500
C	4.184600	-3.262100	-0.676200
H	4.998400	-3.259200	-1.384900
C	4.183900	-3.261600	0.679500
H	4.997000	-3.258200	1.389000
C	2.450900	-3.164900	2.460800
H	1.362700	-3.227100	2.498800
H	2.877600	-3.989900	3.037900
C	2.453400	-3.166500	-2.459400
H	1.365400	-3.230000	-2.498600
H	2.783300	-2.205400	-2.868400
H	2.781400	-2.204100	2.870000
H	2.881800	-3.991100	-3.035900
N	-2.866600	-3.264800	-1.074800
N	-2.867700	-3.267000	1.070700
C	-2.043400	-3.262600	-0.001700
C	-4.183900	-3.261900	0.675100
H	-4.997700	-3.259100	1.383800
C	-4.183200	-3.260600	-0.680600
H	-4.996300	-3.256500	-1.390100
C	-2.450100	-3.163800	-2.461900
H	-1.361900	-3.225200	-2.499800
H	-2.876200	-3.989200	-3.038900
C	-2.452700	-3.168000	2.458400
H	-1.364500	-3.230100	2.497300
H	-2.783600	-2.207900	2.868800
H	-2.781300	-2.203300	-2.871300



H	-2.879800	-3.994000	3.033800
O	-3.853000	0.000100	-2.848800
H	-3.741400	0.000100	-1.878800
C	-5.236600	0.000200	-3.140200
H	-5.729500	0.884300	-2.703400
H	-5.729600	-0.884000	-2.703500
C	-5.415500	0.000200	-4.642300
H	-4.948000	-0.885400	-5.085000
H	-6.477700	0.000200	-4.907700
H	-4.947900	0.885800	-5.085000
O	3.850300	-0.000200	2.849400
H	3.737600	-0.000200	1.879600
C	5.234300	-0.000200	3.139300
H	5.726600	-0.884400	2.702000
H	5.726700	0.883900	2.702000
C	5.414800	-0.000200	4.641200
H	6.477300	-0.000200	4.905400
H	4.947800	0.885400	5.084400
H	4.947700	-0.885800	5.084400
C	5.232100	-0.000300	-3.143300
O	3.848600	-0.000200	-2.851600
H	5.725000	-0.884400	-2.706500
H	5.725200	0.883900	-2.706500
H	3.737000	-0.000200	-1.881600
C	5.410900	-0.000300	-4.645400
H	4.943300	0.885300	-5.088000
H	6.473000	-0.000300	-4.910900
H	4.943200	-0.885800	-5.088000
C	-5.229100	0.000300	3.150400
O	-3.846000	0.000100	2.856700
H	-5.722800	-0.883800	2.714400
H	-5.722600	0.884500	2.714300
H	-3.736000	0.000100	1.886500
C	-5.405600	0.000400	4.652700
H	-6.467300	0.000600	4.919800
H	-4.937400	-0.885200	5.094700
H	-4.937200	0.886000	5.094600

## 19. The T<sub>1</sub> .xyz files of I and its complexes

I

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Molecule Name

Au	2.767000	0.000000	0.000000
N	2.863400	-2.868900	1.031100
N	2.883200	-2.832400	-1.122500
C	2.856900	-2.025900	-0.031900
C	2.921200	-4.155900	-0.746000
H	2.957300	-4.958700	-1.466200
C	2.909100	-4.178900	0.610800
H	2.933200	-5.005600	1.303900
C	2.866700	-2.435200	2.416300
H	2.008800	-1.786800	2.612100
H	2.806500	-3.314800	3.059300
C	2.907400	-2.351500	-2.491900
H	3.821700	-1.777500	-2.669300
H	2.889800	-3.209800	-3.165300
N	0.001000	-0.006500	3.161400
C	0.000700	-0.003900	1.991000
H	3.791900	-1.894500	2.637100
H	2.036000	-1.721300	-2.687800
N	2.862900	2.868900	-1.031200
N	2.882800	2.832500	1.122400
C	2.856600	2.026000	0.031900
C	2.920500	4.156000	0.745900
H	2.956500	4.958800	1.466000
C	2.908300	4.178900	-0.610900
H	2.932300	5.005600	-1.304000
C	2.866100	2.435100	-2.416300
H	2.008000	1.786900	-2.612100
H	2.806100	3.314700	-3.059300
C	2.907200	2.351700	2.491900
H	3.821600	1.777800	2.669200
H	2.889800	3.210100	3.165300
N	0.000500	0.006400	-3.161600
C	0.000400	0.003700	-1.991200
H	3.791100	1.894200	-2.637000
H	2.035900	1.721600	2.688100
Au	-2.766100	0.000000	0.000100
N	-2.887600	-2.832500	1.121400
N	-2.859600	-2.868900	-1.032100
C	-2.856500	-2.025900	0.031000
C	-2.908900	-4.178900	-0.611900
H	-2.931400	-5.005600	-1.305200
C	-2.925800	-4.155900	0.744700
H	-2.964300	-4.958700	1.464800
C	-2.914700	-2.351700	2.490800
H	-2.041900	-1.724600	2.690000
H	-3.827800	-1.774700	2.665200
C	-2.862800	-2.435600	-2.417300
H	-3.805800	-1.932400	-2.651400
H	-2.028500	-1.754100	-2.601000
H	-2.902500	-3.210300	3.164100
H	-2.757600	-3.311700	-3.059300
N	-2.887200	2.832500	-1.121300
N	-2.858900	2.869000	1.032200
C	-2.856100	2.026000	-0.030800
C	-2.908000	4.179000	0.612000
H	-2.930200	5.005700	1.305300
C	-2.925100	4.155900	-0.744600

H	-2.963500	4.958700	-1.464700
C	-2.914800	2.351700	-2.490700
H	-2.042200	1.724300	-2.689900
H	-3.828000	1.775100	-2.664900
C	-2.862100	2.435800	2.417400
H	-3.805500	1.933400	2.651900
H	-2.028300	1.753500	2.601000
H	-2.902300	3.210300	-3.164000
H	-2.755900	3.311900	3.059400
Au	0.000500	-0.000100	-0.000100

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Molecule Name

Au	2.767500	-0.138400	-0.150900
N	2.962300	-2.639100	1.587600
N	3.004400	-3.157900	-0.502400
C	2.935100	-2.098900	0.342900
C	3.090300	-4.337000	0.202700
H	3.162000	-5.296400	-0.286000
C	3.065000	-4.010600	1.519400
H	3.112800	-4.629500	2.402100
C	2.944500	-1.863600	2.813000
H	2.123400	-1.142800	2.786000
H	2.796800	-2.540300	3.656400
C	3.025000	-3.045400	-1.949300
H	3.931400	-2.523300	-2.270400
H	3.020400	-4.048300	-2.379200
N	0.000200	0.774900	2.901800
C	0.000100	0.385200	1.798200
H	3.893600	-1.334000	2.940800
H	2.144000	-2.500900	-2.298100
N	2.758300	2.342200	-1.915500
N	2.776400	2.907700	0.162600
C	2.787700	1.829900	-0.659100
C	2.751400	4.073900	-0.567300
H	2.740900	5.045100	-0.097000
C	2.743300	3.718200	-1.876600
H	2.731600	4.319400	-2.772800
C	2.795400	1.541900	-3.125700
H	2.013500	0.779100	-3.096900
H	2.624300	2.194700	-3.983300
C	2.818700	2.858300	1.613200
H	3.753300	3.301800	1.970200
H	1.958800	3.384700	2.039900
N	-0.000300	-1.099400	-3.136200
C	-0.000100	-0.769500	-2.013100
H	3.773300	1.062500	-3.231500
H	2.775400	1.813600	1.922900
Au	-2.767500	-0.137800	-0.150800
N	-2.963000	-2.638300	1.588000
N	-3.005400	-3.157200	-0.501900
C	-2.935700	-2.098200	0.343200
C	-3.091700	-4.336200	0.203300
H	-3.163800	-5.295700	-0.285300
C	-3.066300	-4.009700	1.519900
H	-3.114300	-4.628600	2.402700
C	-2.944900	-1.862700	2.813300
H	-2.124100	-1.141700	2.785900
H	-3.894100	-1.333400	2.941600
C	-3.026100	-3.044900	-1.948900

H	-3.932300	-2.522600	-2.270000
H	-2.144900	-2.500600	-2.297700
H	-2.796600	-2.539300	3.656700
H	-3.021600	-4.047800	-2.378700
N	-2.757800	2.342500	-1.915800
N	-2.775500	2.908400	0.162200
C	-2.787200	1.830400	-0.659300
C	-2.750400	4.074400	-0.567900
H	-2.739700	5.045700	-0.097800
C	-2.742500	3.718500	-1.877100
H	-2.730800	4.319500	-2.773400
C	-2.795500	1.542100	-3.125800
H	-3.774000	1.063900	-3.232000
H	-2.623200	2.194500	-3.983500
C	-2.817500	2.859200	1.612900
H	-3.751700	3.303400	1.970000
H	-2.774800	1.814600	1.922800
H	-2.014500	0.778300	-3.096600
H	-1.957200	3.385300	2.039300
Au	0.000000	-0.201600	-0.105400
O	0.000700	3.651200	3.178700
H	0.000400	2.677100	3.253200
C	0.000700	4.194400	4.482000
H	0.891500	3.901400	5.055500
H	0.001500	5.283300	4.383300
H	-0.890900	3.902600	5.055000

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## Molecule Name

Au	-2.847800	0.003400	-0.000200
N	-2.774300	-2.934100	-0.902400
N	-3.437100	-2.751500	1.133500
C	-3.033500	-2.022800	0.064700
C	-3.430700	-4.095400	0.837700
H	-3.714100	-4.845600	1.559500
C	-3.017800	-4.209700	-0.448300
H	-2.871500	-5.076400	-1.072700
C	-2.269800	-2.631900	-2.225600
H	-1.834100	-1.630000	-2.207800
H	-1.493400	-3.360500	-2.470700
C	-3.726100	-2.198200	2.439400
H	-4.205300	-1.223500	2.316800
H	-4.408800	-2.865200	2.970000
H	-3.074500	-2.666900	-2.966700
H	-2.802800	-2.085300	3.015500
N	-2.767000	2.940300	0.902700
N	-3.430900	2.760100	-1.133000
C	-3.028500	2.030000	-0.064700
C	-3.421400	4.103800	-0.836600
H	-3.703600	4.854900	-1.558000
C	-3.007800	4.216600	0.449300
H	-2.859400	5.082700	1.073900
C	-2.262500	2.636500	2.225500
H	-1.829500	1.633400	2.207300
H	-1.483900	3.362900	2.470400
C	-3.721700	2.207900	-2.439100
H	-4.202400	1.233900	-2.316600
H	-4.403700	2.876300	-2.968800
H	-3.066600	2.673500	2.967100
H	-2.799000	2.093800	-3.015800
N	-0.017500	2.922000	-1.202500
C	-0.010300	1.820700	-0.804700

N	-0.025100	-2.922300	1.202800
C	-0.015200	-1.820900	0.805100
Au	-0.004700	-0.000100	0.000200
Au	2.841200	-0.003300	0.000100
N	2.873400	-2.987500	-0.720800
N	3.318500	-2.677400	1.358800
C	3.024000	-2.017800	0.212200
C	3.353200	-4.036000	1.144300
H	3.564000	-4.738800	1.935400
C	3.077900	-4.231100	-0.168600
H	3.006200	-5.134900	-0.752200
C	2.515200	-2.769100	-2.106500
H	2.098300	-1.764000	-2.201100
H	3.392800	-2.861800	-2.754000
C	3.458100	-2.040600	2.650700
H	4.028700	-1.115000	2.538600
H	2.471700	-1.818800	3.069400
H	1.755000	-3.503000	-2.384400
H	3.997200	-2.710000	3.323800
N	2.881100	2.981100	0.720200
N	3.324500	2.669500	-1.359400
C	3.029000	2.010900	-0.212600
C	3.362100	4.028100	-1.145400
H	3.574100	4.730200	-1.936800
C	3.088000	4.224100	0.167600
H	3.018700	5.128200	0.751100
C	2.523200	2.764000	2.106200
H	2.104300	1.759800	2.201500
H	3.401400	2.855100	2.753200
C	3.461200	2.032300	-2.651500
H	4.025200	1.102700	-2.538800
H	2.473900	1.817500	-3.071500
H	1.764700	3.499600	2.384300
H	4.006000	2.698100	-3.323600
O	0.065100	4.778300	1.080400
H	0.039800	4.234400	0.268700
C	0.044800	6.133300	0.694400
H	-0.867100	6.396800	0.138600
H	0.077600	6.737700	1.605500
H	0.909000	6.403900	0.070100
O	0.053200	-4.778800	-1.080300
H	0.029100	-4.235100	-0.268500
C	0.030500	-6.133900	-0.694700
H	0.061600	-6.738100	-1.606100
H	0.894500	-6.406400	-0.071000
H	-0.881600	-6.395800	-0.138500

