Supporting Information

Role of structures of the Cu(II) complexes in deciding the mechanistic pathway of reduction of Cu(II) by nitric oxide

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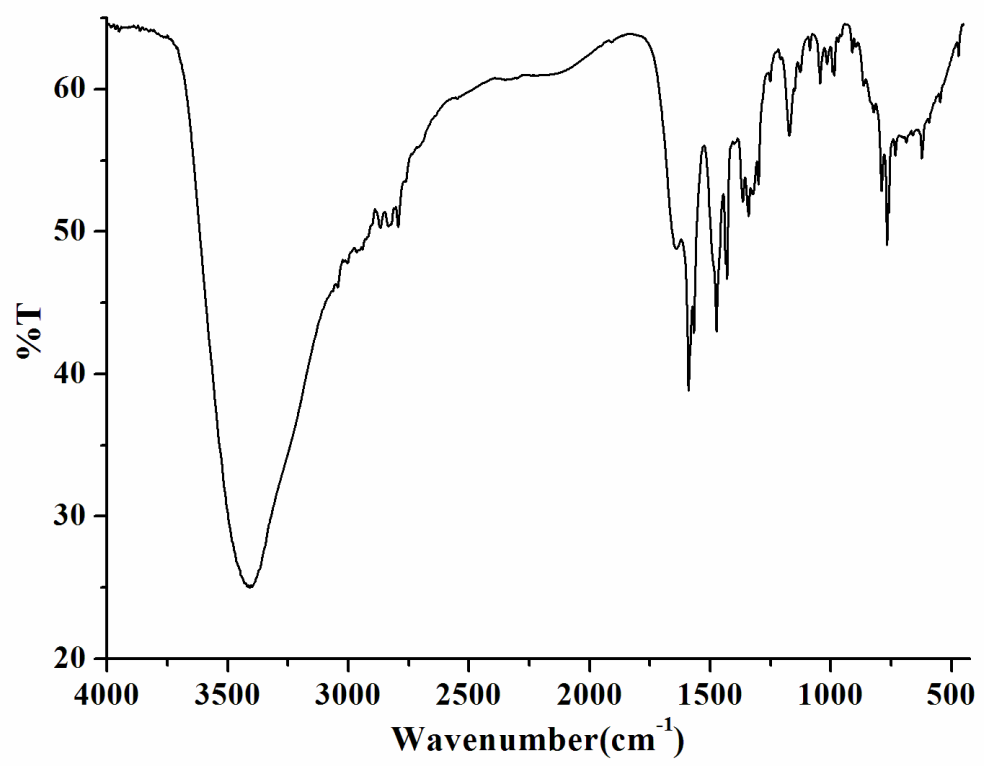

Figure S1: FT-IR spectrum of L_1 in KBr pellet

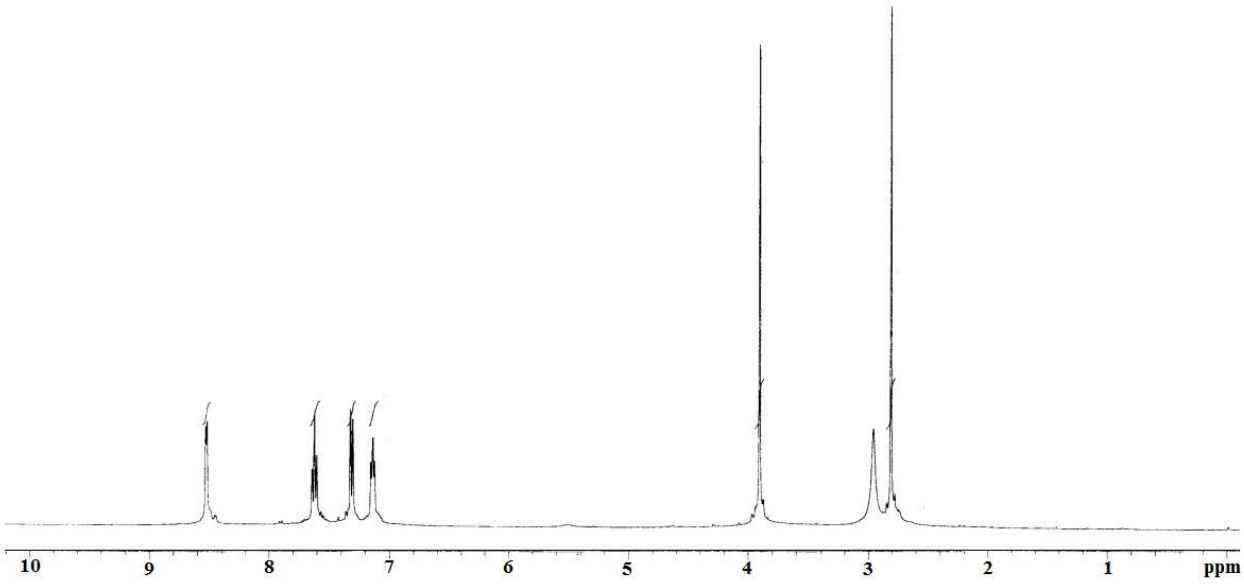

Figure S2: ^{1}H-NMR spectrum of L_1 in $CDCl_3$

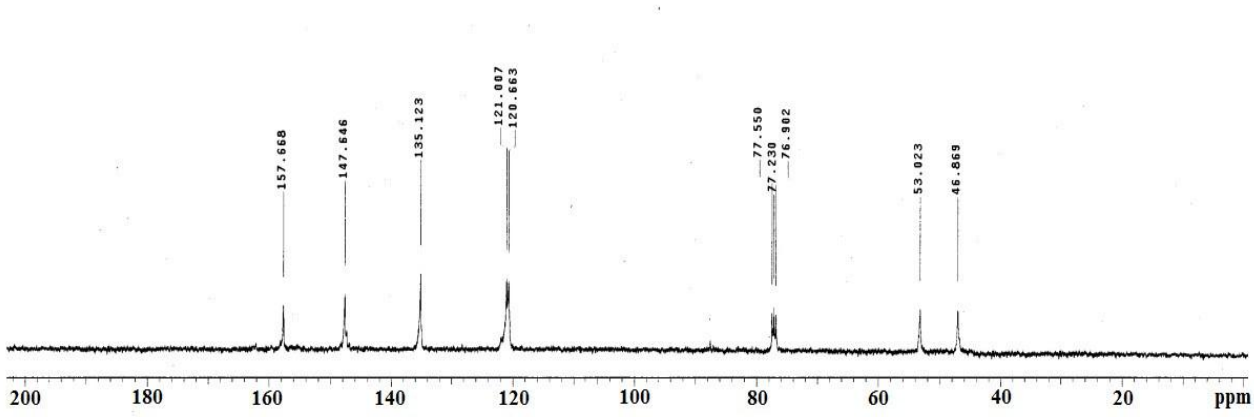

Figure S3: ^{13}C-NMR spectrum of L_1 in $CDCl_3$.

