<Supplementary Materials>

The Relationship between Ratio of Ligand/Metal and Coordinating Ability of Anions. Synthesis and Structural Properties of AgX Bearing Bis(4-pyridyl)dimethylsilane ($X^- = NO_2^-$, NO_3^-, $CF_3SO_3^-$, and PF_6^-)

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Table S1. Calculation of Ag···Ag Interaction in [Ag(NO_2)(L)]

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$ Calculation setI

* only one Ag atom optimization

DFT method : B3LYP
Basis set : LanL2DZ
HF energy : -145.758 Hartree

* two Ag atoms optimization

DFT method : B3LYP
Basis set : LanL2DZ
HF energy : -291.574 Hartree

=> Ag-Ag bonding energy
  : -0.058 Hartree = 36.395 kcal/mol

$ Calculation set II

* unit I - included one Ag atom.

DFT method : B3LYP
Basis set : Gen
********** each C H O Si N atom   : 6-31G*
********** Ag   : LanL2DZ

HF energy : -1428.8823092 Hartree
Dipole   : 3.133173441 Debye

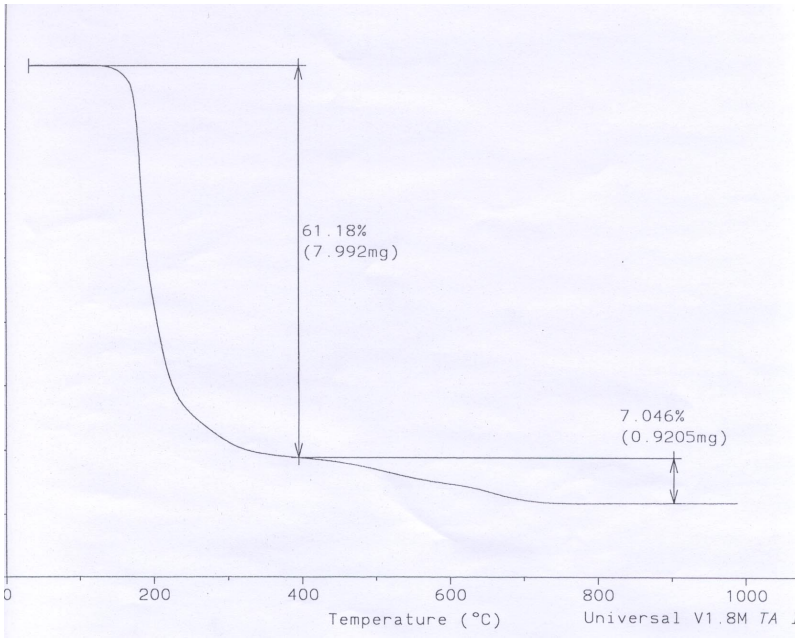
* unit II - included two Ag atom.

DFT method : B3LYP
Basis set : Gen
********** each C H O Si N atom   : 6-31G*
********** Ag   : LanL2DZ

HF energy : -2857.7946356 Hartree
Dipole   : 9.340236115*10(-3) Debye

=> unit I & unit II bonding energy
  : -0.030017 Hartree = 18.83595366 kcal/mol

Figure S1. TGA and DSC of [$Ag(NO_2)(L)$]