## I-3S1

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## Molecule Name

Au	-0.119800	2.843900	0.090800
N	2.772700	2.922400	1.108900
N	2.689100	3.251200	-1.014700
C	1.909400	3.024000	0.070000
C	4.017000	3.292700	-0.657400
H	4.801800	3.463100	-1.378300
C	4.069300	3.089300	0.682300
H	4.905300	3.052300	1.363000
C	2.404500	2.625800	2.478300
H	1.385800	2.231200	2.482200
H	3.086600	1.863400	2.863500
C	2.208000	3.316700	-2.381700
H	1.174000	3.669200	-2.372600

H	2.816700	4.029700	-2.943200
H	2.448700	3.527900	3.096300
H	2.262100	2.328900	-2.852900
N	-3.009800	2.794300	-0.937600
N	-2.922500	3.425000	1.115000
C	-2.145400	3.033000	0.076400
C	-4.250500	3.432400	0.753800
H	-5.033500	3.709300	1.442600
C	-4.304300	3.039400	-0.542500
H	-5.140300	2.906700	-1.210200
C	-2.644200	2.318200	-2.255800
H	-1.657100	1.854100	-2.195600
H	-3.377500	1.569700	-2.565100
C	-2.428100	3.694300	2.448400
H	-1.482100	4.237500	2.380400
H	-3.153400	4.311800	2.981800
H	-2.614700	3.144400	-2.973100
H	-2.276700	2.757600	2.993400
N	-3.215500	-0.000500	0.980600
C	-2.066800	-0.000300	0.756400
N	2.923400	0.000300	-0.503500
C	1.783000	0.000100	-0.231500
Au	-0.140500	-0.000200	0.261800
Au	-0.119100	-2.844200	0.090600
N	2.773100	-2.921300	1.109700
N	2.690400	-3.251000	-1.013800
C	1.910200	-3.023700	0.070500
C	4.018200	-3.291900	-0.656000
H	4.803200	-3.462200	-1.376600
C	4.069900	-3.088000	0.683700
H	4.905700	-3.050600	1.364600
C	2.404200	-2.624500	2.478900
H	1.385900	-2.228900	2.482000
H	2.447300	-3.526600	3.096900
C	2.209700	-3.317400	-2.380900
H	1.176300	-3.671700	-2.372100
H	2.262200	-2.329500	-2.852200
H	3.086700	-1.862600	2.864600
H	2.819900	-4.029200	-2.942200
N	-3.008900	-2.794300	-0.938600
N	-2.922000	-3.426100	1.113800
C	-2.144700	-3.033500	0.075500
C	-4.249800	-3.433300	0.752300
H	-5.033000	-3.710500	1.440900
C	-4.303500	-3.039500	-0.543700
H	-5.139400	-2.906500	-1.211600
C	-2.643000	-2.317900	-2.256500
H	-1.655900	-1.853900	-2.196000
H	-2.613400	-3.143900	-2.974100
C	-2.427800	-3.695900	2.447100
H	-1.482200	-4.239800	2.379100
H	-2.275700	-2.759400	2.992200
H	-3.376200	-1.569200	-2.565800
H	-3.153600	-4.313000	2.980400
O	-4.885600	0.000100	-1.393500
H	-4.409900	0.000100	-0.538500
C	-6.268000	-0.000100	-1.120900
H	-6.583600	0.888600	-0.554600
H	-6.583200	-0.888600	-0.554200
H	-6.795200	-0.000400	-2.079200
O	4.493500	0.000700	1.959400
H	4.071200	0.000400	1.079300
C	5.890400	0.000800	1.777500
H	6.244000	-0.888000	1.234000

H	6.243900	0.889400	1.233500
H	6.353000	0.001100	2.768400
C	4.159100	0.001700	-4.046900
O	2.908000	0.001400	-3.398000
H	4.758100	-0.889600	-3.806500
H	4.758700	0.892100	-3.804800
H	3.061500	0.001300	-2.435200
H	3.970900	0.002800	-5.123700

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Molecule Name

Au	0.000000	2.853600	0.000000
N	2.853600	3.106000	1.075200
N	2.853600	3.106000	-1.075200
C	2.031800	3.036300	0.000000
C	4.165300	3.222200	-0.677800
H	4.975500	3.297400	-1.386700
C	4.165300	3.222200	0.677800
H	4.975500	3.297400	1.386700
C	2.441800	2.985800	2.460400
H	1.356700	2.876300	2.489000
H	2.909900	2.099700	2.901400
C	2.441800	2.985800	-2.460400
H	1.356700	2.876300	-2.489000
H	2.724900	3.884100	-3.016800
H	2.724900	3.884100	3.016800
H	2.909900	2.099700	-2.901400
N	-2.853600	3.106000	-1.075200
N	-2.853600	3.106000	1.075200
C	-2.031800	3.036300	0.000000
C	-4.165300	3.222200	0.677800
H	-4.975500	3.297400	1.386700
C	-4.165300	3.222200	-0.677800
H	-4.975500	3.297400	-1.386700
C	-2.441800	2.985800	-2.460400
H	-1.356700	2.876300	-2.489000
H	-2.909900	2.099700	-2.901400
C	-2.441800	2.985800	2.460400
H	-1.356700	2.876300	2.489000
H	-2.724900	3.884100	3.016800
H	-2.724900	3.884100	-3.016800
H	-2.909900	2.099700	2.901400
N	-3.153900	0.000000	0.000000
C	-1.981900	0.000000	0.000000
N	3.153900	0.000000	0.000000
C	1.981900	0.000000	0.000000
Au	0.000000	0.000000	0.000000
Au	0.000000	-2.853600	0.000000
N	2.853600	-3.106000	1.075200
N	2.853600	-3.106000	-1.075200
C	2.031800	-3.036300	0.000000
C	4.165300	-3.222200	-0.677800
H	4.975500	-3.297400	-1.386700
C	4.165300	-3.222200	0.677800
H	4.975500	-3.297400	1.386700
C	2.441800	-2.985800	2.460400
H	1.356700	-2.876300	2.489000
H	2.724900	-3.884100	3.016800
C	2.441800	-2.985800	-2.460400
H	1.356700	-2.876300	-2.489000
H	2.909900	-2.099700	-2.901400
H	2.909900	-2.099700	2.901400

H	2.724900	-3.884100	-3.016800
N	-2.853600	-3.106000	-1.075200
N	-2.853600	-3.106000	1.075200
C	-2.031800	-3.036300	0.000000
C	-4.165300	-3.222200	0.677800
H	-4.975500	-3.297400	1.386700
C	-4.165300	-3.222200	-0.677800
H	-4.975500	-3.297400	-1.386700
C	-2.441800	-2.985800	-2.460400
H	-1.356700	-2.876300	-2.489000
H	-2.724900	-3.884100	-3.016800
C	-2.441800	-2.985800	2.460400
H	-1.356700	-2.876300	2.489000
H	-2.909900	-2.099700	2.901400
H	-2.909900	-2.099700	-2.901400
H	-2.724900	-3.884100	3.016800
O	-4.108600	0.000000	-2.725700
H	-3.906700	0.000000	-1.770600
C	-5.508600	0.000000	-2.881000
H	-5.981400	0.889800	-2.438300
H	-5.981400	-0.889800	-2.438300
H	-5.721800	0.000000	-3.953200
O	4.108600	0.000000	2.725700
H	3.906700	0.000000	1.770600
C	5.508600	0.000000	2.881000
H	5.981400	-0.889800	2.438300
H	5.981400	0.889800	2.438300
H	5.721800	0.000000	3.953200
C	5.508600	0.000000	-2.881000
O	4.108600	0.000000	-2.725700
H	5.981400	-0.889800	-2.438300
H	5.981400	0.889800	-2.438300
H	3.906700	0.000000	-1.770600
H	5.721800	0.000000	-3.953200
C	-5.508600	0.000000	2.881000
O	-4.108600	0.000000	2.725700
H	-5.981400	-0.889800	2.438300
H	-5.981400	0.889800	2.438300
H	-3.906700	0.000000	1.770600
H	-5.721800	0.000000	3.953200

20. The T<sub>1</sub> .xyz files of II and its complexes

II

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Molecule Name

Au	0.000000	2.768000	-0.000600
N	2.983000	2.610500	0.611500
N	2.630300	3.009100	-1.499400
C	2.006500	2.826800	-0.308700
C	4.230500	2.668500	0.013900
C	5.517900	2.540400	0.527200
H	5.699100	2.365300	1.582700
C	6.567900	2.653000	-0.377900
H	7.588400	2.560700	-0.019200
C	6.339700	2.887100	-1.741900
H	7.187500	2.968600	-2.415000
C	5.053100	3.020300	-2.253200
H	4.881600	3.198400	-3.309800
C	4.002500	2.911300	-1.346700
C	1.963200	3.241600	-2.764300
H	0.960500	3.624000	-2.562800
H	1.884200	2.312600	-3.335900
H	2.518300	3.994000	-3.330700
C	2.767200	2.391300	2.024600
H	1.724000	2.115200	2.188900
H	3.004400	3.293700	2.597700
H	3.401900	1.568800	2.366200
N	-2.983100	2.607700	-0.611900
N	-2.630000	3.008400	1.498500
C	-2.006500	2.825700	0.307800
C	-4.230400	2.665000	-0.013900
C	-5.517900	2.535200	-0.526600
H	-5.699300	2.359100	-1.582000
C	-6.567700	2.647500	0.378700
H	-7.588200	2.553900	0.020500
C	-6.339200	2.882900	1.742400
H	-7.186800	2.964000	2.415800
C	-5.052600	3.017800	2.253200
H	-4.880900	3.196900	3.309500
C	-4.002100	2.909100	1.346400
C	-1.962400	3.242400	2.762900
H	-0.961300	3.628600	2.560600
H	-2.519700	3.992600	3.330300
H	-1.879700	2.313400	3.333900
C	-2.767700	2.387600	-2.025000
H	-1.724100	2.113000	-2.189500
H	-3.401200	1.563800	-2.365500
H	-3.006600	3.289100	-2.598700
N	-0.661900	0.016500	3.093200
C	-0.412900	0.012800	1.951100
N	0.663200	0.015600	-3.092700
C	0.413600	0.012200	-1.950800
Au	-0.000300	-2.750700	0.001500
N	2.608400	-2.756900	1.576500
N	2.982000	-2.851900	-0.567200
C	1.994400	-2.813700	0.364900
C	3.984000	-2.779800	1.422200
C	5.027600	-2.772500	2.343500
H	4.847300	-2.758100	3.413600
C	6.320200	-2.796100	1.829600
H	7.162300	-2.794600	2.514800
C	6.560500	-2.829100	0.448500

H	7.584400	-2.847400	0.088300
C	5.517600	-2.844200	-0.472000
H	5.708900	-2.869100	-1.539800
C	4.224300	-2.824800	0.042300
C	2.771100	-2.881600	-1.999300
H	1.774900	-3.280000	-2.199300
H	3.511500	-3.541400	-2.458700
H	2.843500	-1.878600	-2.429100
C	1.928000	-2.755300	2.854200
H	0.933400	-2.323200	2.734000
H	2.483700	-2.130800	3.557700
H	1.851000	-3.771700	3.254300
N	-2.607200	-2.757100	-1.575600
N	-2.984100	-2.845700	0.567700
C	-1.995000	-2.811300	-0.363000
C	-3.983100	-2.778200	-1.423400
C	-5.025400	-2.772200	-2.346100
H	-4.843700	-2.760700	-3.416000
C	-6.318700	-2.793400	-1.833800
H	-7.159900	-2.792900	-2.520200
C	-6.560900	-2.822700	-0.452900
H	-7.585400	-2.839300	-0.094200
C	-5.519300	-2.836500	0.468900
H	-5.711900	-2.858700	1.536600
C	-4.225400	-2.819400	-0.043700
C	-2.776600	-2.872100	2.000300
H	-1.774200	-3.253000	2.203000
H	-2.867000	-1.870300	2.429600
H	-3.507100	-3.544200	2.458200
C	-1.924800	-2.759100	-2.852300
H	-0.930400	-2.326700	-2.731800
H	-1.847200	-3.776700	-3.249400
H	-2.479400	-2.136700	-3.558400
Au	0.000200	0.004100	0.000200