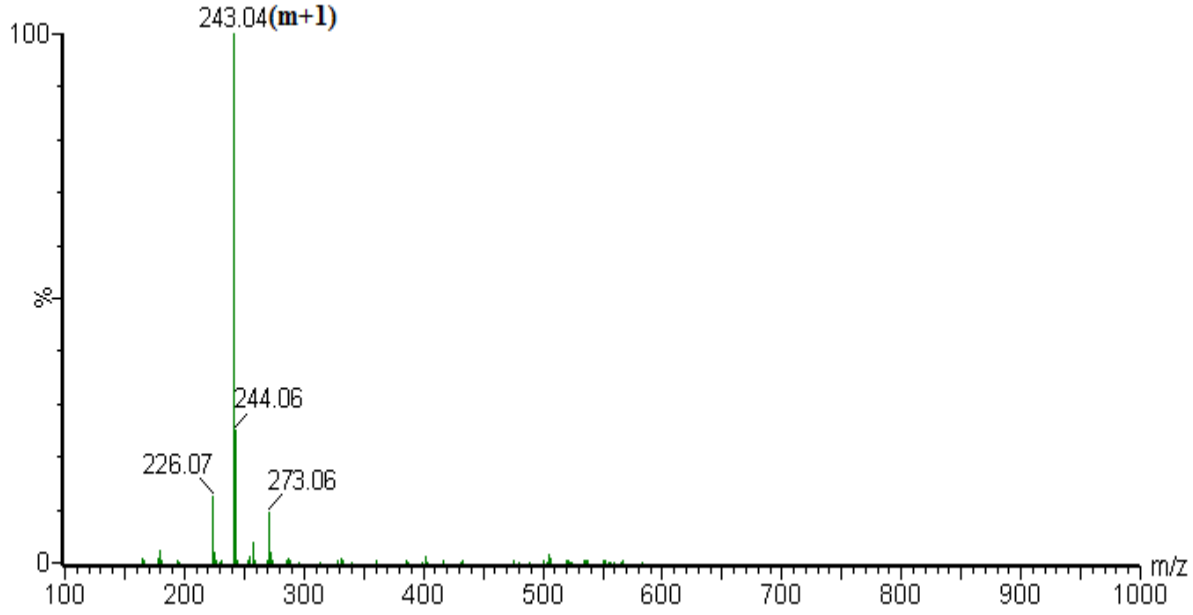

Figure S4: ESI-Mass spectrum of L_1 in methanol

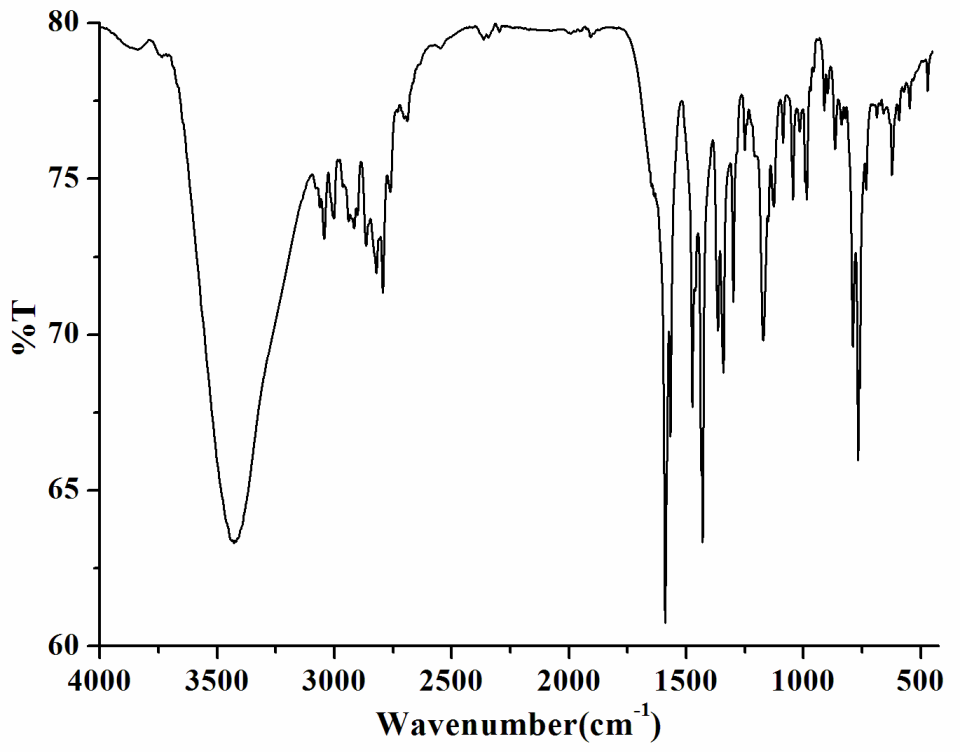

Figure S5: FT-IR spectrum of L_2 in KBr pellet

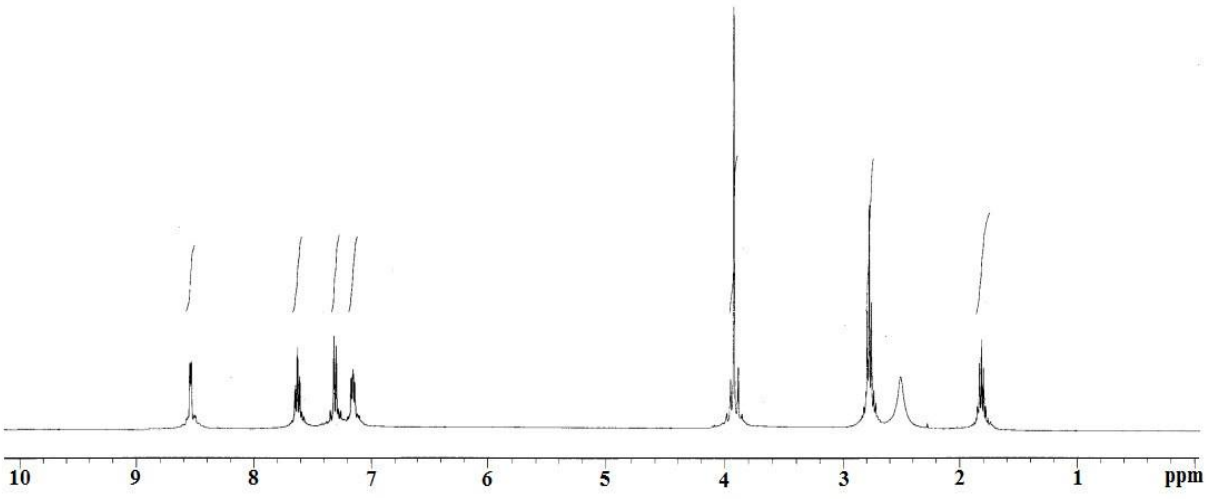

Figure S6: ^{1}H-NMR spectrum of L_2 in $CDCl_3$

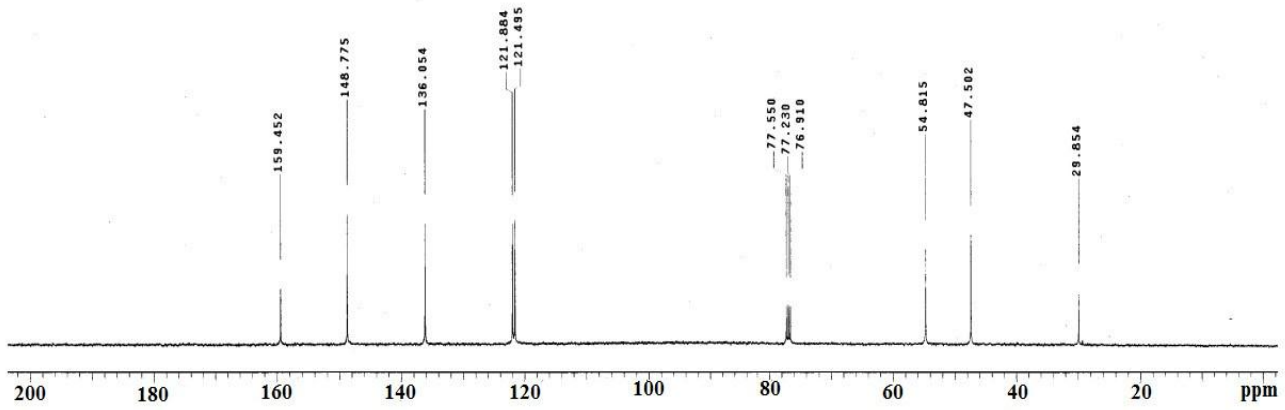

Figure S7: ^{13}C-NMR spectrum of L_2 in $CDCl_3$

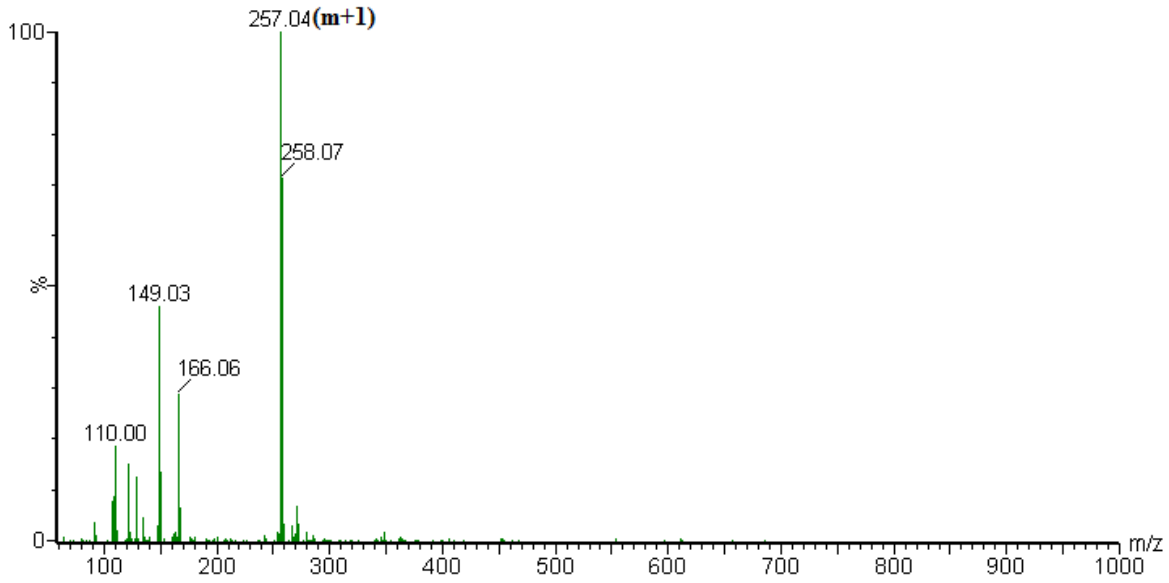

