

Supporting Information

Synthesis of New Heteroleptic Strontium Complexes

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Figure S1. Crystal structure of complex **1** & **2**.

Figure S2. Crystal structure of complex **4** & **5**.

Figure S3. Sr₄O₄ core of complex **7**.

Figure S4. TGA plots of [Sr(bdmadmaeh)(tmhd)]₂ (**4**) and [Sr(bdmadmaph)(tmhd)]₂ (**5**).

Figure S5. TGA plots of [Sr(dmaemp)(tmhd)]₂ (**6**), [Sr(dmapmp)(tmhd)]₂ (**7**),

[Sr(dmamemp)(tmhd)]₂ (**8**), and [Sr(dmaeemp)(tmhd)]₂ (**9**).

Table S6. Crystallographic data and data collection parameters for **1**, **2**, **4**, **5**, and **7**.

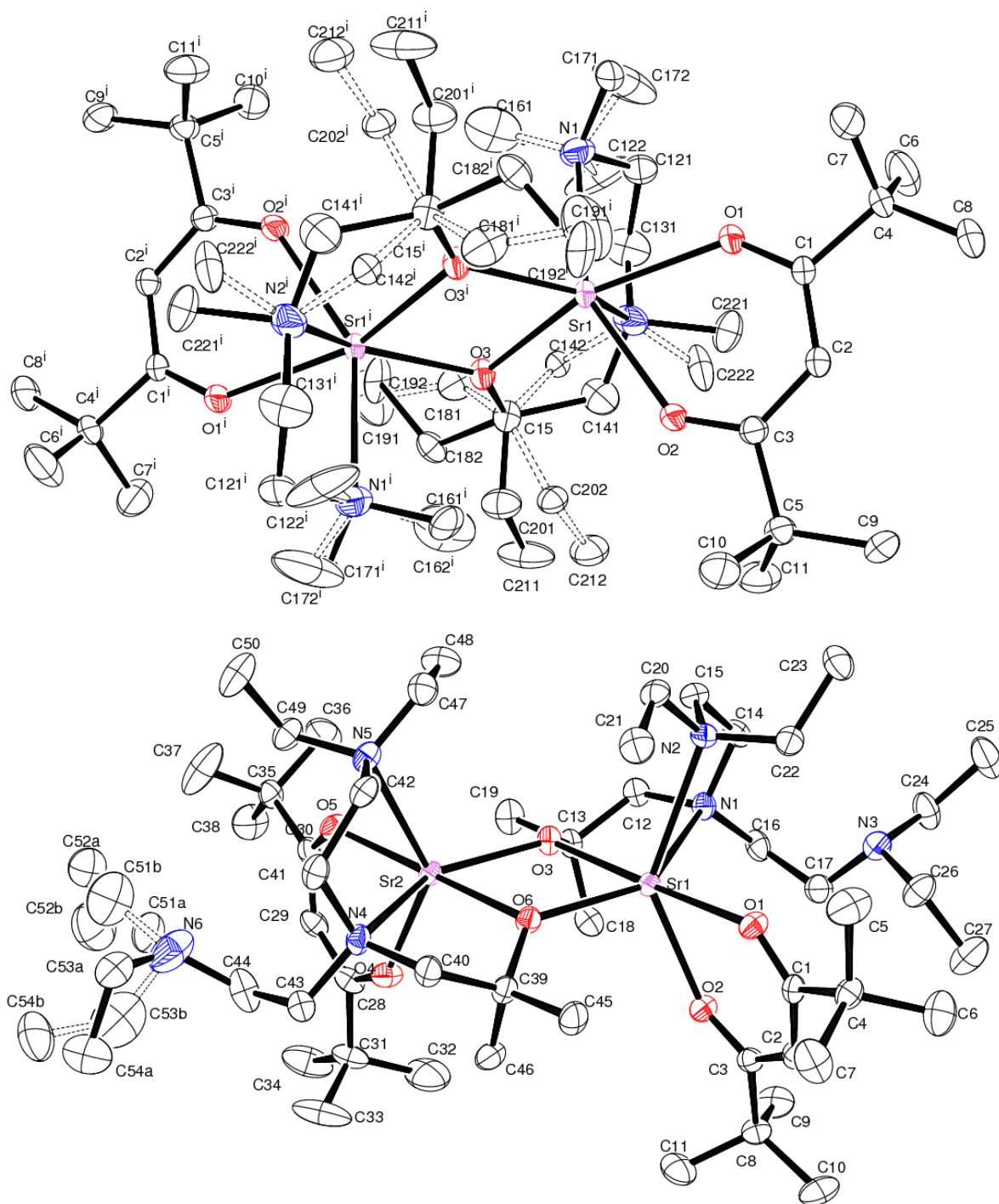


Figure S1. Crystal structure of complex 1(above) & 2 (below) (disorders included).