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Molecule Name

Au	-0.104200	2.772000	-0.119700
N	-2.998600	2.921800	-1.036900
N	-2.873400	2.957300	1.136600
C	-2.125300	2.895200	0.003900
C	-4.217700	3.064800	0.823300
C	-2.624800	2.887900	-2.435000
H	-1.673800	2.363200	-2.542700
H	-3.381700	2.334700	-2.995700
C	-2.344900	2.968600	2.483700
H	-1.369500	2.479800	2.491100
H	-2.253600	3.993800	2.857500
N	-0.171500	0.016400	-3.280400
C	-0.162100	0.014000	-2.111400
H	-2.542500	3.901900	-2.840300
H	-3.012900	2.402400	3.137200
N	2.822600	2.726400	0.743500
N	2.636100	2.818000	-1.424400
C	1.921900	2.802900	-0.268400
C	3.991900	2.748700	-1.154500
C	2.507000	2.732600	2.157400
H	1.422400	2.757300	2.268600
H	2.888100	1.830700	2.648300
C	2.067300	2.885300	-2.753900

H	1.058900	3.297100	-2.683400
H	2.675400	3.550400	-3.372700
N	0.039100	-0.008700	3.036300
C	-0.056100	-0.003200	1.870800
H	2.935700	3.624300	2.626600
H	2.011400	1.893300	-3.210500
Au	-0.068300	-2.756000	-0.151300
N	-2.932300	-2.956400	-1.159700
N	-2.869900	-2.985100	1.016500
C	-2.090300	-2.911700	-0.094200
C	-4.202300	-3.118300	0.664700
C	-2.519800	-2.920200	-2.546900
H	-1.579400	-2.373100	-2.630900
H	-2.402900	-3.933800	-2.944500
C	-2.381600	-2.981100	2.378700
H	-1.418200	-2.469900	2.414400
H	-3.082100	-2.429200	3.010100
H	-3.273300	-2.387000	-3.131200
H	-2.278100	-4.002900	2.758600
N	2.814400	-2.761200	0.838100
N	2.732900	-2.712600	-1.337200
C	1.963300	-2.766900	-0.218400
C	4.074200	-2.678900	-0.998500
C	2.433600	-2.839700	2.233900
H	1.344800	-2.847900	2.296300
H	2.825000	-3.764100	2.671600
C	2.240000	-2.686500	-2.697000
H	1.168000	-2.884600	-2.687700
H	2.406200	-1.705400	-3.150400
H	2.809700	-1.971200	2.785700
H	2.743000	-3.459500	-3.285500
Au	-0.126400	0.007400	-0.120700
C	-4.242600	-3.100000	-0.735600
C	-5.442700	-3.217800	-1.430900
C	-6.599700	-3.350000	-0.670300
H	-5.479500	-3.217100	-2.515500
C	-5.359500	-3.255000	1.426000
C	-6.559100	-3.368200	0.731300
H	-7.555900	-3.449200	-1.174600
H	-5.332200	-3.282200	2.510500
H	-7.484500	-3.481000	1.287400
C	4.126000	-2.711900	0.400300
C	5.336500	-2.704100	1.086900
C	6.492900	-2.660200	0.315800
H	5.377500	-2.727100	2.171000
C	5.231200	-2.634500	-1.771100
C	6.441400	-2.626300	-1.085900
H	7.459200	-2.653500	0.810400
H	5.195200	-2.608300	-2.855500
H	7.368700	-2.594400	-1.649600
C	-4.298400	3.042200	-0.575200
C	-5.520300	3.136200	-1.235400
C	-5.354600	3.182100	1.617700
C	-6.656900	3.249000	-0.441600
H	-5.588600	3.131900	-2.318400
C	-6.575900	3.271600	0.958100
H	-5.296000	3.212700	2.700900
H	-7.629100	3.329200	-0.918000
H	-7.486600	3.368900	1.540800
C	4.110700	2.694800	0.240100
C	5.352200	2.636600	0.866500
C	5.111600	2.740900	-1.981500
C	6.470800	2.630000	0.040500
H	5.444000	2.594200	1.946900
C	6.352700	2.681400	-1.356400

H	5.026200	2.778000	-3.062800
H	7.459100	2.585000	0.487400
H	7.251700	2.675300	-1.965000
H	1.805600	-0.027400	3.831000
O	2.769200	-0.041200	3.988500
C	2.991200	0.013100	5.381400
H	2.594800	0.934500	5.831100
H	2.550900	-0.845700	5.907700
H	4.072600	-0.006500	5.541800

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## Molecule Name

Au	0.000100	-2.858500	-0.000100
N	2.922000	-3.061700	-0.859100
N	2.713400	-3.307200	1.290500
C	2.017100	-3.071000	0.149000
C	4.060300	-3.454900	1.014800
C	2.643300	-2.758300	-2.246300
H	1.587400	-2.497300	-2.337900
H	3.256400	-1.903800	-2.554200
C	2.151400	-3.361700	2.619200
H	1.063000	-3.363100	2.539300
H	2.470300	-4.279000	3.123200
H	2.856800	-3.628000	-2.876300
H	2.470900	-2.492700	3.203100
N	-2.921900	-3.061300	0.858900
N	-2.713100	-3.307300	-1.290700
C	-2.016900	-3.070900	-0.149100
C	-4.060100	-3.454800	-1.015000
C	-2.643100	-2.757600	2.246000
H	-1.587000	-2.497500	2.337800
H	-3.255700	-1.902700	2.553600
C	-2.151100	-3.362400	-2.619300
H	-1.062700	-3.361800	-2.539500
H	-2.468500	-4.280800	-3.122300
H	-2.857400	-3.627100	2.876200
H	-2.472100	-2.494500	-3.204200
C	4.192600	-3.303500	-0.370200
C	5.425100	-3.431200	-1.003300
C	5.156300	-3.724900	1.828200
C	6.521800	-3.703400	-0.191800
H	5.527400	-3.322900	-2.078100
C	6.390300	-3.844800	1.197700
H	5.058700	-3.837500	2.903200
H	7.502300	-3.813100	-0.645000
H	7.271700	-4.057000	1.794800
C	-4.192500	-3.303000	0.370000
C	-5.425000	-3.430200	1.003000
C	-5.156100	-3.724800	-1.828400
C	-6.521700	-3.702300	0.191500
H	-5.527400	-3.321600	2.077700
C	-6.390100	-3.844200	-1.198000
H	-5.058400	-3.837800	-2.903300
H	-7.502300	-3.811600	0.644600
H	-7.271600	-4.056400	-1.795100
N	-3.137800	-0.000100	-0.376300
C	-1.972700	-0.000100	-0.273200
N	3.137500	0.000000	0.377500
C	1.972500	0.000000	0.273500
Au	-0.000100	0.000000	-0.000000
Au	-0.000000	2.858500	-0.000100
N	2.922000	3.061800	-0.858800
N	2.713100	3.307200	1.290800

C	2.017000	3.071000	0.149100
C	4.060100	3.454900	1.015100
C	2.643300	2.758700	-2.246200
H	1.587500	2.497500	-2.337800
H	2.856500	3.628800	-2.875800
C	2.151000	3.361500	2.619400
H	1.062600	3.363000	2.539400
H	2.470500	2.492500	3.203300
H	3.256700	1.904600	-2.554400
H	2.469900	4.278900	3.123400
N	-2.922100	3.061300	0.858600
N	-2.713200	3.307100	-1.291000
C	-2.017000	3.070900	-0.149300
C	-4.060200	3.454600	-1.015300
C	-2.643400	2.757900	2.245900
H	-1.587300	2.497900	2.337700
H	-2.857900	3.627400	2.875900
C	-2.151100	3.361900	-2.619500
H	-1.062700	3.361500	-2.539600
H	-2.472000	2.494000	-3.204300
H	-3.255900	1.902900	2.553500
H	-2.468500	4.280200	-3.122700
C	4.192500	3.303600	-0.369800
C	5.425000	3.431300	-1.002800
C	6.521600	3.703500	-0.191200
H	5.527500	3.323100	-2.077500
C	5.156000	3.724900	1.828700
C	6.390000	3.844800	1.198300
H	7.502200	3.813300	-0.644300
H	5.058300	3.837400	2.903700
H	7.271400	4.057100	1.795500
C	-4.192700	3.302900	0.369600
C	-5.425200	3.430200	1.002500
C	-6.521900	3.702200	0.190900
H	-5.527700	3.321800	2.077200
C	-5.156100	3.724400	-1.828900
C	-6.390200	3.843900	-1.198600
H	-7.502500	3.811500	0.643900
H	-5.058300	3.837300	-2.903800
H	-7.271600	4.056000	-1.795800
O	-4.566800	-0.000200	2.123800
H	-4.261000	-0.000300	1.195400
C	-5.978400	-0.000000	2.130900
H	-6.396200	-0.890000	1.640700
H	-6.299600	0.000300	3.176800
H	-6.396100	0.889800	1.640200
O	4.566700	0.000300	-2.122300
H	4.259900	0.000200	-1.194200
C	5.978300	0.000200	-2.127800
H	6.300700	0.000200	-3.173300
H	6.395600	0.890000	-1.636800
H	6.395400	-0.889800	-1.636800

II-3S1

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Molecule Name

Au	-0.074100	0.123000	2.853100
N	-1.038300	-2.758200	3.111100
N	1.133900	-2.652500	3.147800
C	0.010400	-1.901400	3.032700
C	0.807800	-3.985600	3.311500
C	-2.432000	-2.409300	2.938300
H	-2.498800	-1.336700	2.748300
H	-2.836600	-2.953600	2.077500

C	2.492900	-2.168700	3.029000
H	2.468700	-1.080000	2.957500
H	3.069400	-2.452600	3.914900
H	-2.999000	-2.650800	3.843100
H	2.951900	-2.586900	2.125900
N	0.908100	3.003900	3.057200
N	-1.241900	2.885200	3.353500
C	-0.137100	2.142900	3.085500
C	-0.905100	4.218100	3.503400
C	2.275500	2.668700	2.721100
H	2.315700	1.613800	2.444300
H	2.592400	3.280100	1.868800
C	-2.592500	2.381600	3.433500
H	-2.562000	1.291300	3.404000
H	-3.055800	2.698000	4.373000
H	2.931400	2.842000	3.580400
H	-3.185200	2.749700	2.590100
C	-0.590200	-4.053400	3.289800
C	-1.264800	-5.258900	3.459300
C	1.591100	-5.120500	3.500600
C	-0.483000	-6.395000	3.644000
H	-2.348700	-5.312100	3.452700
C	0.918200	-6.327200	3.664100
H	2.674800	-5.068400	3.524100
H	-0.969000	-7.355700	3.784100
H	1.490600	-7.236800	3.818300
C	0.480000	4.292600	3.318300
C	1.167500	5.496600	3.436200
C	-1.664800	5.345400	3.799700
C	0.409900	6.624500	3.734300
H	2.242500	5.554400	3.300700
C	-0.980100	6.550800	3.910300
H	-2.739800	5.292300	3.939000
H	0.906700	7.584400	3.837500
H	-1.533800	7.455300	4.142100
N	-0.347600	3.298900	0.000000
C	-0.318700	2.129900	0.000000
N	0.061200	-3.005700	0.000000
C	-0.022200	-1.837500	0.000000
Au	-0.176000	0.145500	0.000000
Au	-0.074100	0.123000	-2.853100
N	-1.038300	-2.758200	-3.111100
N	1.133900	-2.652500	-3.147800
C	0.010400	-1.901400	-3.032700
C	0.807800	-3.985600	-3.311500
C	-2.432000	-2.409300	-2.938300
H	-2.498800	-1.336700	-2.748300
H	-2.999000	-2.650800	-3.843100
C	2.492900	-2.168700	-3.029000
H	2.468700	-1.080000	-2.957500
H	2.951900	-2.586900	-2.125900
H	-2.836600	-2.953600	-2.077500
H	3.069400	-2.452600	-3.914900
N	0.908100	3.003900	-3.057200
N	-1.241900	2.885200	-3.353500
C	-0.137100	2.142900	-3.085500
C	-0.905100	4.218100	-3.503400
C	2.275500	2.668700	-2.721100
H	2.315700	1.613800	-2.444300
H	2.931400	2.842000	-3.580400
C	-2.592500	2.381600	-3.433500
H	-2.562000	1.291300	-3.404000
H	-3.185200	2.749700	-2.590100
H	2.592400	3.280100	-1.868800
H	-3.055800	2.698000	-4.373000