Figure S8: ESI-Mass spectrum of L_2 in methanol

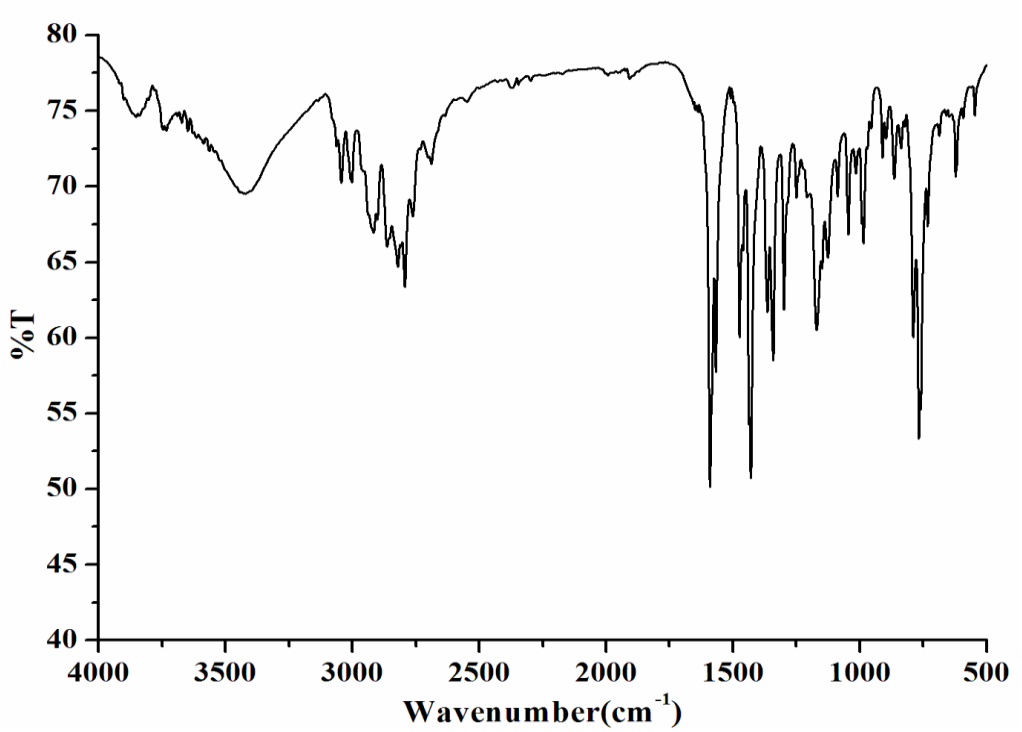

Figure S9: FT-IR spectrum of L_3 in KBr pellet

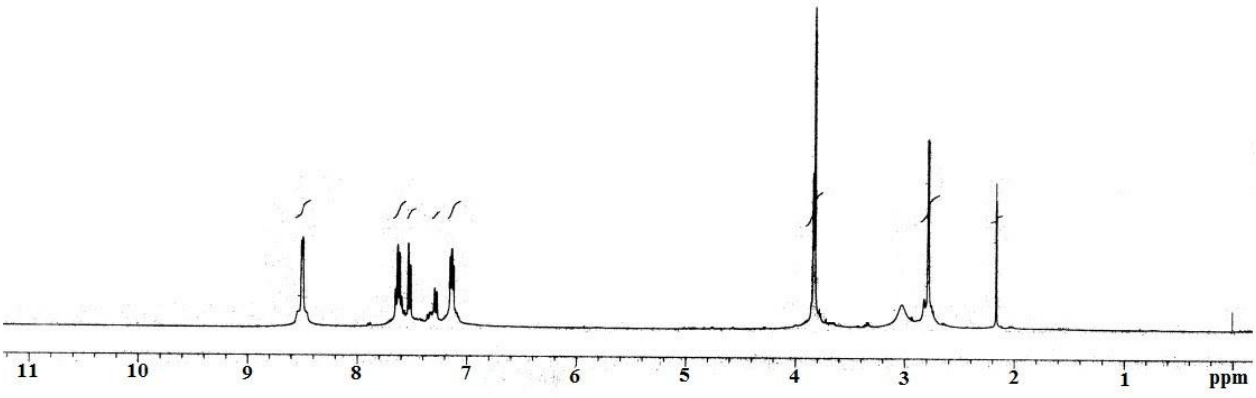

Figure S10: ^{1}H-NMR spectrum of L_3 in $CDCl_3$

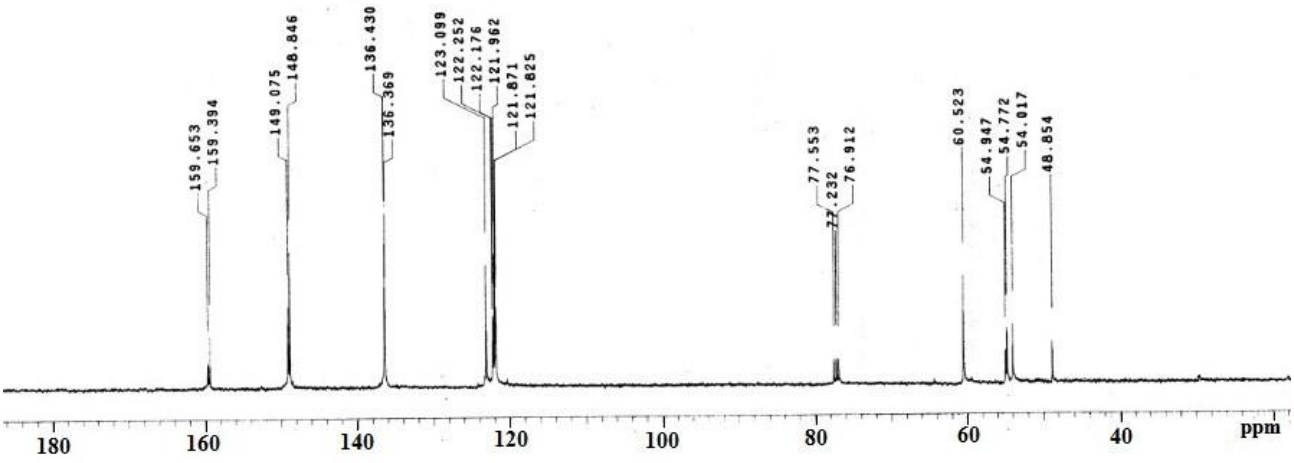

Figure S11: ^{13}C-NMR spectrum of L_3 in $CDCl_3$

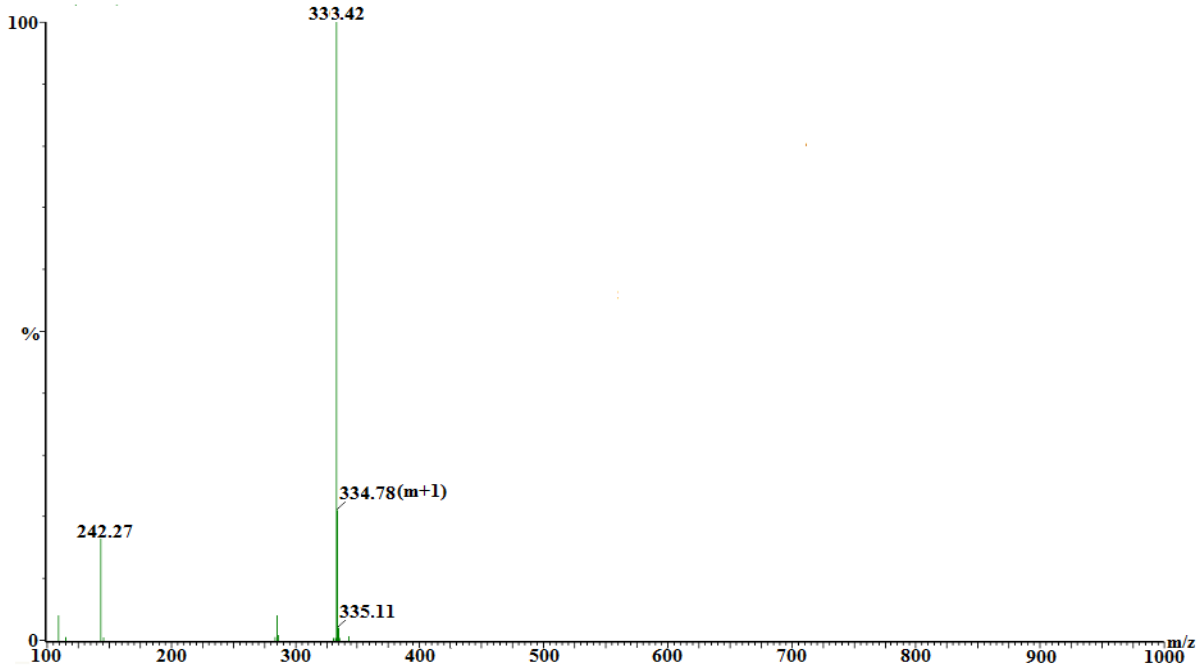

Figure S12: ESI-Mass spectrum of L_3 in methanol

