Supplementary Information

Effect of anion on Ag(I) meso-helical chains formed with 4,4'-dipyridyl ketone: solvent versus anion bridging and anion effects on the strength of ligand binding

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Table S1. Selected bond lengths (Å) and angles (°) of complexes **1-9**.

Complex $\{[Ag(\mathbf{L})](CF_3SO_3)\cdot{}^1/_2H_2O\}_\infty$ (**1**)			
N(1)–Ag(1)	2.135(2)	N(2A)–Ag(1)	2.132(2)
O(1)–C(6)	1.214(3)	N(1)–Ag(1)–N(2A)	175.72(6)
Symmetry codes: A $^1/_2$+x, $^1/_2$-y, $^1/_2$+z			
Complex $\{[Ag(\mathbf{L})](ClO_4)\cdot{}^1/_2H_2O\}_\infty$ (**2**)			
Ag(1)–N(1)	2.148(2)	Ag(1)–N(2A)	2.1562(19)
O(1)–C(6)	1.219(2)	N(1)–Ag(1)–N(2A)	170.12(6)
Symmetry codes: A $^1/_2$+x, –$^1/_2$-y, $^1/_2$+z			
Complex $\{[Ag_2(\mathbf{L})_2(CH_3CN)](ClO_4)_2\cdot 2CH_3CN\cdot H_2O\}_\infty$ (**3**)			
Ag(1)–N(1)	2.203(4)	Ag(1)–N(5)	2.505(4)
Ag(1)–N(2A)	2.198(4)	Ag(2)–N(3A)	2.171(4)
Ag(2)–N(4)	2.177(4)	O(1A)–C(6A)	1.217(5)
O(2A)–C(17A)	1.212(5)	N(3A)–Ag(2)–N(4)	174.58(14)
N(1)–Ag(1)–N(2A)	163.80(14)	N(1)–Ag(1)–N(5)	95.86(14)
N(5)–Ag(1)–N(2A)	94.84(14)		
Symmetry codes: A x, 1.5–y, -$^1/_2$+z			

Complex $\{[Ag_2(\mathbf{L})_2(CH_3CN)_2](ClO_4)_2{\cdot}CH_3CN\}_\infty$ (**4**)			
Ag(1)–N(1A)	2.186(5)	Ag(1)–N(2)	2.186(5)
Ag(2)–N(3A)	2.223(5)	Ag(2)–N(5)	2.414(6)
Ag(2)–N(7)	2.657(6)	Ag(2)–N(4)	2.222(5)
O(1)–C(6)	1.199(7)	O(2)–C(17)	1.202(7)
N(5)–Ag(2)–N(7)	106.1(2)	N(5)–Ag(2)–N(3A)	98.79(18)
N(2)–Ag(1)–N(1A)	165.85(18)	N(4)–Ag(2)–N(5)	100.49(18)
N(4)–Ag(2)–N(7)	95.12(17)	N(4)–Ag(2)–N(3A)	155.56(19)
N(7)–Ag(2)–N(3A)	93.97(18)		
Symmetry codes: A x, $^1/_2$–y, $^{-1}/_2$+z			
Complex $\{[Ag_2(\mathbf{L})_2(CH_3CN)_2](PF_6)_2{\cdot}2CH_3CN\}_\infty$ (**5**)			
Ag(1)–N(1)	2.164(3)	Ag(1)–N(3)	2.173(3)
Ag(1)–N(5)	2.632(3)	Ag(2A)–N(2)	2.183(3)
Ag(2A)–N(7A)	2.664(3)	Ag(2A)–N(4A)	2.172(2)
O(1)–C(6)	1.198(5)	O(2A)–C(17A)	1.211(5)
N(2)–Ag(2A)–N(4A)	169.63(9)	N(7A)–Ag(2A)–N(4A)	94.48(9)
N(1)–Ag(1)–N(3)	171.15(9)	N(1)–Ag(1)–N(5)	96.23(9)
N(3)–Ag(1)–N(5)	89.63(9)	N(2)–Ag(2A)–N(7A)	90.87(9)
Symmetry codes: A x, 1+y, z			
Complex $\{[Ag(\mathbf{L})_2](CF_3SO_3){\cdot}^1/_2H_2O\}_\infty$ (**6**)			
N(1)–Ag(1)	2.257(6)	N(3)–Ag(1)	2.275(5)
N(4A)–Ag(1)	2.260(6)	O(1)–C(6)	1.201(9)
O(2)–C(17)	1.216(9)	N(1)–Ag(1)–N(3)	116.1(2)
N(1)–Ag(1)–N(4A)	127.5(2)	N(3)–Ag(1)–N(4A)	112.74(19)
Symmetry codes: A x, 1-y, $^{-1}/_2$+z			
Complex $\{[Ag(\mathbf{L})_2](BF_4)\}_\infty$ (**7**)			
Ag(1)–N(1)	2.2334(17)	Ag(1)–N(3)	2.2121(17)
Ag(1)–N(4A)	2.3861(18)	O(2)–C(26)	1.218(2)
O(1)–C(6)	1.214(3)	N(1)–Ag(1)–N(3)	149.54(6)
N(1)–Ag(1)–N(3)	99.89(6)	N(3)–Ag(1)–N(4)	109.33(6)
Symmetry codes: A 2–x, $^{-1}/_2$+y, 1.5–z			

Complex $\{[Ag(\mathbf{L})_2](PF_6)\}_\infty$ (**8**)			
Ag(1)–N(1)	2.244(3)	Ag(1)–N(3)	2.297(4)
Ag(1)–N(4B)	2.377(3)	Ag(1A)–N(2)	2.383(3)
O(1)–C(6)	1.212(4)	O(2A)–C(17A)	1.216(4)
N(1)–Ag(1)–N(3)	138.04(12)	N(1)–Ag(1)–N(4B)	110.78(11)
N(1)–Ag(1)–N(2C)	104.33(11)	N(3)–Ag(1)–N(4B)	94.52(11)
N(3)–Ag(1)–N(2C)	95.70(12)	N(4B)–Ag(1)–N(2C)	112.11(11)
Symmetry codes: A –1+x, y, z; B $^{-1}/_{2}$+x, $^{1}/_{2}$–y, $^{-1}/_{2}$+z, C 1+x, y, z			
Complex $\{[Ag(\mathbf{L})_2](PF_6)\cdot 2CH_3CN\}_\infty$ (**9**)			
Ag(1)–N(1)	2.352(4)	Ag(1)–N(3)	2.275(4)
Ag(1A)–N(4)	2.333(4)	Ag(1)–N(2B)	2.268(4)
O(1A)–C(6A)	1.207(5)	O(2)–C(17)	1.213(4)
N(1)–Ag(1)–N(3)	111.87(12)	N(1)–Ag(1)–N(4)	93.42(12)
N(1)–Ag(1)–N(2B)	107.59(12)	N(3)–Ag(1)–N(4)	107.00(12)
N(3)–Ag(1)–N(2B)	119.90(12)	N(4)–Ag(1)–N(2B)	113.96(12)
Symmetry codes: A x, 1+y, z; B –1+x, y, z			