C	-0.590200	-4.053400	-3.289800
C	-1.264800	-5.258900	-3.459300
C	-0.483000	-6.395000	-3.644000
H	-2.348700	-5.312100	-3.452700
C	1.591100	-5.120500	-3.500600
C	0.918200	-6.327200	-3.664100
H	-0.969000	-7.355700	-3.784100
H	2.674800	-5.068400	-3.524100
H	1.490600	-7.236800	-3.818300
C	0.480000	4.292600	-3.318300
C	1.167500	5.496600	-3.436200
C	0.409900	6.624500	-3.734300
H	2.242500	5.554400	-3.300700
C	-1.664800	5.345400	-3.799700
C	-0.980100	6.550800	-3.910300
H	0.906700	7.584400	-3.837500
H	-2.739800	5.292300	-3.939000
H	-1.533800	7.455300	-4.142100
O	2.202600	4.637800	0.000000
H	1.263300	4.367800	0.000000
C	2.263800	6.048000	0.000000
H	1.789900	6.484200	0.890100
H	3.321300	6.328700	0.000000
H	1.789900	6.484200	-0.890100
O	-2.629600	-4.142900	0.000000
H	-1.676800	-3.935200	0.000000
C	-2.778100	-5.546900	0.000000
H	-3.850600	-5.761000	0.000000
H	-2.332000	-6.012100	-0.890200
H	-2.332000	-6.012100	0.890200
H	1.922000	-3.635300	0.000000
O	2.894100	-3.713100	0.000000
C	3.226800	-5.085000	0.000000
H	4.318000	-5.156100	0.000000
H	2.845800	-5.605500	0.890100
H	2.845800	-5.605500	-0.890100

## II-4S1

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## Molecule Name

Au	0.000000	2.848600	0.000000
N	2.830000	3.135000	1.087500
N	2.830000	3.135000	-1.087500
C	2.025400	3.038800	0.000000
C	4.146000	3.302800	-0.699900
C	2.413100	2.992300	2.466100
H	1.328700	2.873900	2.489900
H	2.886800	2.104200	2.899700
C	2.413100	2.992300	-2.466100
H	1.328700	2.873900	-2.489900
H	2.686500	3.886000	-3.036000
H	2.686500	3.886000	3.036000
H	2.886800	2.104200	-2.899700
N	-2.830000	3.135000	-1.087500
N	-2.830000	3.135000	1.087500
C	-2.025400	3.038800	0.000000
C	-4.146000	3.302800	0.699900
C	-2.413100	2.992300	-2.466100
H	-1.328700	2.873900	-2.489900
H	-2.886800	2.104200	-2.899700
C	-2.413100	2.992300	2.466100
H	-1.328700	2.873900	2.489900
H	-2.686500	3.886000	3.036000
H	-2.686500	3.886000	-3.036000

H	-2.886800	2.104200	2.899700
C	4.146000	3.302800	0.699900
C	5.318100	3.477600	1.429900
C	5.318100	3.477600	-1.429900
C	6.491300	3.647100	0.701600
H	5.318700	3.485500	2.515100
C	6.491300	3.647100	-0.701600
H	5.318700	3.485500	-2.515100
H	7.428000	3.790500	1.231300
H	7.428000	3.790500	-1.231300
C	-4.146000	3.302800	-0.699900
C	-5.318100	3.477600	-1.429900
C	-5.318100	3.477600	1.429900
C	-6.491300	3.647100	-0.701600
H	-5.318700	3.485500	-2.515100
C	-6.491300	3.647100	0.701600
H	-5.318700	3.485500	2.515100
H	-7.428000	3.790500	-1.231300
H	-7.428000	3.790500	1.231300
N	-3.158200	0.000000	0.000000
C	-1.987200	0.000000	0.000000
N	3.158200	0.000000	0.000000
C	1.987200	0.000000	0.000000
Au	0.000000	0.000000	0.000000
Au	0.000000	-2.848600	0.000000
N	2.830000	-3.135000	1.087500
N	2.830000	-3.135000	-1.087500
C	2.025400	-3.038800	0.000000
C	4.146000	-3.302800	-0.699900
C	2.413100	-2.992300	2.466100
H	1.328700	-2.873900	2.489900
H	2.686500	-3.886000	3.036000
C	2.413100	-2.992300	-2.466100
H	1.328700	-2.873900	-2.489900
H	2.886800	-2.104200	-2.899700
H	2.886800	-2.104200	2.899700
H	2.686500	-3.886000	-3.036000
N	-2.830000	-3.135000	-1.087500
N	-2.830000	-3.135000	1.087500
C	-2.025400	-3.038800	0.000000
C	-4.146000	-3.302800	0.699900
C	-2.413100	-2.992300	-2.466100
H	-1.328700	-2.873900	-2.489900
H	-2.686500	-3.886000	-3.036000
C	-2.413100	-2.992300	2.466100
H	-1.328700	-2.873900	2.489900
H	-2.886800	-2.104200	2.899700
H	-2.886800	-2.104200	-2.899700
H	-2.686500	-3.886000	3.036000
C	4.146000	-3.302800	0.699900
C	5.318100	-3.477600	1.429900
C	6.491300	-3.647100	0.701600
H	5.318700	-3.485500	2.515100
C	5.318100	-3.477600	-1.429900
C	6.491300	-3.647100	-0.701600
H	7.428000	-3.790500	1.231300
H	5.318700	-3.485500	-2.515100
H	7.428000	-3.790500	-1.231300
C	-4.146000	-3.302800	-0.699900
C	-5.318100	-3.477600	-1.429900
C	-6.491300	-3.647100	-0.701600
H	-5.318700	-3.485500	-2.515100
C	-5.318100	-3.477600	1.429900
C	-6.491300	-3.647100	0.701600
H	-7.428000	-3.790500	-1.231300

H	-5.318700	-3.485500	2.515100
H	-7.428000	-3.790500	1.231300
O	-4.053400	0.000000	-2.785000
H	-3.926900	0.000000	-1.818500
C	-5.440000	0.000000	-3.050200
H	-5.941100	0.890100	-2.644200
H	-5.564000	0.000000	-4.136700
H	-5.941100	-0.890100	-2.644200
O	4.053400	0.000000	2.785000
H	3.926900	0.000000	1.818500
C	5.440000	0.000000	3.050200
H	5.564000	0.000000	4.136700
H	5.941100	-0.890100	2.644200
H	5.941100	0.890100	2.644200
H	3.926900	0.000000	-1.818500
O	4.053400	0.000000	-2.785000
C	5.440000	0.000000	-3.050200
H	5.564000	0.000000	-4.136700
H	5.941100	0.890100	-2.644200
H	5.941100	-0.890100	-2.644200
H	-3.926900	0.000000	1.818500
O	-4.053400	0.000000	2.785000
C	-5.440000	0.000000	3.050200
H	-5.941100	-0.890100	2.644200
H	-5.564000	0.000000	4.136700
H	-5.941100	0.890100	2.644200

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Molecule Name

Au	-0.388500	2.739900	-0.446600
N	-3.430000	2.658400	-0.635100
N	-2.777400	3.199400	1.370400
C	-2.329300	2.905600	0.122500
C	-4.159800	3.141800	1.414900
C	-3.415000	2.328100	-2.043600
H	-2.431100	1.937800	-2.310100
H	-4.157500	1.550700	-2.241700
C	-1.930500	3.498200	2.506100
H	-0.973400	3.873600	2.137900
H	-2.401500	4.276500	3.111700
N	-0.626200	-0.363900	-3.298600
C	-0.519300	-0.230200	-2.142200
H	-3.641900	3.209900	-2.651800
H	-1.755600	2.603900	3.111100
N	2.643700	2.475600	-0.229200
N	2.000600	2.568400	-2.309300
C	1.556200	2.640500	-1.027200
C	3.366000	2.347200	-2.334600
C	2.643500	2.536900	1.218200
H	1.614100	2.638300	1.562800
H	3.062300	1.627300	1.657300
C	1.169500	2.695400	-3.489000
H	0.250200	3.215600	-3.212300
H	1.697300	3.292800	-4.237300
N	-0.007200	0.360800	2.952800
C	-0.151100	0.213800	1.801900
H	3.222500	3.403900	1.553200
H	0.914900	1.713200	-3.896700
Au	0.150600	-2.722300	0.005900
N	-2.482300	-3.488200	-1.295300
N	-2.769200	-3.075600	0.823100
C	-1.828700	-3.149300	-0.154900
C	-4.020000	-3.380200	0.313900

C	-1.860200	-3.655100	-2.593100
H	-0.801100	-3.876500	-2.445800
H	-2.326100	-4.498900	-3.108600
C	-2.508600	-2.768100	2.212200
H	-1.540000	-2.272200	2.292800
H	-3.276700	-2.084400	2.583400
H	-1.953700	-2.745300	-3.192400
H	-2.510100	-3.679900	2.818300
N	2.875000	-2.364100	1.308500
N	3.028500	-2.190000	-0.856000
C	2.156400	-2.424900	0.160500
C	4.307700	-2.005000	-0.360000
C	2.358400	-2.568100	2.647100
H	1.278100	-2.705700	2.584700
H	2.810100	-3.464300	3.085200
C	2.699400	-2.182500	-2.265000
H	1.619200	-2.088200	-2.383300
H	3.175200	-1.322700	-2.745000
H	2.577200	-1.687500	3.260000
H	3.045000	-3.103700	-2.745900
Au	-0.331900	-0.007900	-0.171400
C	-3.837400	-3.632100	-1.052100
C	-4.906100	-3.962100	-1.880700
C	-6.161200	-4.039600	-1.286100
H	-4.772200	-4.148800	-2.941200
C	-5.274700	-3.463800	0.910700
C	-6.342100	-3.796600	0.083400
H	-7.020900	-4.296900	-1.897000
H	-5.418100	-3.283300	1.971200
H	-7.337900	-3.873300	0.508600
C	4.205700	-2.106100	1.032600
C	5.315000	-1.959200	1.860200
C	6.533600	-1.717700	1.235300
H	5.232200	-2.023100	2.939900
C	5.527300	-1.765900	-0.986600
C	6.637800	-1.625500	-0.161000
H	7.426300	-1.602000	1.842300
H	5.612500	-1.690800	-2.065700
H	7.610100	-1.443900	-0.608900
C	-4.580300	2.807600	0.120800
C	-5.929500	2.689000	-0.200100
C	-5.071800	3.354700	2.444700
C	-6.841000	2.904900	0.828200
H	-6.259900	2.444700	-1.204500
C	-6.420000	3.230200	2.125800
H	-4.752200	3.604900	3.451100
H	-7.903200	2.823100	0.620100
H	-7.163800	3.391300	2.899900
C	3.780400	2.295900	-0.996700
C	5.114600	2.102400	-0.651700
C	4.269400	2.197100	-3.383300
C	6.017700	1.954800	-1.699500
H	5.436100	2.057800	0.383700
C	5.603600	2.001200	-3.038800
H	3.953500	2.232200	-4.421000
H	7.068400	1.801100	-1.474000
H	6.341600	1.886100	-3.827000
H	1.784200	0.486100	3.703000
O	2.751400	0.458700	3.833400
C	3.041500	0.881700	5.154100
H	2.708500	1.919400	5.311600
H	2.512000	0.256300	5.889200
C	4.535100	0.783200	5.373200
H	4.802200	1.117800	6.380700
H	4.875000	-0.251300	5.254000