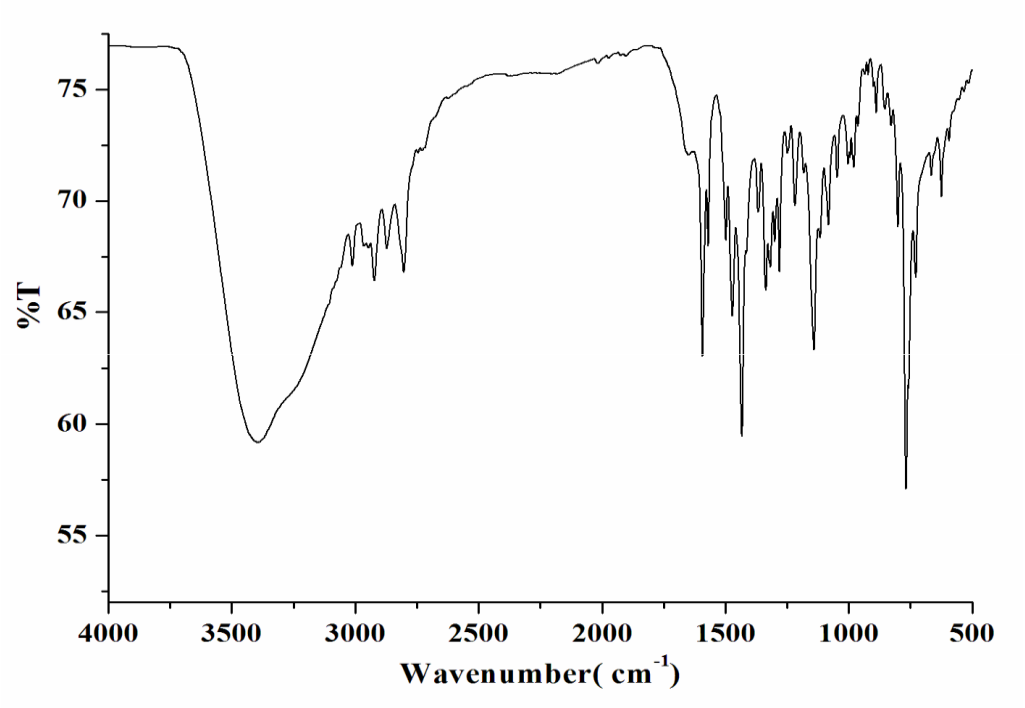

Figure S13: FT-IR spectrum of L_4 in KBr pellet

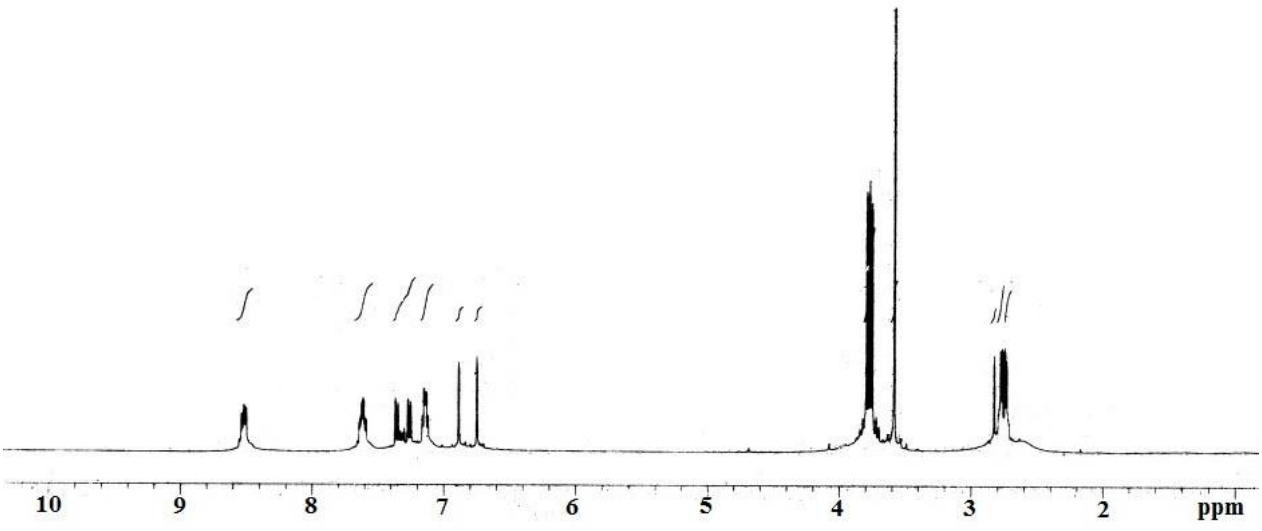

Figure S14: ^{1}H-NMR spectrum of L_4 in $CDCl_3$

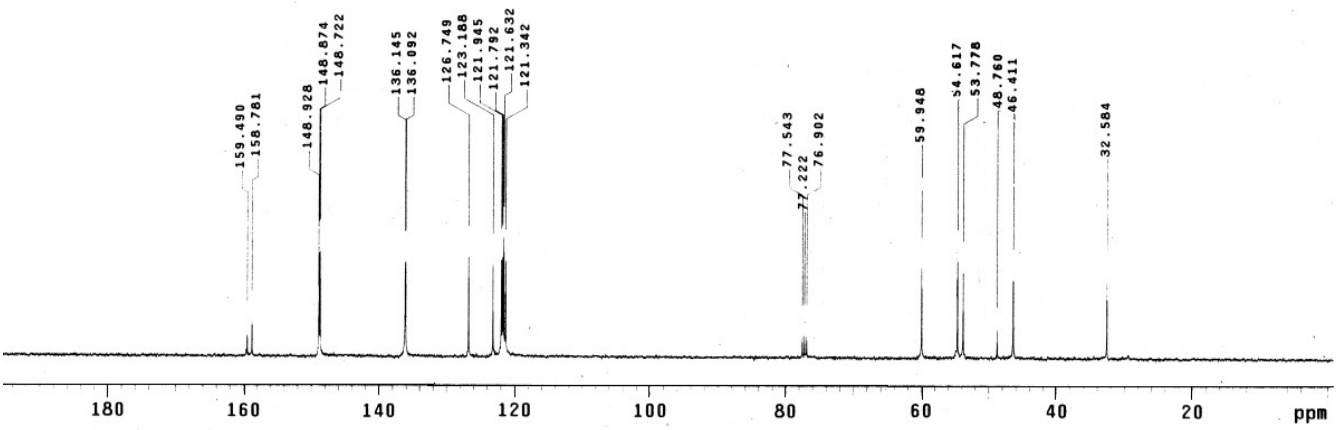

Figure S15: ^{13}C-NMR spectrum of L_4 in $CDCl_3$

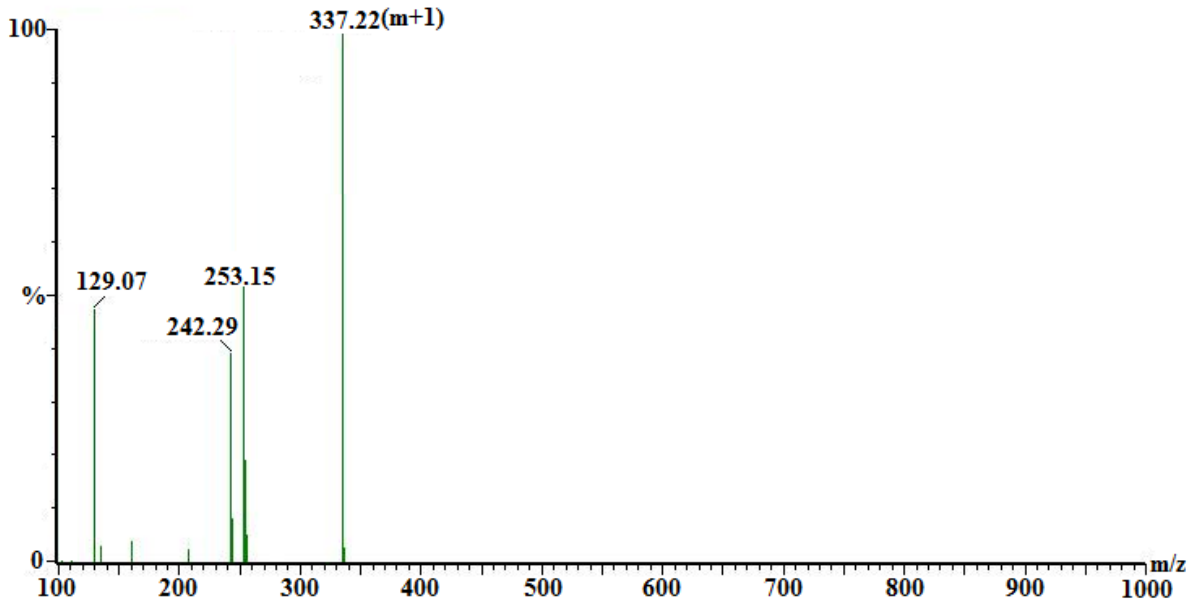

Figure S16: ESI-Mass spectrum of L_4 in methanol