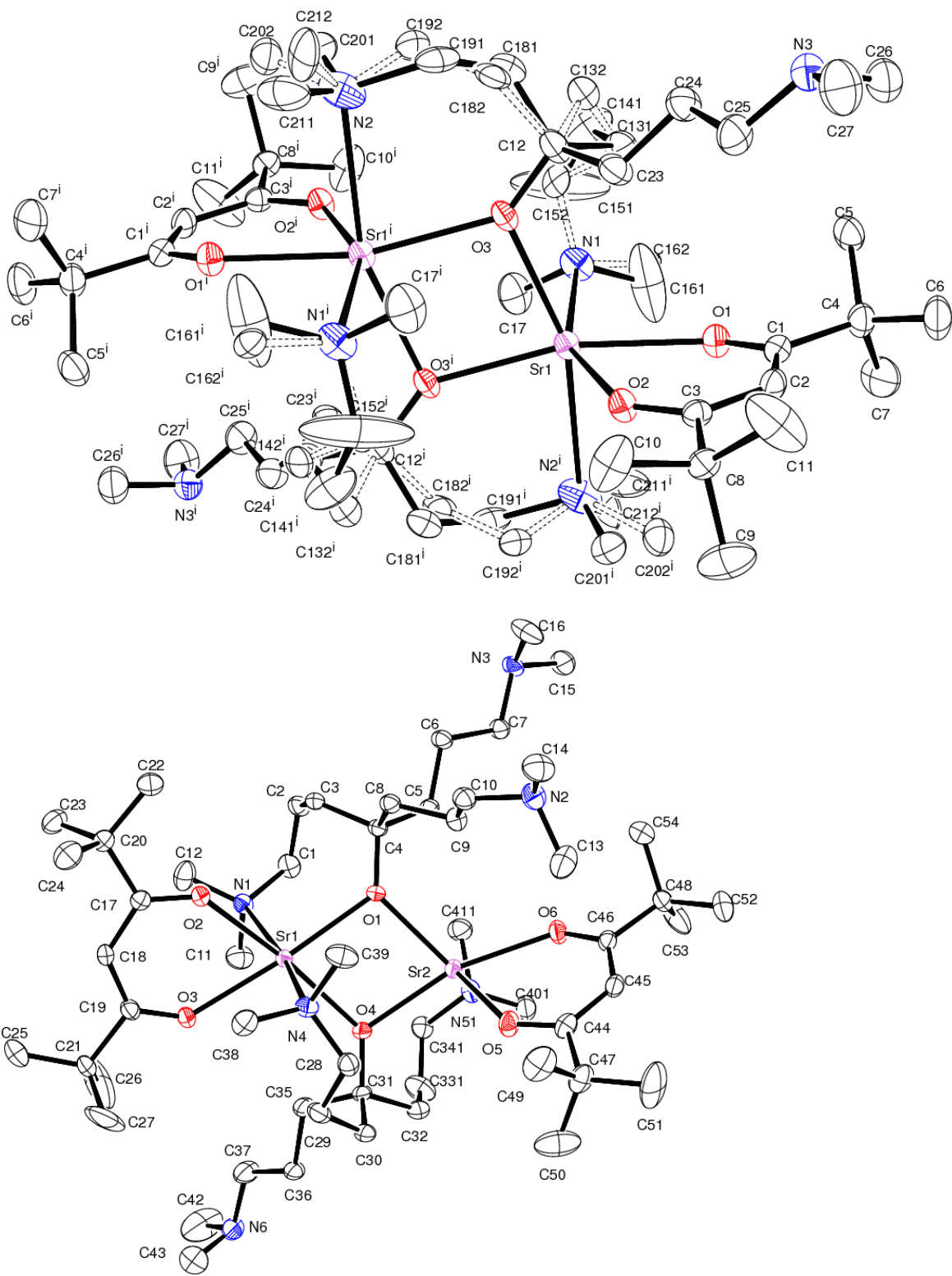


Figure S2. Crystal structure of complex 4 (disorders included) & 5.