H 5.071400 1.405100 4.648700

## II-2S2

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## Molecule Name

Au -0.000100 -2.861000 -0.000200  
 N -2.969600 -3.035100 0.684100  
 N -2.627600 -3.361400 -1.437600  
 C -2.004100 -3.078500 -0.264800  
 C -3.988700 -3.505900 -1.240000  
 C -2.775700 -2.679000 2.073200  
 H -1.743500 -2.348400 2.203900  
 H -3.452100 -1.854900 2.325500  
 C -1.982900 -3.468100 -2.725100  
 H -0.902400 -3.503900 -2.574600  
 H -2.299500 -4.388500 -3.224700  
 H -2.966900 -3.541700 2.720000  
 H -2.234700 -2.606300 -3.351400  
 N 2.969500 -3.035100 -0.684400  
 N 2.627300 -3.362600 1.437100  
 C 2.003900 -3.078900 0.264400  
 C 3.988300 -3.507300 1.239400  
 C 2.775700 -2.677900 -2.073300  
 H 1.743800 -2.346400 -2.203700  
 H 3.452700 -1.854200 -2.325100  
 C 1.982400 -3.469900 2.724500  
 H 0.902000 -3.506400 2.573800  
 H 2.299700 -4.390000 3.224000  
 H 2.966200 -3.540400 -2.720700  
 H 2.233500 -2.607900 3.350800  
 C -4.206700 -3.303400 0.127600  
 C -5.475100 -3.415100 0.688400  
 C -5.031700 -3.812300 -2.108500  
 C -6.518600 -3.724400 -0.177800  
 H -5.643300 -3.266300 1.749900  
 C -6.301400 -3.916600 -1.550500  
 H -4.868300 -3.963800 -3.170600  
 H -7.524700 -3.823000 0.218200  
 H -7.143700 -4.156200 -2.192000  
 C 4.206400 -3.304000 -0.128000  
 C 5.474800 -3.415900 -0.688900  
 C 5.031300 -3.814500 2.107800  
 C 6.518200 -3.726100 0.177100  
 H 5.643000 -3.266700 -1.750400  
 C 6.300900 -3.919000 1.549700  
 H 4.867800 -3.966600 3.169800  
 H 7.524300 -3.825000 -0.218900  
 H 7.143100 -4.159300 2.191100  
 N 3.109600 -0.000100 0.564100  
 C 1.953000 -0.000000 0.392100  
 N -3.109900 0.000100 -0.563000  
 C -1.953200 0.000000 -0.391300  
 Au -0.000100 0.000000 0.000300  
 Au 0.000000 2.861100 -0.000100  
 N -2.970000 3.036200 0.681600  
 N -2.626200 3.360400 -1.440200  
 C -2.003700 3.078600 -0.266600  
 C -3.987500 3.505200 -1.243800  
 C -2.777400 2.681300 2.071200  
 H -1.745000 2.351800 2.203300  
 H -2.970000 3.544500 2.717000  
 C -1.980400 3.465800 -2.727200  
 H -0.900100 3.501600 -2.575900  
 H -2.231900 2.603500 -3.352900

H -3.453300 1.856900 2.323600  
 H -2.296500 4.385800 -3.227900  
 N 2.970100 3.035900 -0.681800  
 N 2.626300 3.361300 1.439700  
 C 2.003800 3.078800 0.266300  
 C 3.987500 3.506100 1.243200  
 C 2.777400 2.680300 -2.071200  
 H 1.745400 2.349500 -2.202900  
 H 2.968800 3.543400 -2.717600  
 C 1.980500 3.467200 2.726800  
 H 0.900200 3.503300 2.575400  
 H 2.231600 2.604900 3.352600  
 H 3.454200 1.856500 -2.323400  
 H 2.297000 4.387200 3.227300  
 C -4.206600 3.303900 0.123800  
 C -5.475500 3.416100 0.683500  
 C -6.518300 3.724700 -0.183900  
 H -5.644500 3.268500 1.745000  
 C -5.029800 3.810700 -2.113500  
 C -6.299900 3.915500 -1.556600  
 H -7.524700 3.823600 0.211100  
 H -4.865500 3.961200 -3.175600  
 H -7.141700 4.154600 -2.199100  
 C 4.206600 3.304300 -0.124300  
 C 5.475400 3.416800 -0.684100  
 C 6.518100 3.726100 0.183100  
 H 5.644400 3.268800 -1.745600  
 C 5.029800 3.812400 2.112700  
 C 6.299800 3.917400 1.555700  
 H 7.524500 3.825400 -0.212100  
 H 4.865600 3.963400 3.174800  
 H 7.141600 4.157100 2.198000  
 O 4.787900 0.000500 -1.775900  
 H 4.402900 0.000300 -0.876900  
 C 6.200800 0.000700 -1.670300  
 H 6.547700 -0.883700 -1.115800  
 H 6.547500 0.885300 -1.115900  
 C 6.784900 0.000600 -3.066200  
 H 7.879300 0.000800 -3.029500  
 H 6.458600 -0.884500 -3.623200  
 H 6.458300 0.885500 -3.623400  
 O -4.786600 0.000400 1.777700  
 H -4.402200 0.000200 0.878500  
 C -6.199600 0.000800 1.673000  
 H -6.546500 0.885500 1.118800  
 H -6.547000 -0.883600 1.118700  
 C -6.782900 0.000900 3.069300  
 H -7.877300 0.001200 3.033200  
 H -6.456300 -0.884300 3.626200  
 H -6.455800 0.885800 3.626300

## II-3S2

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## Molecule Name

Au -0.175900 -2.852600 -0.131300  
 N 2.733900 -3.108700 -1.004400  
 N 2.561100 -3.152400 1.163300  
 C 1.845100 -3.033300 0.017400  
 C 3.903500 -3.315700 0.878200  
 C 2.428300 -2.928400 -2.407200  
 H 1.360400 -2.725300 -2.504400  
 H 2.994000 -2.072400 -2.792600  
 C 2.035900 -3.034800 2.506900  
 H 0.948500 -2.962200 2.449600

H	2.301200	-3.921700	3.090900
H	2.676000	-3.834100	-2.970100
H	2.440600	-2.132400	2.979200
N	-3.088400	-3.055500	0.753600
N	-2.897300	-3.350800	-1.391400
C	-2.192600	-3.083700	-0.261900
C	-4.240900	-3.499900	-1.100000
C	-2.798500	-2.721400	2.131700
H	-1.746800	-2.439800	2.205900
H	-3.423500	-1.872800	2.431200
C	-2.348200	-3.431200	-2.724100
H	-1.259300	-3.412900	-2.656300
H	-2.657500	-4.366200	-3.201000
H	-2.988300	-3.583200	2.780000
H	-2.687500	-2.582600	-3.326600
C	4.014500	-3.289900	-0.517000
C	5.240100	-3.457900	-1.154600
C	5.013800	-3.507700	1.695400
C	6.351500	-3.646000	-0.338900
H	5.326800	-3.447500	-2.236300
C	6.240600	-3.670200	1.059500
H	4.928700	-3.534100	2.777000
H	7.326700	-3.784700	-0.795600
H	7.131900	-3.826300	1.659300
C	-4.361900	-3.315800	0.282000
C	-5.588400	-3.433300	0.928500
C	-5.342400	-3.794600	-1.897300
C	-6.690500	-3.730100	0.133300
H	-5.682400	-3.298600	2.001100
C	-6.570200	-3.904900	-1.253500
H	-5.253300	-3.932800	-2.970100
H	-7.666700	-3.832500	0.597400
H	-7.455800	-4.135400	-1.837600
N	-3.345100	-0.000100	-0.499800
C	-2.177700	-0.000000	-0.433700
N	2.944900	-0.000000	0.092400
C	1.779600	-0.000000	-0.023900
Au	-0.198200	-0.000000	-0.233000
Au	-0.175900	2.852600	-0.131400
N	2.733900	3.108700	-1.004300
N	2.561000	3.152400	1.163400
C	1.845100	3.033400	0.017400
C	3.903500	3.315800	0.878200
C	2.428300	2.928300	-2.407100
H	1.360400	2.725300	-2.504300
H	2.676100	3.834000	-2.970100
C	2.035800	3.034800	2.506900
H	0.948500	2.962200	2.449600
H	2.440600	2.132400	2.979300
H	2.994000	2.072400	-2.792500
H	2.301000	3.921700	3.090900
N	-3.088400	3.055500	0.753500
N	-2.897300	3.350700	-1.391500
C	-2.192600	3.083700	-0.262000
C	-4.240900	3.499900	-1.100100
C	-2.798600	2.721600	2.131700
H	-1.746800	2.440000	2.205900
H	-2.988400	3.583300	2.779800
C	-2.348200	3.431000	-2.724200
H	-1.259300	3.412700	-2.656400
H	-2.687500	2.582400	-3.326600
H	-3.423600	1.872900	2.431200
H	-2.657500	4.366000	-3.201200
C	4.014400	3.289900	-0.516900
C	5.240100	3.458000	-1.154500

C	6.351500	3.646100	-0.338800
H	5.326800	3.447600	-2.236200
C	5.013700	3.507800	1.695500
C	6.240500	3.670300	1.059600
H	7.326700	3.784800	-0.795400
H	4.928600	3.534200	2.777100
H	7.131800	3.826500	1.659400
C	-4.361900	3.315800	0.281900
C	-5.588500	3.433300	0.928400
C	-6.690500	3.730100	0.133200
H	-5.682500	3.298600	2.001000
C	-5.342400	3.794500	-1.897500
C	-6.570200	3.904800	-1.253700
H	-7.666700	3.832500	0.597200
H	-5.253300	3.932600	-2.970200
H	-7.455800	4.135300	-1.837800
O	-4.776800	0.000000	2.001400
H	-4.476200	-0.000000	1.071100
C	-6.193600	0.000000	2.022600
H	-6.588300	-0.884500	1.501100
H	-6.588300	0.884600	1.501000
C	-6.651200	0.000100	3.465000
H	-6.276400	0.885100	3.990700
H	-7.744400	0.000100	3.525900
H	-6.276400	-0.884900	3.990800
O	4.193500	-0.000000	-2.548200
H	3.950900	-0.000000	-1.603200
C	5.607200	-0.000000	-2.651100
H	6.031500	0.884800	-2.152800
H	6.031600	-0.884700	-2.152700
C	5.981000	-0.000100	-4.117200
H	5.576800	0.885200	-4.619700
H	7.069000	-0.000100	-4.239900
H	5.576900	-0.885500	-4.619600
H	3.525500	0.000000	1.975800
O	3.571400	0.000000	2.950200
C	4.935600	-0.000000	3.334800
H	5.451700	-0.884700	2.931500
H	5.451700	0.884700	2.931500
C	5.007600	-0.000000	4.846000
H	6.048800	-0.000000	5.184800
H	4.510800	0.885400	5.256800
H	4.510700	-0.885400	5.256800

## II-4S2

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## Molecule Name

Au	0.000000	0.000000	-2.848500
N	-1.087500	2.830000	-3.133900
N	1.087500	2.830000	-3.133900
C	0.000000	2.025300	-3.038100
C	0.699900	4.146100	-3.301200
C	-2.465900	2.412800	-2.991600
H	-2.489400	1.328400	-2.872600
H	-2.900000	2.886800	-2.103900
C	2.465900	2.412800	-2.991600
H	2.489400	1.328400	-2.872600
H	3.035500	2.685400	-3.885700
H	-3.035500	2.685400	-3.885700
H	2.900000	2.886800	-2.103900
N	1.087500	-2.830000	-3.133900
N	-1.087500	-2.830000	-3.133900
C	0.000000	-2.025300	-3.038100
C	-0.699900	-4.146100	-3.301200