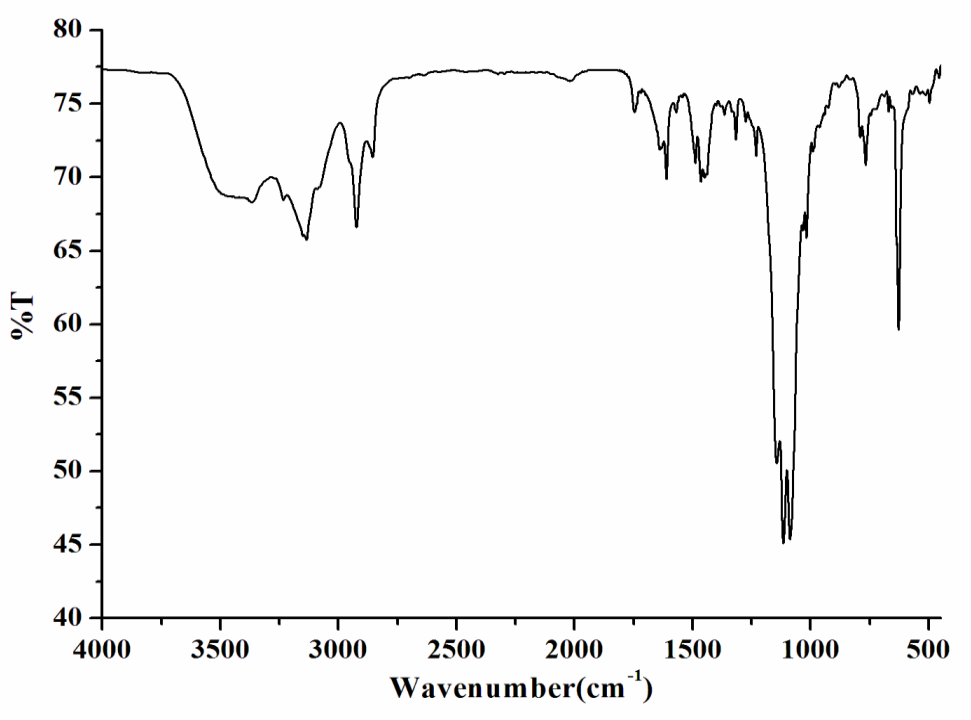

Figure S17: FT-IR spectrum of complex 1 in KBr pellet

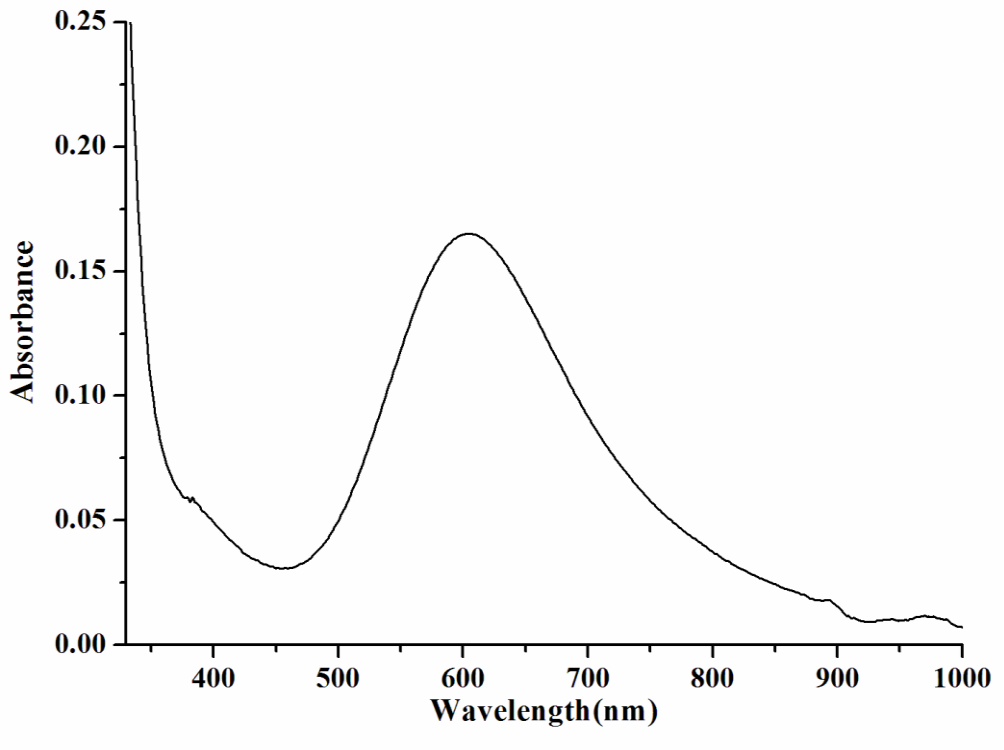

Figure S18: UV-visible spectrum of complex 1 in methanol

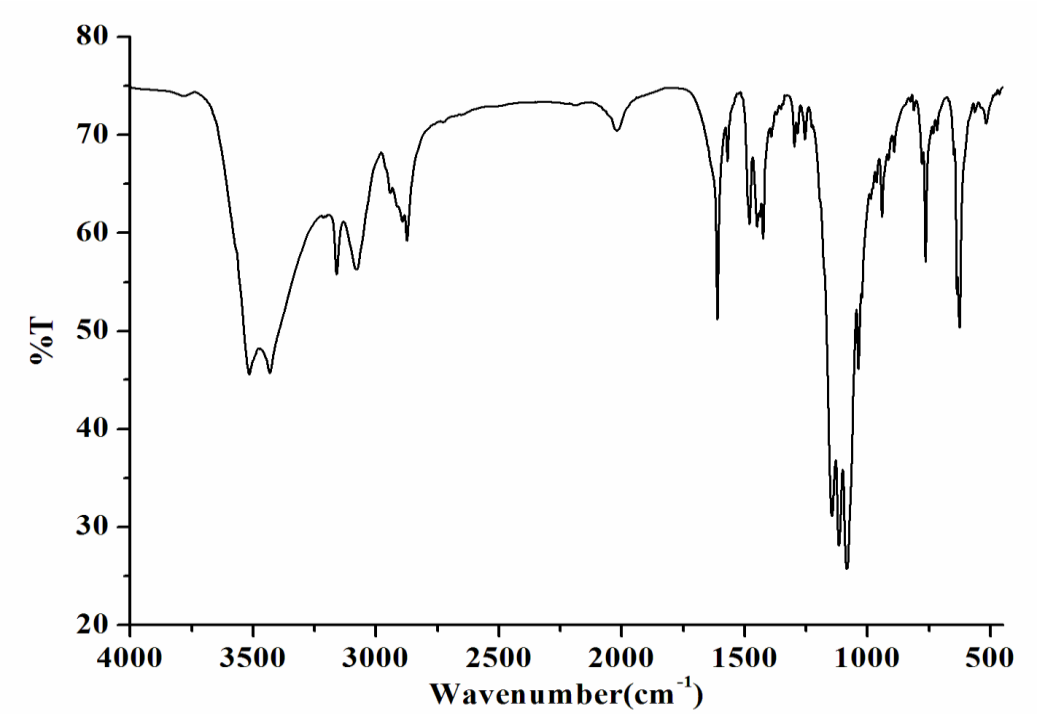

Figure S19: FT-IR spectrum of complex 2 in KBr pellet

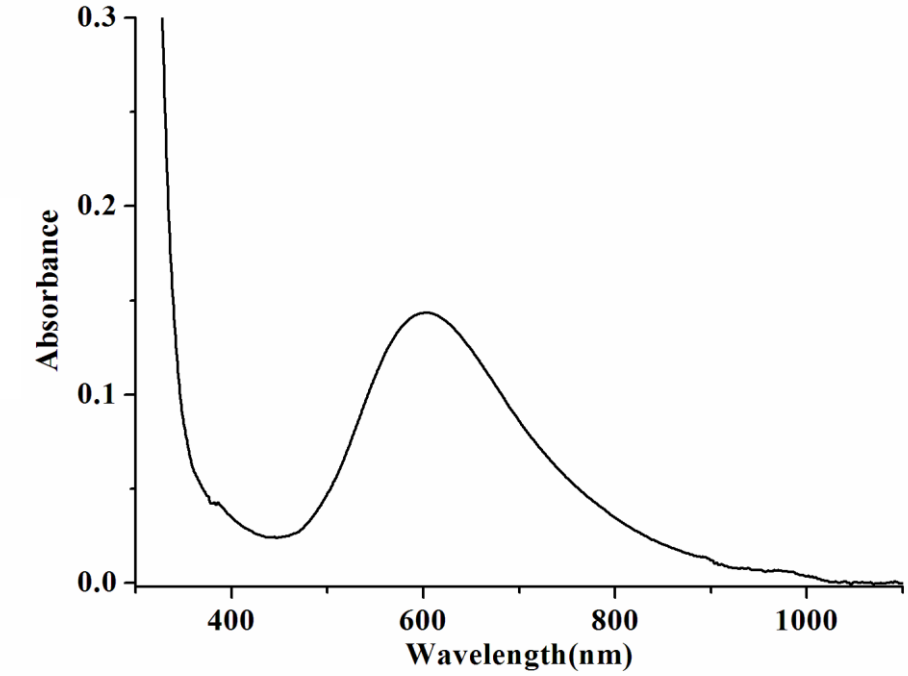

Figure S20: UV-visible spectrum of complex 2 in methanol