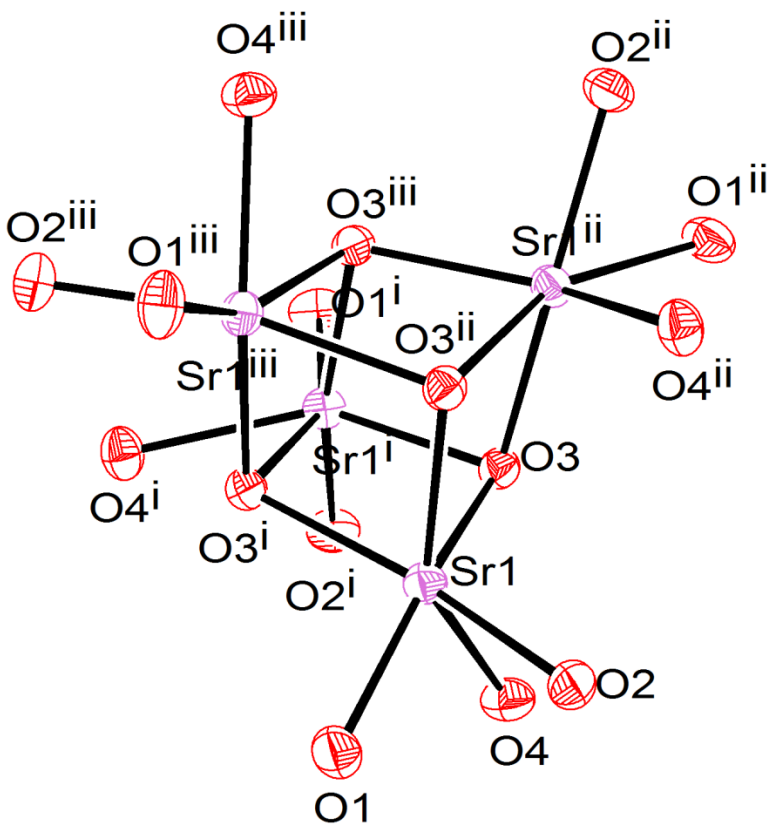


Figure S3. Sr_4O_4 core of complex 7.

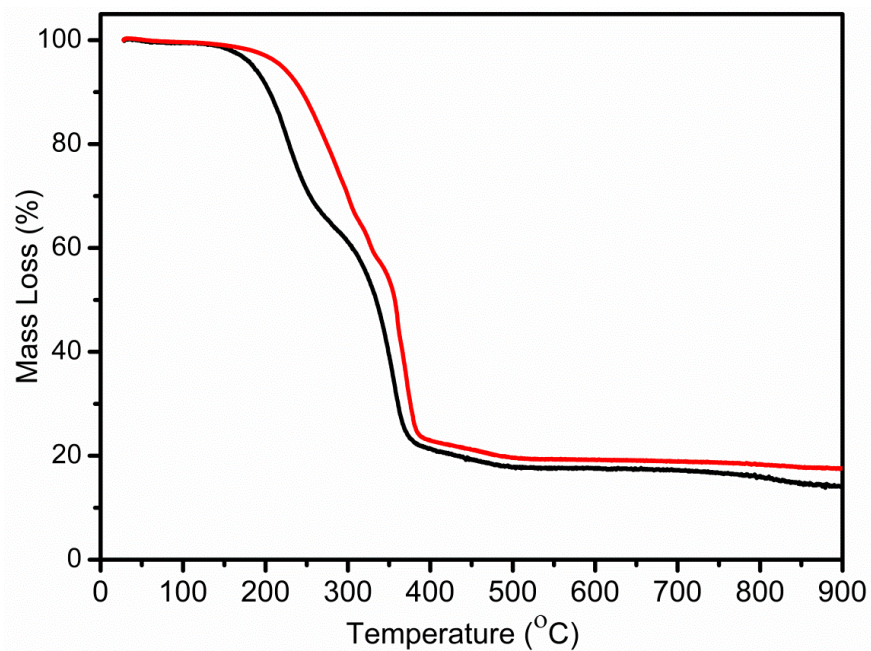


Figure S4. TGA plots of $[\text{Sr}(\text{bdmadmaeh})(\text{tmhd})]_2$ (**4**) (black) and $[\text{Sr}(\text{bdmadmaph})(\text{tmhd})]_2$ (**5**) (red).