C	2.465900	-2.412800	-2.991600	C	0.699900	-4.146100	3.301300
H	2.489400	-1.328400	-2.872600	C	1.429900	-5.318300	3.475100
H	2.900000	-2.886800	-2.103900	C	0.701500	-6.491500	3.644000
C	-2.465900	-2.412800	-2.991600	H	2.515100	-5.319000	3.482400
H	-2.489400	-1.328400	-2.872600	C	-1.429900	-5.318300	3.475100
H	-3.035500	-2.685400	-3.885700	C	-0.701500	-6.491500	3.644000
H	3.035500	-2.685400	-3.885700	H	1.231300	-7.428400	3.786300
H	-2.900000	-2.886800	-2.103900	H	-2.515100	-5.319000	3.482400
C	-0.699900	4.146100	-3.301200	H	-1.231300	-7.428400	3.786300
C	-1.429900	5.318300	-3.474800	O	2.789100	-4.061200	-0.000000
C	1.429900	5.318300	-3.474800	H	1.821700	-3.939200	-0.000100
C	-0.701500	6.491600	-3.643700	C	3.068200	-5.450900	-0.000100
H	-2.515100	5.319100	-3.482100	H	2.626500	-5.934500	-0.884700
C	0.701500	6.491600	-3.643700	H	2.626500	-5.934600	0.884600
H	2.515100	5.319100	-3.482100	C	4.569400	-5.637600	-0.000100
H	-1.231300	7.428500	-3.785900	H	5.016800	-5.173300	0.885400
H	1.231300	7.428500	-3.785900	H	4.828300	-6.701400	-0.000100
C	0.699900	-4.146100	-3.301200	H	5.016800	-5.173300	-0.885500
C	1.429900	-5.318300	-3.474800	O	-2.789100	4.061200	-0.000000
C	-1.429900	-5.318300	-3.474800	H	-1.821700	3.939200	-0.000100
C	0.701500	-6.491600	-3.643700	C	-3.068200	5.450900	-0.000100
H	2.515100	-5.319100	-3.482100	H	-2.626500	5.934600	0.884600
C	-0.701500	-6.491600	-3.643700	H	-2.626500	5.934500	-0.884700
H	-2.515100	-5.319100	-3.482100	C	-4.569400	5.637600	-0.000100
H	1.231300	-7.428500	-3.785900	H	-5.016800	5.173300	0.885400
H	-1.231300	-7.428500	-3.785900	H	-4.828300	6.701400	-0.000100
N	0.000000	-3.158400	-0.000000	H	-5.016800	5.173300	-0.885500
C	0.000000	-1.987500	-0.000100	H	1.821700	3.939200	-0.000100
N	0.000000	3.158400	-0.000000	O	2.789100	4.061200	-0.000000
C	0.000000	1.987500	-0.000100	C	3.068200	5.450900	-0.000100
Au	0.000000	0.000000	-0.000100	H	2.626500	5.934500	-0.884700
Au	0.000000	0.000000	2.848400	H	2.626500	5.934600	0.884600
N	-1.087500	2.830000	3.133900	C	4.569400	5.637600	-0.000100
N	1.087500	2.830000	3.133900	H	4.828300	6.701400	-0.000100
C	0.000000	2.025300	3.038100	H	5.016800	5.173300	0.885400
C	0.699900	4.146100	3.301300	H	5.016800	5.173300	-0.885500
C	-2.465900	2.412800	2.991500	H	-1.821700	-3.939200	-0.000100
H	-2.489400	1.328400	2.872500	O	-2.789100	-4.061200	-0.000000
H	-3.035500	2.685400	3.885600	C	-3.068200	-5.450900	-0.000100
C	2.465900	2.412800	2.991500	H	-2.626500	-5.934600	0.884600
H	2.489400	1.328400	2.872500	H	-2.626500	-5.934500	-0.884700
H	2.900000	2.886800	2.103800	C	-4.569400	-5.637600	-0.000100
H	-2.900000	2.886800	2.103800	H	-4.828300	-6.701400	-0.000100
H	3.035500	2.685400	3.885600	H	-5.016800	-5.173300	0.885400
N	1.087500	-2.830000	3.133900	H	-5.016800	-5.173300	-0.885500
N	-1.087500	-2.830000	3.133900				
C	0.000000	-2.025300	3.038100				
C	-0.699900	-4.146100	3.301300				
C	2.465900	-2.412800	2.991500				
H	2.489400	-1.328400	2.872500				
H	3.035500	-2.685400	3.885600				
C	-2.465900	-2.412800	2.991500				
H	-2.489400	-1.328400	2.872500				
H	-2.900000	-2.886800	2.103800				
H	2.900000	-2.886800	2.103800				
H	-3.035500	-2.685400	3.885600				
C	-0.699900	4.146100	3.301300				
C	-1.429900	5.318300	3.475100				
C	-0.701500	6.491500	3.644000				
H	-2.515100	5.319000	3.482400				
C	1.429900	5.318300	3.475100				
C	0.701500	6.491500	3.644000				
H	-1.231300	7.428400	3.786300				
H	2.515100	5.319000	3.482400				
H	1.231300	7.428400	3.786300				

## 21. The T<sub>1</sub> .xyz files of III and its complexes

III

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Molecule Name

Au	2.755900	0.000100	0.000100
N	2.824700	2.899200	-0.948800
N	2.891900	2.797200	1.202900
C	2.833700	2.023300	0.088800
C	2.937700	4.130400	0.865000
H	2.995600	4.911000	1.607900
C	2.896800	4.194900	-0.490000
H	2.915100	5.042300	-1.158000
C	2.813200	2.510300	-2.346700
H	2.023800	1.775800	-2.524200
H	2.620600	3.394800	-2.956200
C	2.945700	2.276100	2.556700
H	3.863400	1.696800	2.696800
H	2.944100	3.114600	3.255000
N	0.000300	0.000200	-3.192000
C	0.000200	0.000100	-2.021400
H	3.781100	2.084400	-2.629100
H	2.077800	1.641600	2.753400
N	2.824600	-2.899100	0.948900
N	2.892100	-2.797100	-1.202700
C	2.833800	-2.023100	-0.088700
C	2.937900	-4.130300	-0.864800
H	2.995800	-4.910900	-1.607700
C	2.896800	-4.194800	0.490100
H	2.914900	-5.042100	1.158100
C	2.812900	-2.510100	2.346800
H	2.023200	-1.776000	2.524300
H	2.620800	-3.394700	2.956300
C	2.946200	-2.276000	-2.556500
H	3.863900	-1.696700	-2.696400
H	2.944600	-3.114500	-3.254800
N	-0.000300	-0.000100	3.191700
C	-0.000200	-0.000100	2.021100
H	3.780600	-2.083800	2.629200
H	2.078300	-1.641500	-2.753300
Au	-2.755900	-0.000100	0.000000
N	-2.892200	2.797100	-1.202700
N	-2.824800	2.899000	0.948900
C	-2.833900	2.023100	-0.088800
C	-2.897100	4.194800	0.490100
H	-2.915300	5.042100	1.158200
C	-2.938000	4.130300	-0.864800
H	-2.995900	4.910900	-1.607700
C	-2.946000	2.276100	-2.556600
H	-2.078100	1.641600	-2.753300
H	-3.863700	1.696800	-2.696700
C	-2.813300	2.510000	2.346800
H	-3.781200	2.084100	2.629100
H	-2.023900	1.775600	2.524300
H	-2.944400	3.114600	-3.254900
H	-2.620800	3.394600	2.956300
N	-2.891800	-2.797400	1.202700
N	-2.824500	-2.899100	-0.949000
C	-2.833600	-2.023300	0.088800
C	-2.896600	-4.194900	-0.490400
H	-2.914700	-5.042100	-1.158500
C	-2.937500	-4.130600	0.864600

H	-2.995400	-4.911300	1.607400
C	-2.945900	-2.276500	2.556600
H	-2.078000	-1.642000	2.753500
H	-3.863500	-1.697200	2.696500
C	-2.812900	-2.509900	-2.346800
H	-3.780800	-2.084000	-2.629200
H	-2.023500	-1.775500	-2.524200
H	-2.944400	-3.115100	3.254800
H	-2.620400	-3.394400	-2.956500
Ag	0.000000	0.000000	-0.000200

III-S1

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Molecule Name

Au	2.755900	-0.157300	-0.162700
N	2.943800	-2.655100	1.580400
N	2.971700	-3.178600	-0.509900
C	2.906100	-2.116600	0.333900
C	3.068400	-4.355200	0.197400
H	3.139700	-5.315600	-0.289400
C	3.051900	-4.026100	1.513700
H	3.107900	-4.643300	2.397200
C	2.940400	-1.878300	2.804900
H	2.123200	-1.152900	2.784100
H	2.796100	-2.553200	3.650300
C	2.992600	-3.069800	-1.956900
H	3.911700	-2.572200	-2.281600
H	2.960000	-4.073200	-2.384700
N	0.000500	0.762600	2.937400
C	0.000200	0.359600	1.838600
H	3.893500	-1.353500	2.924200
H	2.125500	-2.503000	-2.304900
N	2.740500	2.323800	-1.927800
N	2.760900	2.887100	0.151800
C	2.765300	1.809000	-0.671300
C	2.746800	4.053800	-0.577000
H	2.743600	5.024700	-0.105900
C	2.737500	3.699500	-1.886900
H	2.732000	4.302000	-2.782300
C	2.783000	1.526400	-3.139800
H	3.764000	1.053200	-3.246300
H	2.005800	0.758800	-3.113000
C	2.807400	2.836900	1.602400
H	3.745900	3.274700	1.956100
H	1.952200	3.368400	2.032400
N	-0.002800	-1.090500	-3.171000
C	-0.002000	-0.772600	-2.044200
H	2.608000	2.180200	-3.995900
H	2.758900	1.792500	1.912100
Au	-2.757300	-0.149100	-0.161800
N	-2.953400	-2.645200	1.582700
N	-2.982800	-3.170000	-0.507200
C	-2.914000	-2.107700	0.335800
C	-3.083100	-4.345900	0.201000
H	-3.157400	-5.306400	-0.285200
C	-3.065600	-4.015800	1.517000
H	-3.123500	-4.632200	2.400900
C	-2.947300	-1.867400	2.806700
H	-2.126500	-1.146000	2.786200
H	-3.897900	-1.337900	2.924700
C	-3.003600	-3.062400	-1.954300

H	-3.921500	-2.563000	-2.279400
H	-2.135200	-2.497700	-2.302700
H	-2.807200	-2.542500	3.652700
H	-2.973100	-4.066100	-2.381300
N	-2.733400	2.330400	-1.928600
N	-2.748700	2.895700	0.150600
C	-2.759100	1.816900	-0.671500
C	-2.729900	4.061600	-0.579200
H	-2.721800	5.032900	-0.109000
C	-2.723800	3.706100	-1.888800
H	-2.716100	4.307800	-2.784800
C	-2.780200	1.532100	-3.139800
H	-3.762400	1.060800	-3.243500
H	-2.606200	2.184900	-3.996900
C	-2.794800	2.846800	1.601200
H	-3.733300	3.284500	1.955000
H	-2.745600	1.802800	1.912000
H	-2.004500	0.763000	-3.114400
H	-1.939700	3.378900	2.030500
Ag	-0.000700	-0.218700	-0.101700
O	0.007600	3.644700	3.185000
H	0.004800	2.671400	3.270400
C	0.013700	4.202100	4.482400
H	0.906500	3.913900	5.055200
H	0.015700	5.289800	4.371700
H	-0.875900	3.917800	5.062000

## III-2S1

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## Molecule Name

Au	-2.935300	-0.000100	-0.000000
N	-2.977900	2.986700	0.819100
N	-3.427700	2.737200	-1.280200
C	-3.121900	2.038700	-0.149400
C	-3.475900	4.094100	-1.018300
H	-3.699600	4.819700	-1.784500
C	-3.197200	4.250600	0.301900
H	-3.137900	5.136900	0.912700
C	-2.599500	2.740100	2.205700
H	-2.311400	1.692500	2.305600
H	-1.747200	3.379100	2.450300
C	-3.578500	2.145200	-2.603400
H	-4.152200	1.218400	-2.523600
H	-4.119500	2.843700	-3.245000
H	-3.439300	2.949700	2.875800
H	-2.595900	1.938200	-3.037200
N	-2.977800	-2.986800	-0.819100
N	-3.427500	-2.737300	1.280200
C	-3.121800	-2.038800	0.149400
C	-3.475600	-4.094200	1.018300
H	-3.699300	-4.819800	1.784600
C	-3.197000	-4.250700	-0.301800
H	-3.137700	-5.137100	-0.912600
C	-2.599400	-2.740300	-2.205700
H	-2.311300	-1.692700	-2.305600
H	-1.747100	-3.379300	-2.450300
C	-3.578400	-2.145300	2.603400
H	-4.152200	-1.218500	2.523500
H	-4.119300	-2.843700	3.245100
H	-3.439300	-2.949800	-2.875800
H	-2.595800	-1.938100	3.037200
N	0.000000	-2.911300	1.350200
C	0.000000	-1.818800	0.924300

N	-0.000200	2.911300	-1.350200
C	-0.000000	1.818800	-0.924100
Ag	0.000100	-0.000000	0.000100
Au	2.935500	0.000100	0.000000
N	2.977900	2.986900	0.818600
N	3.427700	2.737100	-1.280500
C	3.121900	2.038800	-0.149700
C	3.475800	4.094100	-1.018900
H	3.699900	4.819500	-1.785200
C	3.197100	4.250800	0.301200
H	3.137600	5.137200	0.912000
C	2.598900	2.740700	2.205200
H	2.310500	1.693200	2.305200
H	3.438500	2.950300	2.875600
C	3.578500	2.144900	-2.603700
H	4.152800	1.218500	-2.523900
H	2.595800	1.937200	-3.037100
H	1.746500	3.379900	2.449100
H	4.118700	2.843600	-3.245700
N	2.977900	-2.986700	-0.818800
N	3.427900	-2.737000	1.280400
C	3.121900	-2.038700	0.149600
C	3.476000	-4.094000	1.018600
H	3.700100	-4.819500	1.784900
C	3.197100	-4.250600	-0.301400
H	3.137600	-5.137000	-0.912200
C	2.598700	-2.740500	-2.205300
H	2.310200	-1.693000	-2.305200
H	3.438300	-2.949800	-2.875800
C	3.578600	-2.145000	2.603500
H	4.152900	-1.218500	2.523900
H	2.595900	-1.937200	3.036900
H	1.746500	-3.379800	-2.449200
H	4.118800	-2.843700	3.245600
O	-0.000500	-4.631300	-1.130700
H	-0.000600	-4.137800	-0.285800
C	0.000100	-6.020100	-0.831400
H	-0.889400	-6.323000	-0.260400
H	-0.000200	-6.559700	-1.783000
H	0.890200	-6.322500	-0.261100
O	-0.000700	4.631200	1.130700
H	-0.000600	4.137800	0.285900
C	-0.000300	6.020000	0.831600
H	-0.001000	6.559600	1.783200
H	0.890000	6.322600	0.261700
H	-0.889500	6.322900	0.260300