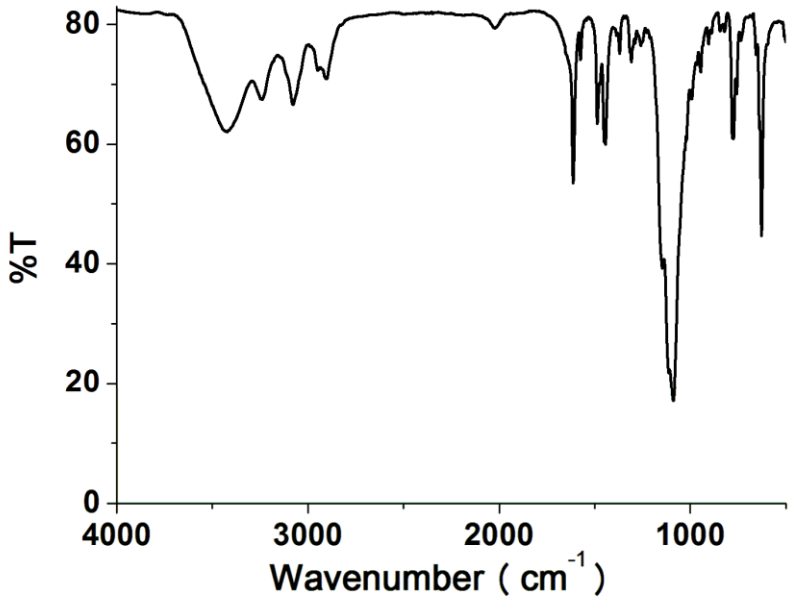

Figure S21: FT-IR spectrum of complex 3 in KBr pellet

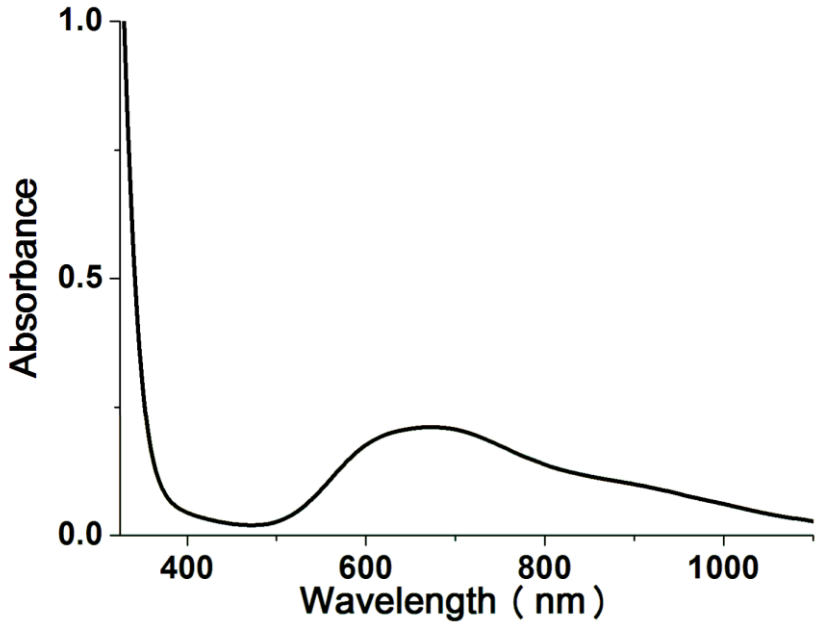

Figure S22: UV-visible spectrum of complex 3 in methanol

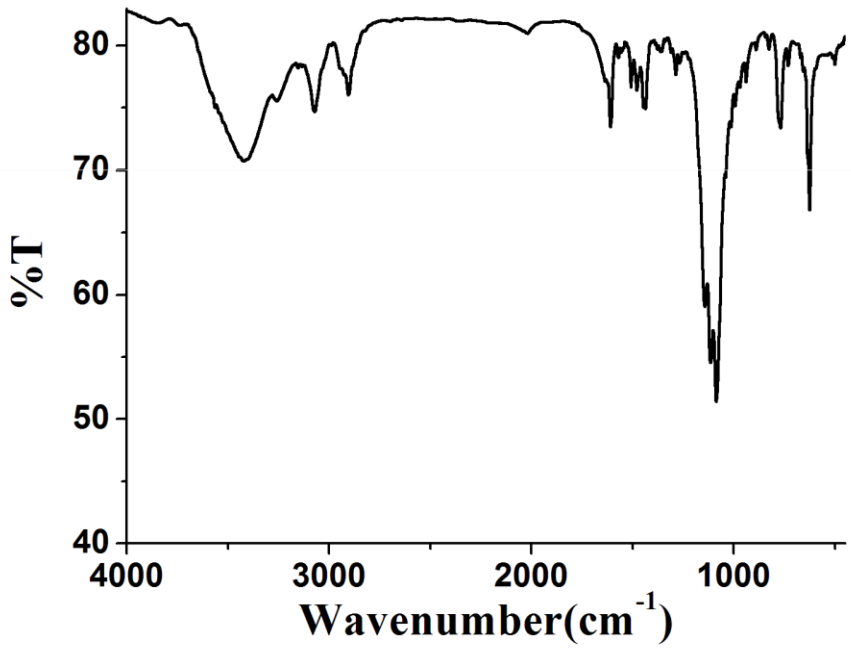

Figure S23: FT-IR spectrum of the complex 4 in KBr pellet

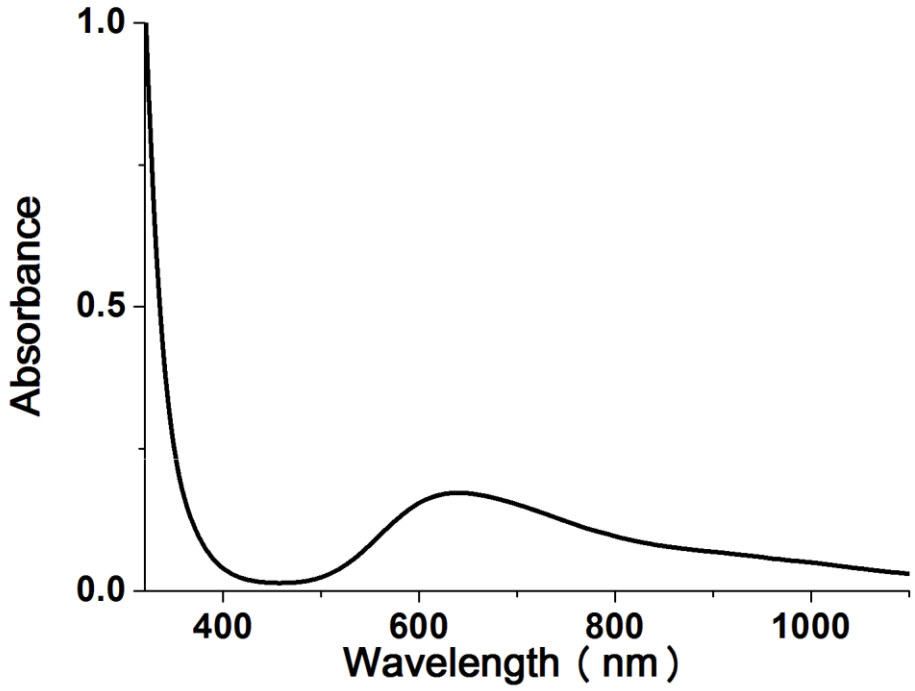

Figure S24: UV-visible spectrum of complex 4 in methanol