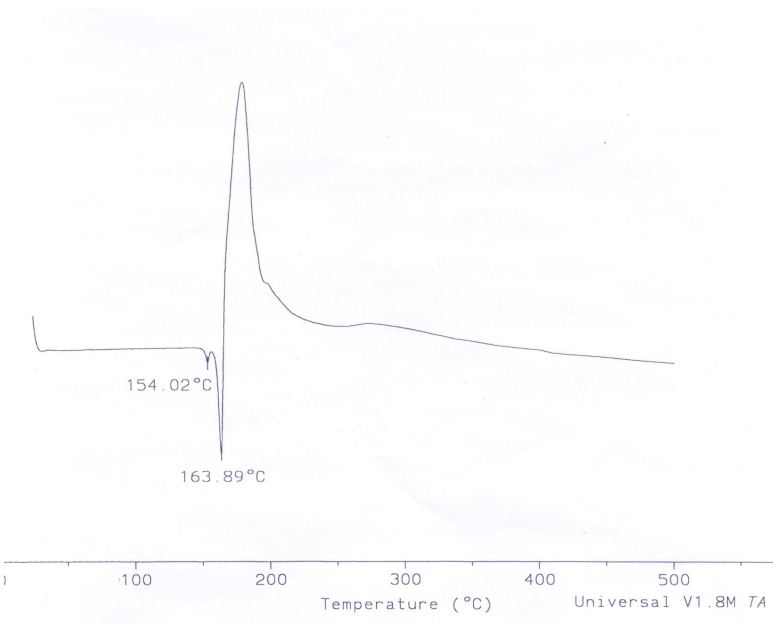
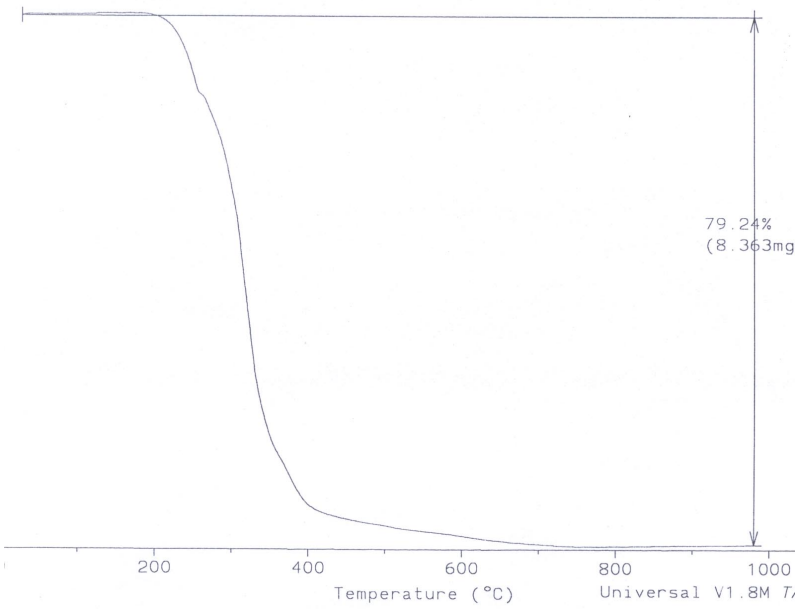


Figure S2. TGA and DSC of $[Ag_2(L)_3](CF_3SO_3)_2$



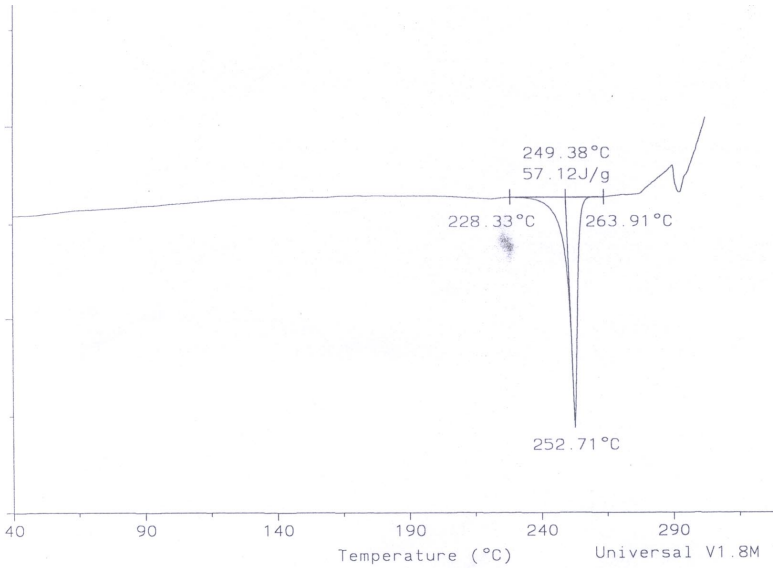


Figure S1. TGA and DSC of $[Ag(L)_2](PF_6)$