## III-3S1

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## Molecule Name

Au	0.072000	2.856400	-0.104700
N	-2.844900	2.937000	-1.057000
N	-2.714200	3.169400	1.077300
C	-1.957000	2.999900	-0.034800
C	-4.050200	3.210500	0.753500
H	-4.819200	3.340700	1.499300
C	-4.132600	3.067500	-0.592400
H	-4.984600	3.054300	-1.254000
C	-2.512500	2.712800	-2.449200
H	-1.449900	2.471100	-2.516200
H	-3.103300	1.869600	-2.818400
C	-2.201200	3.187600	2.433500
H	-1.180900	3.578100	2.417800

H	-2.820000	3.851500	3.042000
H	-2.715500	3.610200	-3.041500
H	-2.209300	2.178500	2.860500
N	2.971000	2.905800	0.888000
N	2.855700	3.367500	-1.209000
C	2.093000	3.050500	-0.133800
C	4.186000	3.421100	-0.863200
H	4.958700	3.651300	-1.580300
C	4.258000	3.135300	0.460000
H	5.102400	3.072700	1.127600
C	2.628500	2.536500	2.245700
H	1.605300	2.155000	2.255200
H	3.312800	1.749100	2.571700
C	2.343500	3.509500	-2.554500
H	1.425100	4.102300	-2.534800
H	3.084900	4.026100	-3.166800
H	2.696600	3.402900	2.911000
H	2.139500	2.524000	-2.984500
N	3.246300	0.038800	-1.120100
C	2.101300	0.027000	-0.874800
N	-2.909900	-0.055900	0.554000
C	-1.774900	-0.032300	0.260400
Ag	0.164300	0.002100	-0.298600
Au	0.175700	-2.848400	-0.123200
N	-2.695200	-2.947700	-1.206600
N	-2.643500	-3.323500	0.910900
C	-1.848000	-3.056900	-0.154100
C	-3.963500	-3.380400	0.528400
H	-4.757800	-3.582200	1.230400
C	-3.995800	-3.147500	-0.807200
H	-4.820200	-3.111000	-1.501800
C	-2.310400	-2.615900	-2.562700
H	-1.282800	-2.245600	-2.547600
H	-2.368400	-3.497200	-3.208900
C	-2.183800	-3.419800	2.283200
H	-1.159300	-3.799800	2.284600
H	-2.219600	-2.438600	2.770000
H	-2.973700	-1.828000	-2.929500
H	-2.819200	-4.124900	2.824600
N	3.034800	-2.768400	0.989200
N	3.016300	-3.306500	-1.092400
C	2.202400	-2.977500	-0.059200
C	4.333000	-3.304000	-0.694900
H	5.139900	-3.534900	-1.373100
C	4.344100	-2.969900	0.618900
H	5.159400	-2.856300	1.315300
C	2.630700	-2.351800	2.315900
H	1.583600	-2.044500	2.280200
H	2.740500	-3.174600	3.029100
C	2.564500	-3.511100	-2.451700
H	1.637000	-4.089600	-2.442700
H	2.395300	-2.546700	-2.940200
H	3.251600	-1.503500	2.615600
H	3.324500	-4.069500	-3.001500
O	4.749600	0.110200	1.415300
H	4.319600	0.092600	0.538000
C	6.144400	0.114600	1.213900
H	6.484100	0.997800	0.653200
H	6.492400	-0.778900	0.675500
H	6.621100	0.129500	2.198200
O	-4.428600	-0.029300	-1.962000
H	-4.021200	-0.041300	-1.075400
C	-5.828400	-0.056000	-1.803100
H	-6.175100	-0.963000	-1.286100

H	-6.204700	0.813800	-1.244700
H	-6.274700	-0.040200	-2.801200
C	-4.027100	-0.158300	4.140300
O	-2.800000	-0.154400	3.446600
H	-4.644400	-1.036400	3.898300
H	-4.624200	0.744800	3.943400
H	-2.987900	-0.127500	2.490300
H	-3.800200	-0.187800	5.209100

## III-4S1

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## Molecule Name

Au	-0.000000	-2.867300	-0.001000
N	-2.852700	-3.115000	1.073200
N	-2.851900	-3.112500	-1.077900
C	-2.029900	-3.039800	-0.001900
C	-4.162800	-3.235300	-0.680800
H	-4.972600	-3.314300	-1.389800
C	-4.163300	-3.236900	0.674900
H	-4.973700	-3.317400	1.383100
C	-2.442100	-2.996300	2.458600
H	-1.354900	-2.910000	2.489500
H	-2.893400	-2.099400	2.895900
C	-2.440300	-2.991600	-2.462700
H	-1.353200	-2.902400	-2.492600
H	-2.739800	-3.882000	-3.023100
H	-2.744400	-3.886500	3.017800
H	-2.893500	-2.095500	-2.899500
N	2.853000	-3.112800	-1.075000
N	2.851800	-3.113100	1.076100
C	2.029900	-3.039300	0.000100
C	4.162800	-3.235000	0.679100
H	4.972500	-3.314600	1.388100
C	4.163500	-3.234800	-0.676600
H	4.974000	-3.314100	-1.384800
C	2.442500	-2.993100	-2.460300
H	1.355500	-2.904300	-2.491200
H	2.895800	-2.097200	-2.897600
C	2.439900	-2.993600	2.461000
H	1.352700	-2.905800	2.490800
H	2.740400	-3.884100	3.020800
H	2.742800	-3.883900	-3.019700
H	2.891900	-2.097300	2.898500
N	3.185800	0.000000	0.000100
C	2.013700	0.000100	-0.000200
N	-3.186700	-0.000100	0.003800
C	-2.014500	0.000000	0.002200
Ag	-0.000400	-0.000200	0.000400
Au	-0.000100	2.867500	-0.000900
N	-2.852900	3.114900	1.073200
N	-2.852000	3.112300	-1.077900
C	-2.030000	3.039700	-0.002000
C	-4.162900	3.235100	-0.680900
H	-4.972700	3.313900	-1.389900
C	-4.163500	3.236700	0.674800
H	-4.973900	3.317100	1.383000
C	-2.442300	2.996300	2.458600
H	-1.355100	2.910100	2.489500
H	-2.744700	3.886500	3.017800
C	-2.440300	2.991300	-2.462800
H	-1.353300	2.902200	-2.492500
H	-2.893500	2.095100	-2.899500
H	-2.893500	2.099400	2.895900



H	-2.739900	3.881600	-3.023300
N	2.852700	3.112700	-1.075300
N	2.851800	3.113300	1.075900
C	2.029800	3.039300	-0.000000
C	4.162700	3.235100	0.678700
H	4.972600	3.314700	1.387600
C	4.163300	3.234800	-0.677000
H	4.973800	3.314000	-1.385300
C	2.442200	2.992900	-2.460500
H	1.355100	2.904200	-2.491300
H	2.742400	3.883700	-3.020000
C	2.440000	2.993800	2.460800
H	1.352900	2.906200	2.490700
H	2.892000	2.097400	2.898300
H	2.895400	2.097000	-2.897700
H	2.740700	3.884300	3.020500
O	4.083500	0.000000	-2.751000
H	3.899400	0.000000	-1.792500
C	5.480800	0.000100	-2.931400
H	5.961000	-0.889700	-2.497200
H	5.961000	0.889900	-2.497200
H	5.674700	0.000100	-4.007300
O	-4.076200	-0.000000	2.758300
H	-3.895000	-0.000000	1.799200
C	-5.472900	-0.000100	2.943100
H	-5.954500	0.889700	2.510400
H	-5.954400	-0.890000	2.510400
H	-5.663300	-0.000100	4.019600
C	-5.480200	-0.000100	-2.929400
O	-4.083000	-0.000200	-2.748700
H	-5.960500	0.889700	-2.495300
H	-5.960600	-0.889900	-2.495200
H	-3.899100	-0.000200	-1.790100
H	-5.673900	-0.000100	-4.005300
C	5.475300	0.000100	2.936400
O	4.078400	0.000100	2.753700
H	5.956300	0.889900	2.503000
H	5.956300	-0.889800	2.503000
H	3.895800	0.000000	1.794900
H	5.667400	0.000100	4.012600

## III-S2

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## Molecule Name

Au	2.754900	-0.283700	-0.206200
N	2.658700	1.873200	-2.356000
N	2.706000	2.769400	-0.396900
C	2.715000	1.571100	-1.033000
C	2.657800	3.800700	-1.306000
H	2.646800	4.835500	-0.999900
C	2.631600	3.236900	-2.540000
H	2.600300	3.684500	-3.521500
C	2.699700	0.889800	-3.422800
H	3.682600	0.409800	-3.455100
H	1.926800	0.133100	-3.268700
C	2.783200	2.959300	1.040800
H	3.701500	3.499800	1.290100
H	1.908100	3.506800	1.406200
N	0.000100	-1.715500	-2.990600
C	0.000100	-1.222800	-1.928500
H	2.519400	1.396000	-4.372700
H	2.806600	1.978400	1.516700
N	3.040900	-2.438600	1.931600

N	3.018800	-3.319700	-0.034700
C	2.957400	-2.127600	0.612100
C	3.157600	-4.352800	0.864100
H	3.233400	-5.382600	0.550300
C	3.171800	-3.798300	2.102500
H	3.263000	-4.250300	3.078100
C	3.050200	-1.457800	2.999800
H	2.198500	-0.781100	2.893100
H	2.975400	-1.977600	3.956500
C	3.000700	-3.466600	-1.478400
H	3.920100	-3.058500	-1.909600
H	2.932500	-4.528100	-1.722400
N	-0.003300	1.055200	2.759200
C	-0.001700	0.494100	1.732200
H	3.980800	-0.882100	2.976300
H	2.136000	-2.946700	-1.898000
Au	-2.755200	-0.282200	-0.206500
N	-2.655400	1.877200	-2.353500
N	-2.707100	2.771200	-0.393600
C	-2.714300	1.573700	-1.031100
C	-2.657600	3.803600	-1.301500
H	-2.647400	4.838000	-0.994100
C	-2.628700	3.241200	-2.536000
H	-2.595700	3.689900	-3.517000
C	-2.694400	0.895000	-3.421400
H	-3.679000	0.418900	-3.459900
H	-2.506500	1.401200	-4.369900
C	-2.787100	2.959700	1.044100
H	-3.706700	3.498600	1.292300
H	-2.809800	1.978400	1.519100
H	-1.925400	0.135100	-3.263600
H	-1.913400	3.508200	1.411400
N	-3.042400	-2.439300	1.928900
N	-3.020200	-3.318300	-0.038300
C	-2.958500	-2.126900	0.609800
C	-3.159500	-4.352300	0.859400
H	-3.235500	-5.381700	0.544600
C	-3.173700	-3.799100	2.098400
H	-3.265200	-4.252100	3.073600
C	-3.051900	-1.459600	2.998200
H	-2.200800	-0.782100	2.891700
H	-3.983000	-0.884600	2.975900
C	-3.001900	-3.463800	-1.482100
H	-3.920700	-3.053900	-1.913100
H	-2.136400	-2.944600	-1.900900
H	-2.976100	-1.980300	3.954200
H	-2.935200	-4.525100	-1.727100
Ag	-0.000100	-0.370900	-0.097600
C	0.004400	4.697700	3.758100
C	0.007100	6.167400	3.400600
H	0.891200	4.456200	4.363800
H	-0.880000	4.460700	4.369000
H	-0.881000	6.422700	2.812800
H	0.011100	6.785300	4.304200
H	0.893100	6.418400	2.807800
O	-0.001100	3.941000	2.558800
H	-0.001300	2.992000	2.792600