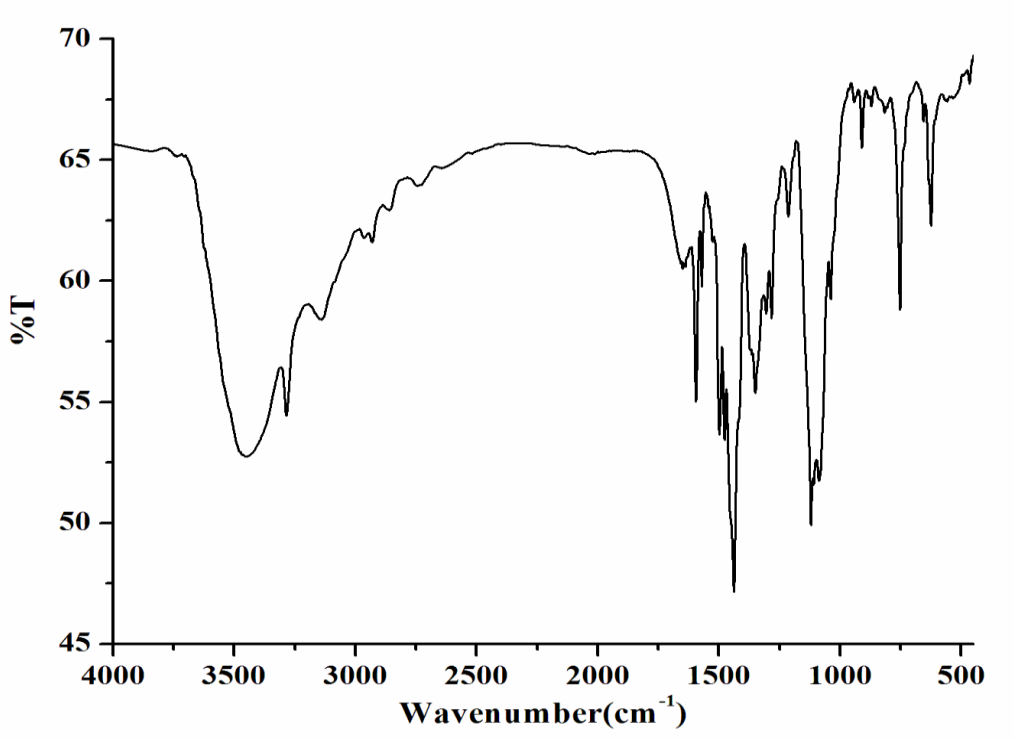

Figure S25: FT-IR spectrum of complex L_1'-ClO_4 in KBr pellet

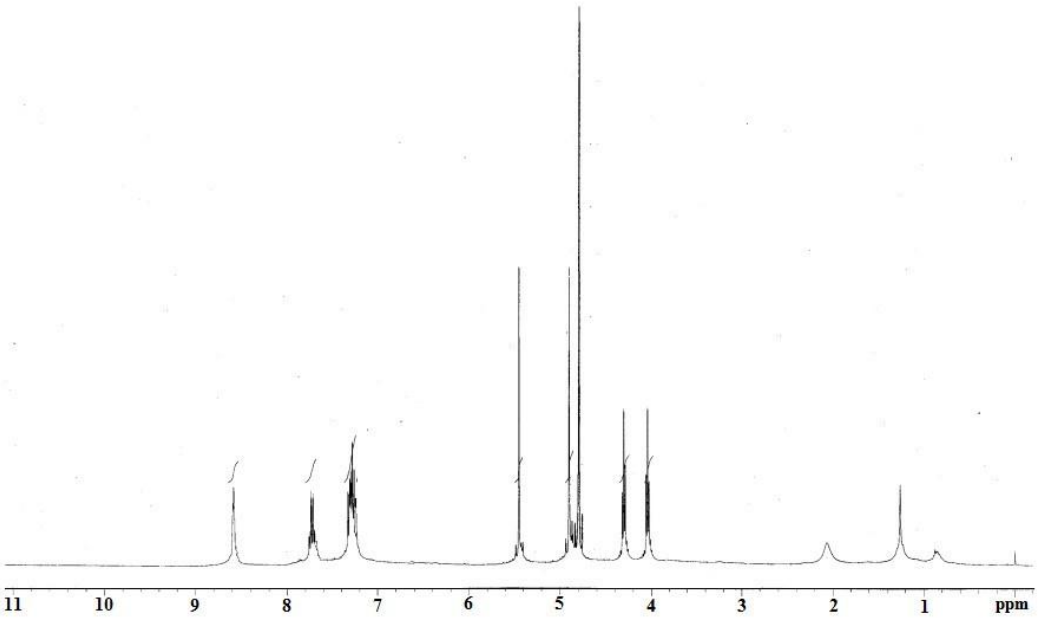

Figure S26: ^{1}H-NMR spectrum of L_1'-ClO_4 in D_2O

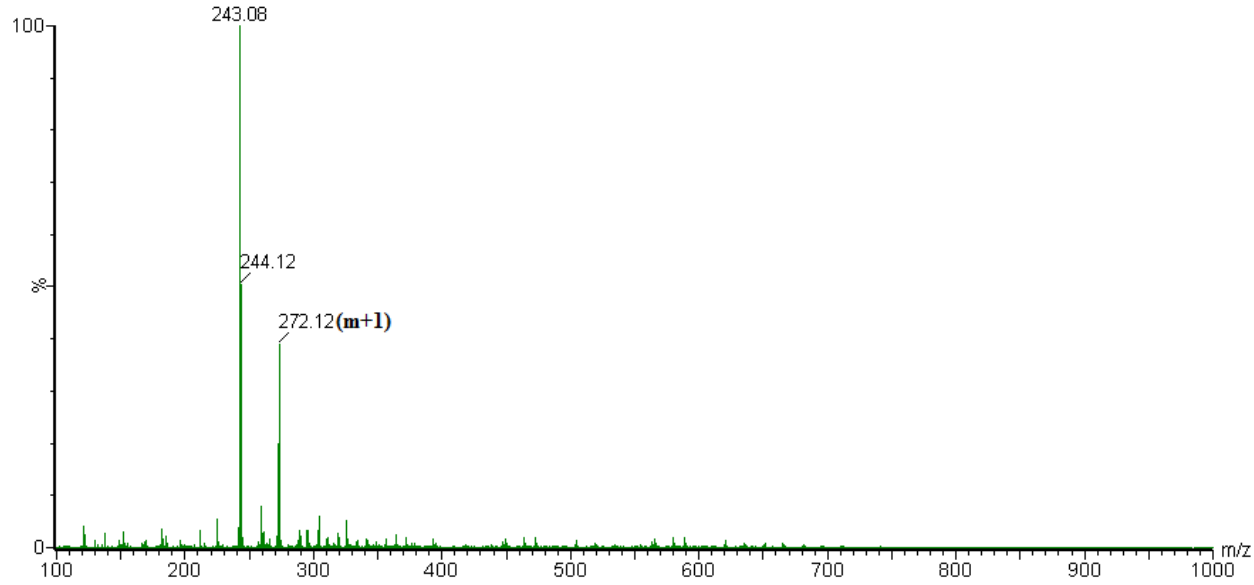

Figure S27: ESI-Mass spectrum of L_1'-ClO_4 in methanol

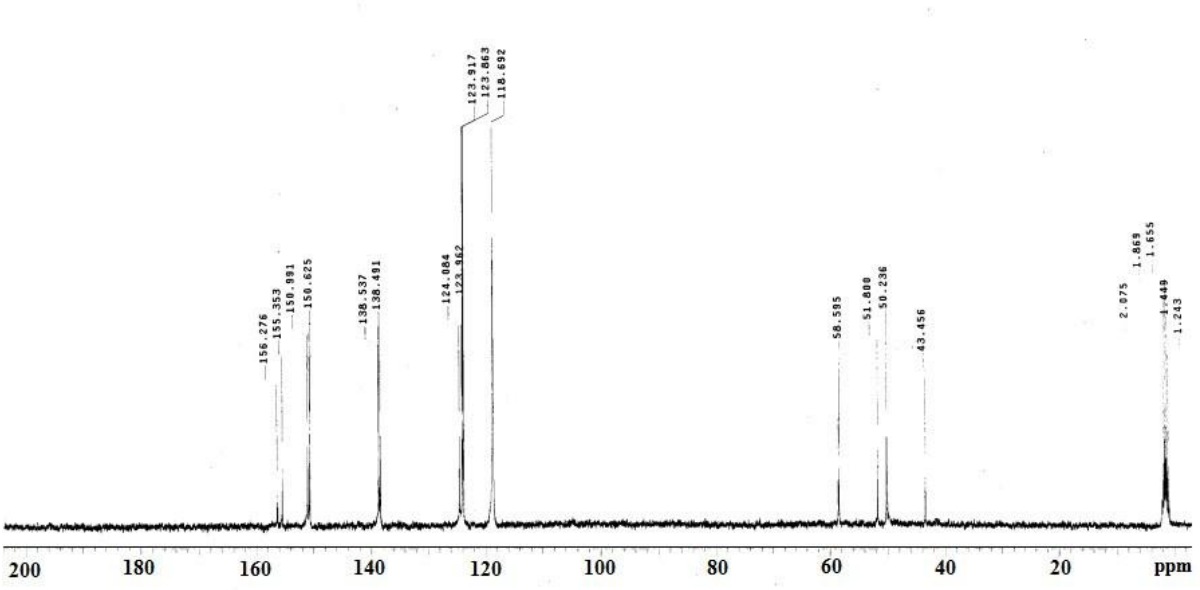

Figure S29: ^{13}C-NMR spectrum of L_1'-ClO_4 in D_2O and CD_3CN mixture.