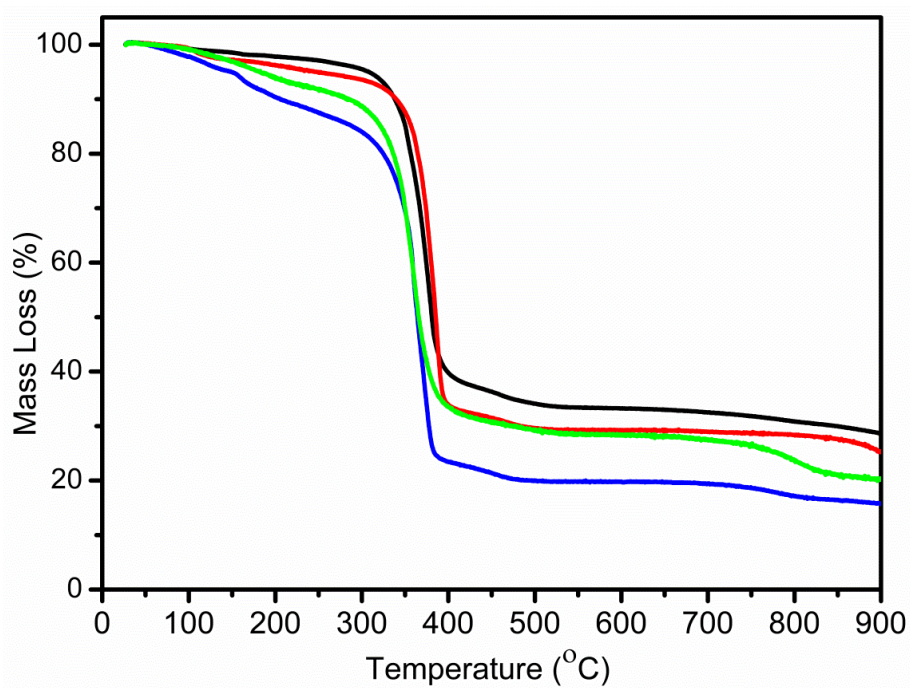


Figure S5. TGA plots of $[\text{Sr}(\text{dmaemp})(\text{tmhd})]_2$ (**6**) (black), $[\text{Sr}(\text{dmapmp})(\text{tmhd})]_2$ (**7**) (red), $[\text{Sr}(\text{dmamemp})(\text{tmhd})]_2$ (**8**) (blue), and $[\text{Sr}(\text{dmaeemp})(\text{tmhd})]_2$ (**9**) (green).

Table S6. Crystallographic data and data collection parameters for **1**, **2**, **4**, **5**, and **7**.

Compound	(1)	(2)	(4)	(5)	(7)
Formula weight	944.42	1116.74	1086.67	1114.72	1780.57
Temperature (K)	173(2)	173(2)	173(2)	173(2)	173(2)
Wavelength (Å)	0.71073 Å	0.71073	0.71073	0.71073	0.71073
Crystal system	Monoclinic	Monoclinic	Monoclinic	Monoclinic	Tetragonal
Space group	<i>P2₁/n</i>	<i>Pc</i>	<i>P2₁/n</i>	<i>P2₁/c</i>	<i>I4₁/a</i>
<i>a</i> (Å)	10.736(2)	17.275(4)	12.915(3)	29.008(6)	26.451(4)
<i>b</i> (Å)	14.750(3)	10.216(2)	14.502(3)	11.542(2)	26.451(4)
<i>c</i> (Å)	16.890(3)	19.675(4)	16.512(3)	19.150(4)	13.425(3)
α (°)	90	90	90	90	90
β (°)	102.20(3)	113.21(3)	99.99(3)	94.86(3)	90
γ (°)	90	90	90	90	90
<i>V</i> (Å ³)	2614.2(9)	3191.3(11)	3045.8(11)	6389(2)	9393(3)
<i>Z</i>	2	2	2	4	4
ρ_{calc} (Mg/m ³)	1.200	1.162	1.185	1.159	1.259
μ (mm ⁻¹)	2.084	1.717	1.798	1.716	2.317
<i>F</i> (000)	1008	1204	1168	2400	3776
Crystal size (mm ³)	0.23 x 0.20 x 0.16	0.34 x 0.29 x 0.18	0.35 x 0.30 x 0.25	0.24 x 0.22 x 0.19	0.70 x 0.45 x 0.08
Theta range for data collection (°)	3.03 to 27.44	3.00 to 27.48	3.07 to 27.49	3.02 to 27.45	3.08 to 27.47
Index ranges	-13 \leq h \leq 13, -19 \leq k \leq 17, -21 \leq l \leq 21	-22 \leq h \leq 22, -13 \leq k \leq 12, -23 \leq l \leq 25	-16 \leq h \leq 16, -18 \leq k \leq 18, -21 \leq l \leq 21	-37 \leq h \leq 37, -14 \leq k \leq 14, -22 \leq l \leq 24	-34 \leq h \leq 30, -34 \leq k \leq 34, -17 \leq l \leq 17
total reflns	23744	28960	29024	60438	45260
Independent reflns(<i>R</i> _{int})	5953 (0.0672)	13398 (0.0390)	6938 (0.0544)	14403 (0.1011)	5378 (0.1292)
parameters	350	676	386	664	246
GOF on <i>F</i> ²	1.039	1.024	1.161	1.029	1.070
<i>R</i> 1 [<i>I</i> $>$ 2 σ (<i>I</i>)]	0.0422	0.0383	0.0434	0.0540	0.0508
<i>wR</i> 2 [<i>I</i> $>$ 2 σ (<i>I</i>)]	0.0820	0.0809	0.0933	0.0984	0.1035