## III-2S2

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## Molecule Name

Au	0.000700	-2.938600	0.000100
N	3.045200	-2.971300	-0.568300

N	2.623200	-3.432300	1.500600
C	2.020400	-3.123300	0.316800
C	3.997500	-3.473900	1.352800
H	4.657600	-3.698000	2.176000
C	4.262500	-3.188300	0.051700
H	5.196400	-3.121500	-0.482500
C	2.913200	-2.589400	-1.969600
H	1.881100	-2.284400	-2.150000
H	3.582900	-1.747500	-2.162400
C	1.922900	-3.594700	2.768200
H	1.013000	-4.178900	2.608900
H	2.570800	-4.129400	3.465600
H	3.160500	-3.432500	-2.622600
H	1.667400	-2.616500	3.186200
N	-3.043900	-2.972700	0.568300
N	-2.621500	-3.433400	-1.500600
C	-2.018900	-3.124200	-0.316800
C	-3.995800	-3.475600	-1.353000
H	-4.655700	-3.700000	-2.176200
C	-4.261000	-3.190200	-0.051800
H	-5.195000	-3.123700	0.482200
C	-2.912100	-2.590700	1.969500
H	-1.880200	-2.285400	2.150100
H	-3.582200	-1.749000	2.162300
C	-1.920900	-3.595600	-2.768200
H	-1.010900	-4.179400	-2.608800
H	-2.568600	-4.130500	-3.465700
H	-3.159300	-3.433900	2.622500
H	-1.665800	-2.617300	-3.186100
N	-2.828400	-0.000500	-1.515900
C	-1.762600	-0.000300	-1.027400
N	2.828400	0.000800	1.515900
C	1.762600	0.000500	1.027500
Ag	0.000000	-0.000000	0.000100
Au	-0.000700	2.938600	-0.000100
N	3.043500	2.972200	-0.570400
N	2.622500	3.433700	1.498600
C	2.019100	3.124200	0.315300
C	3.996700	3.475700	1.350100
H	4.657200	3.700200	2.172800
C	4.261000	3.189800	0.048900
H	5.194700	3.122900	-0.485800
C	2.910900	2.589700	-1.971400
H	1.878900	2.284100	-2.151200
H	3.157300	3.432800	-2.624900
C	1.922900	3.596300	2.766600
H	1.012500	4.179800	2.607500
H	1.668300	2.618100	3.185200
H	3.581000	1.748300	-2.164400
H	2.570900	4.131800	3.463400
N	-3.044900	2.970900	0.570500
N	-2.624200	3.432600	-1.498600
C	-2.020600	3.123300	-0.315300
C	-3.998400	3.474000	-1.349900
H	-4.659100	3.698300	-2.172600
C	-4.262500	3.188000	-0.048700
H	-5.196200	3.120700	0.486000
C	-2.911900	2.588400	1.971400
H	-1.879800	2.283100	2.151100
H	-3.158500	3.431400	2.625000
C	-1.924800	3.595500	-2.766600
H	-1.014600	4.179400	-2.607600
H	-1.669800	2.617500	-3.185300
H	-3.581700	1.746700	2.164500
H	-2.573100	4.130800	-3.463300
O	-4.764000	-0.001000	0.789300
H	-4.202800	-0.001000	-0.012800
C	-6.130900	-0.001600	0.380800
H	-6.348700	-0.886500	-0.236900
H	-6.348900	0.882000	-0.238800
C	-7.011400	-0.000500	1.620400
H	-8.070500	-0.001000	1.341400
H	-6.817200	-0.885500	2.236600
H	-6.817600	0.886000	2.234800
O	4.764000	0.000800	-0.789500
H	4.202800	0.000500	0.012700
C	6.130900	0.001000	-0.381100
H	6.348600	0.884800	0.238300
H	6.349200	-0.883700	0.236900
C	7.011300	0.002200	-1.620700
H	6.817100	0.888300	-2.235300
H	8.070500	0.002300	-1.341800
H	6.817600	-0.883100	-2.236600
III-3S2			
94			
Molecule Name			
Au	0.176100	2.853300	-0.184600
N	-2.766000	2.966100	-1.050900
N	-2.569700	3.231000	1.074600
C	-1.848000	3.032000	-0.055800
C	-3.913900	3.287100	0.789000
H	-4.658800	3.440200	1.554700
C	-4.037500	3.123500	-0.551400
H	-4.908800	3.110900	-1.187400
C	-2.476700	2.709700	-2.447100
H	-1.424200	2.432900	-2.535800
H	-3.101800	1.879100	-2.787000
C	-2.019500	3.268600	2.415900
H	-0.975800	3.585700	2.356400
H	-2.573300	3.998400	3.011900
H	-2.666600	3.603300	-3.049600
H	-2.084900	2.279800	2.883700
N	3.110200	2.825300	0.708100
N	2.927200	3.348000	-1.369500
C	2.198400	3.013000	-0.276400
C	4.269800	3.370700	-1.071400
H	5.019900	3.608000	-1.809800
C	4.384700	3.046300	0.239800
H	5.251700	2.949300	0.873400
C	2.811500	2.420200	2.065700
H	1.784200	2.051200	2.100500
H	3.497200	1.615900	2.343600
C	2.368800	3.539000	-2.690500
H	1.463900	4.148500	-2.619700
H	3.097700	4.058700	-3.315000
H	2.914500	3.265400	2.753500
H	2.129200	2.570700	-3.140400
N	3.267500	-0.000500	-1.338600
C	2.132500	-0.000300	-1.051200
N	-2.823300	0.000500	0.559100
C	-1.699700	0.000300	0.224500
Ag	0.217100	-0.000100	-0.405200
Au	0.174800	-2.853400	-0.184600
N	-2.767700	-2.965600	-1.049800
N	-2.570600	-3.229800	1.075600
C	-1.849300	-3.031400	-0.055100

C	-3.914900	-3.285700	0.790700
H	-4.659500	-3.438400	1.556700
C	-4.039000	-3.122500	-0.549800
H	-4.910600	-3.110000	-1.185400
C	-2.479000	-2.709500	-2.446200
H	-1.425800	-2.435400	-2.535800
H	-2.671600	-3.602600	-3.048700
C	-2.019900	-3.267400	2.416800
H	-0.975900	-3.583600	2.356800
H	-2.085900	-2.278700	2.884900
H	-3.102300	-1.877300	-2.785500
H	-2.572900	-3.997800	3.012700
N	3.109100	-2.826600	0.707400
N	2.925600	-3.348800	-1.370300
C	2.197100	-3.013900	-0.277000
C	4.268300	-3.371900	-1.072400
H	5.018100	-3.609300	-1.811000
C	4.383400	-3.047800	0.238900
H	5.250600	-2.951100	0.872300
C	2.810700	-2.421500	2.065100
H	1.783600	-2.052200	2.100100
H	2.913600	-3.266900	2.752700
C	2.366900	-3.539400	-2.691200
H	1.461400	-4.147800	-2.620200
H	2.128400	-2.570900	-3.141300
H	3.496800	-1.617400	2.343000
H	3.095200	-4.060000	-3.315600
O	4.913800	-0.000900	1.106700
H	4.444100	-0.000800	0.249300
C	6.304700	-0.001100	0.847100
H	6.590100	0.882000	0.253800
H	6.590000	-0.884400	0.254200
C	7.045600	-0.000800	2.166500
H	6.786400	-0.885900	2.757600
H	8.128100	-0.001000	2.003800
H	6.786700	0.884600	2.757200
O	-4.441400	0.001400	-1.895500
H	-4.015100	0.001200	-1.017400
C	-5.844500	0.000900	-1.715100
H	-6.164100	-0.882800	-1.139800
H	-6.164700	0.884300	-1.139700
C	-6.507900	0.000800	-3.074600
H	-7.598100	0.000400	-2.974700
H	-6.214300	0.886400	-3.648000
H	-6.213700	-0.884700	-3.648100
C	-4.027400	0.000500	4.107800
O	-2.775200	0.000500	3.448300
H	-4.619000	-0.885100	3.823700
H	-4.619400	0.885600	3.822900
H	-2.933300	0.000300	2.485400
C	-3.786500	0.001200	5.601100
H	-3.215900	0.887400	5.897200
H	-4.735200	0.001200	6.147300
H	-3.215400	-0.884400	5.898000
III-4S2			
103			
Molecule Name			
Au	0.000300	2.868000	-0.001200
N	2.853300	3.111300	1.073000
N	2.852500	3.108900	-1.078100
C	2.030200	3.038500	-0.002100
C	4.163700	3.227400	-0.681000
H	4.974100	3.302200	-1.389800
C	4.164200	3.228900	0.674700
H	4.975100	3.305300	1.382700
C	2.441900	2.994600	2.458200
H	1.354700	2.907200	2.488500
H	2.893600	2.098700	2.897100
C	2.440100	2.989500	-2.462700
H	1.353100	2.899700	-2.492000
H	2.738600	3.880900	-3.022200
H	2.742900	3.886000	3.016200
H	2.893500	2.094100	-2.900700
N	-2.852900	3.109300	-1.075600
N	-2.851900	3.109800	1.075500
C	-2.029700	3.038100	-0.000400
C	-4.163200	3.227500	0.678300
H	-4.973600	3.303100	1.387100
C	-4.163800	3.227100	-0.677400
H	-4.974800	3.302300	-1.385500
C	-2.441600	2.991000	-2.460700
H	-1.354600	2.901200	-2.490900
H	-2.895300	2.096000	-2.899200
C	-2.439500	2.992100	2.460300
H	-1.352300	2.904000	2.489700
H	-2.739400	3.883500	3.019000
H	-2.740500	3.882900	-3.019200
H	-2.891500	2.096400	2.899100
N	-3.185900	-0.000000	0.000000
C	-2.013900	-0.000000	-0.000300
N	3.186900	-0.000000	0.002800
C	2.014900	-0.000000	0.001400
Ag	0.000500	-0.000000	0.000000
Au	0.000200	-2.868000	-0.001200
N	2.853200	-3.111400	1.073100
N	2.852400	-3.108900	-1.078000
C	2.030100	-3.038500	-0.002000
C	4.163700	-3.227400	-0.680900
H	4.974000	-3.302300	-1.389700
C	4.164200	-3.229000	0.674800
H	4.975000	-3.305400	1.382900
C	2.441800	-2.994600	2.458300
H	1.354600	-2.907200	2.488600
H	2.742700	-3.886100	3.016300
C	2.440200	-2.989500	-2.462600
H	1.353100	-2.899700	-2.491900
H	2.893500	-2.094100	-2.900600
H	2.893500	-2.098700	2.897200
H	2.738700	-3.880900	-3.022100
N	-2.852900	-3.109300	-1.075700
N	-2.852000	-3.109800	1.075400
C	-2.029700	-3.038100	-0.000400
C	-4.163300	-3.227400	0.678200
H	-4.973700	-3.303000	1.387000
C	-4.163900	-3.227100	-0.677500
H	-4.974800	-3.302400	-1.385600
C	-2.441600	-2.991100	-2.460700
H	-1.354600	-2.901300	-2.490900
H	-2.740500	-3.883000	-3.019200
C	-2.439600	-2.992000	2.460200
H	-1.352500	-2.904000	2.489700
H	-2.891600	-2.096200	2.898900
H	-2.895200	-2.096000	-2.899200
H	-2.739600	-3.883300	3.019000
O	-4.085600	-0.000100	-2.759000
H	-3.907300	-0.000100	-1.799100

C	-5.486700	-0.000000	-2.954800
H	-5.947100	0.884500	-2.485100
H	-5.947200	-0.884500	-2.485100
C	-5.768300	0.000000	-4.441000
H	-5.333000	-0.885800	-4.915100
H	-6.846300	0.000000	-4.631900
H	-5.333000	0.885800	-4.915100
O	4.076300	-0.000100	2.766000
H	3.901000	-0.000000	1.805600
C	5.476900	-0.000000	2.966000
H	5.938700	-0.884500	2.497600
H	5.938700	0.884500	2.497600
C	5.754000	-0.000100	4.453000
H	6.831400	-0.000000	4.647100
H	5.317300	0.885700	4.925800
H	5.317300	-0.885900	4.925700
C	5.486400	-0.000000	-2.953700
O	4.085400	0.000000	-2.757500
H	5.946900	-0.884500	-2.484100
H	5.947000	0.884400	-2.484100
H	3.907300	0.000000	-1.797600
C	5.767600	0.000000	-4.440000
H	5.332200	0.885800	-4.913900
H	6.845500	-0.000000	-4.631200
H	5.332100	-0.885800	-4.914000
C	-5.480600	0.000100	2.960400
O	-4.079800	0.000100	2.761700
H	-5.942000	-0.884400	2.491700
H	-5.941900	0.884600	2.491600
H	-3.903500	0.000100	1.801500
C	-5.759000	0.000200	4.447200
H	-6.836600	0.000200	4.640400
H	-5.322700	-0.885600	4.920400
H	-5.322700	0.886000	4.920300