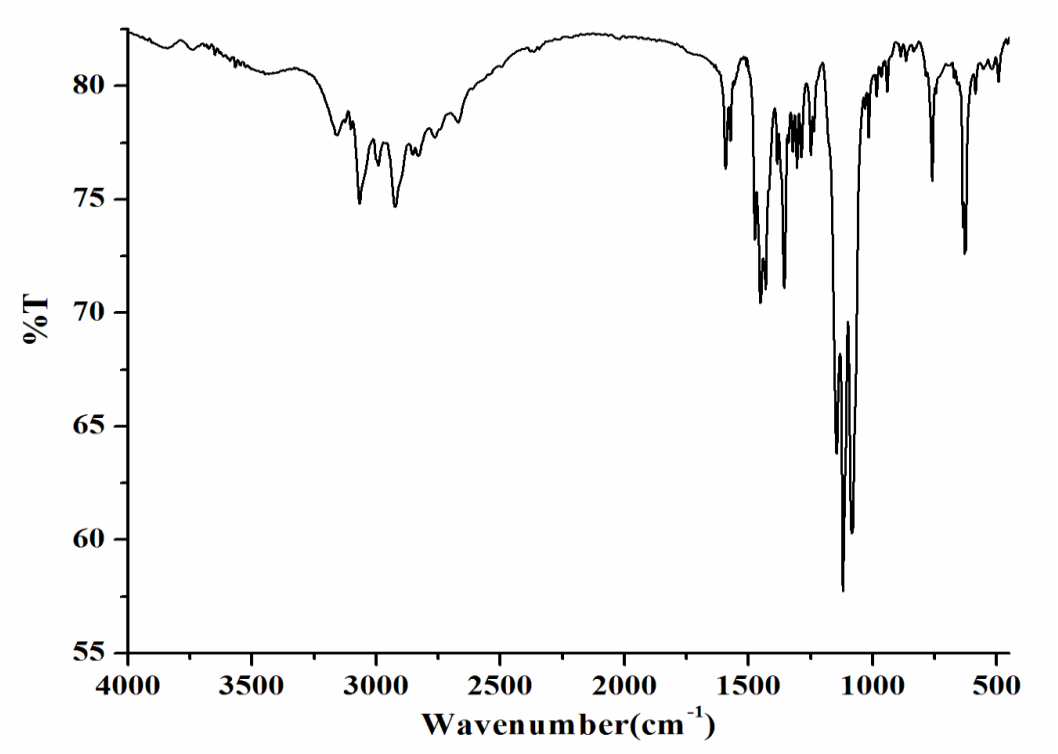

Figure S30: FT-IR spectrum of L_2'-ClO_4 in KBr pellet

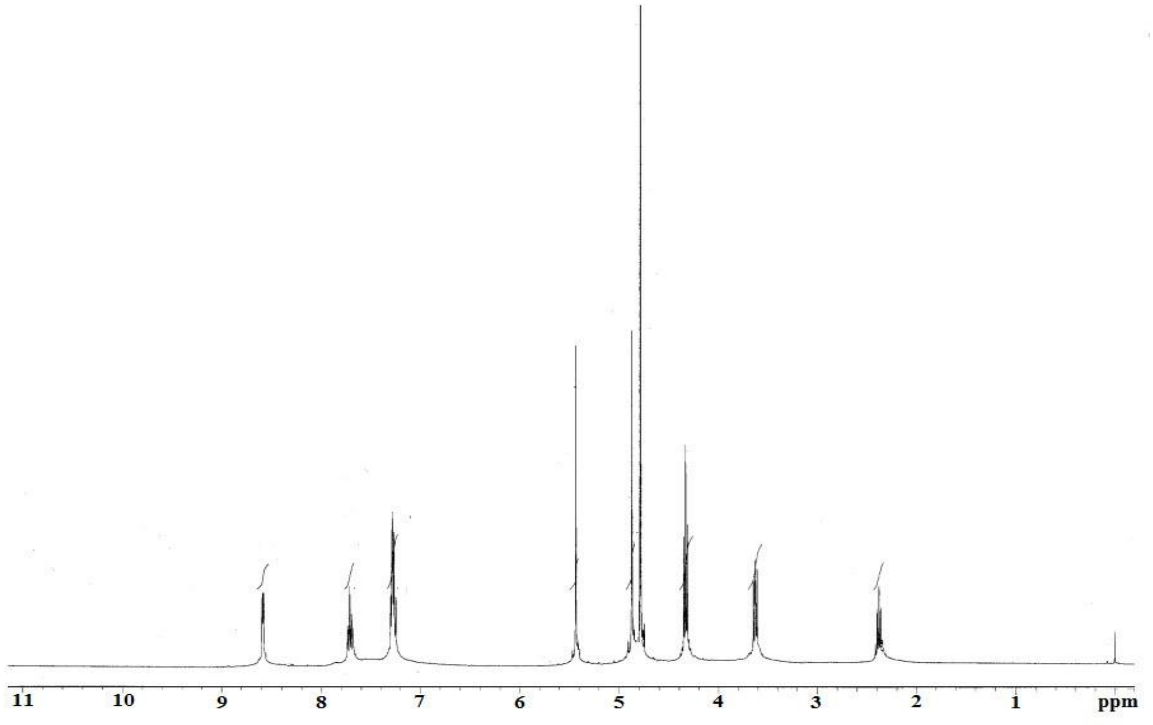

Figure S31: ^{1}H-NMR spectrum of L_2'-ClO_4 in D_2O

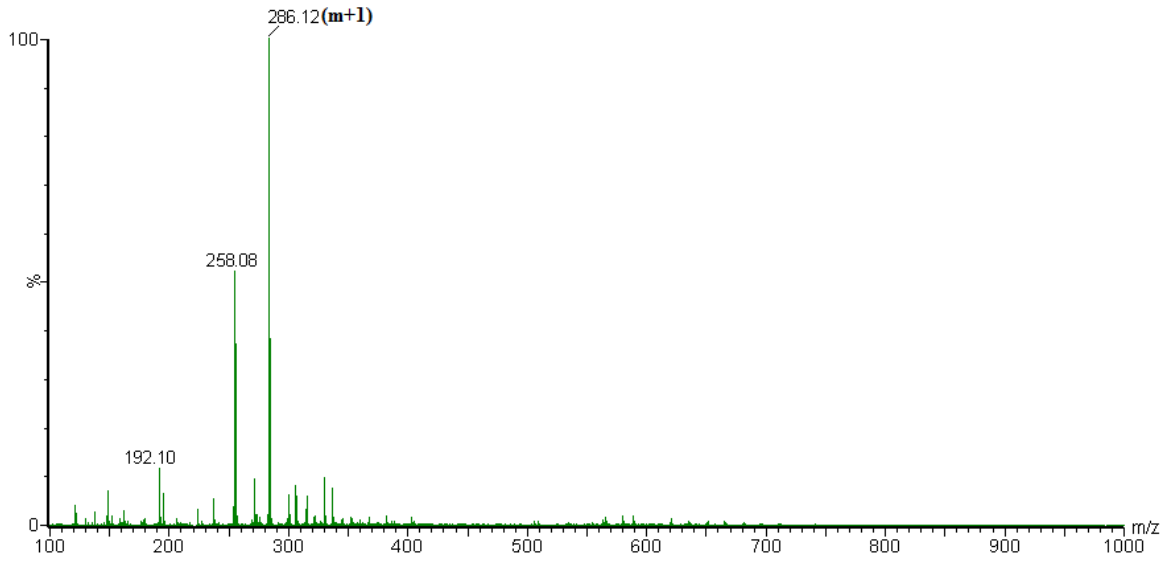

Figure S32: ESI-Mass spectrum of L_2'-ClO_4 in methanol

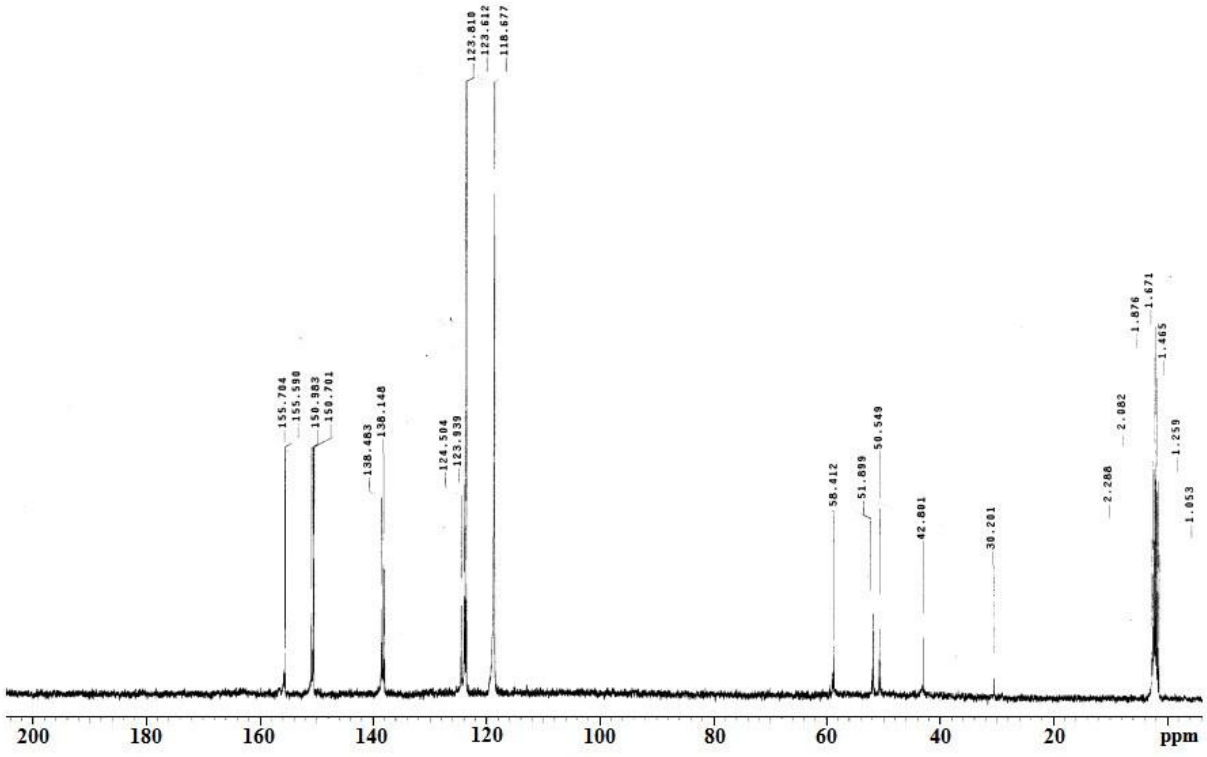

Figure 33: ^{13}C-NMR spectrum of L_2'-ClO_4 in D_2O and CD_3CN mixture.

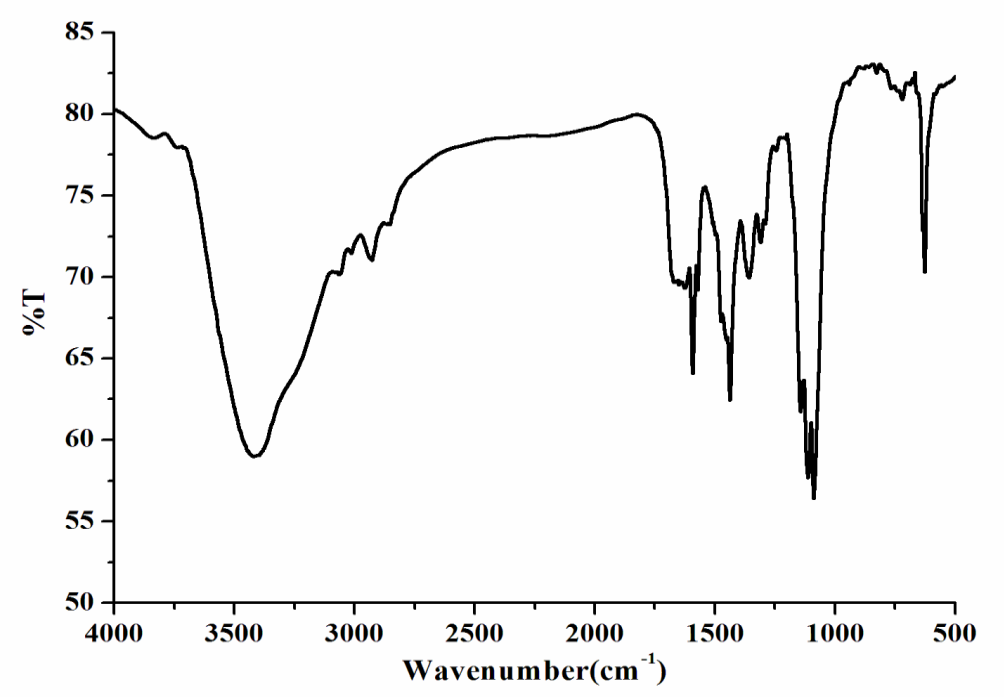

Figure S34: FT-IR spectrum of complex $L_3^{/}$-ClO_4 in KBr pellet

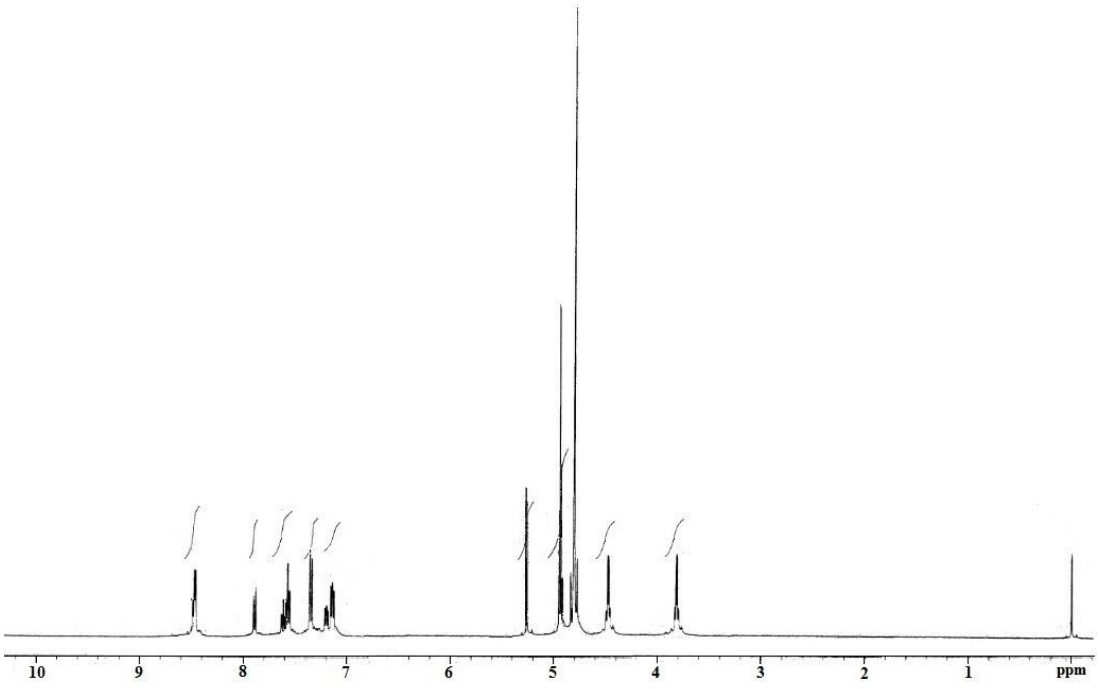

Figure S35: ^{1}H-NMR spectrum of $L_3^{/}$-ClO_4 in D_2O

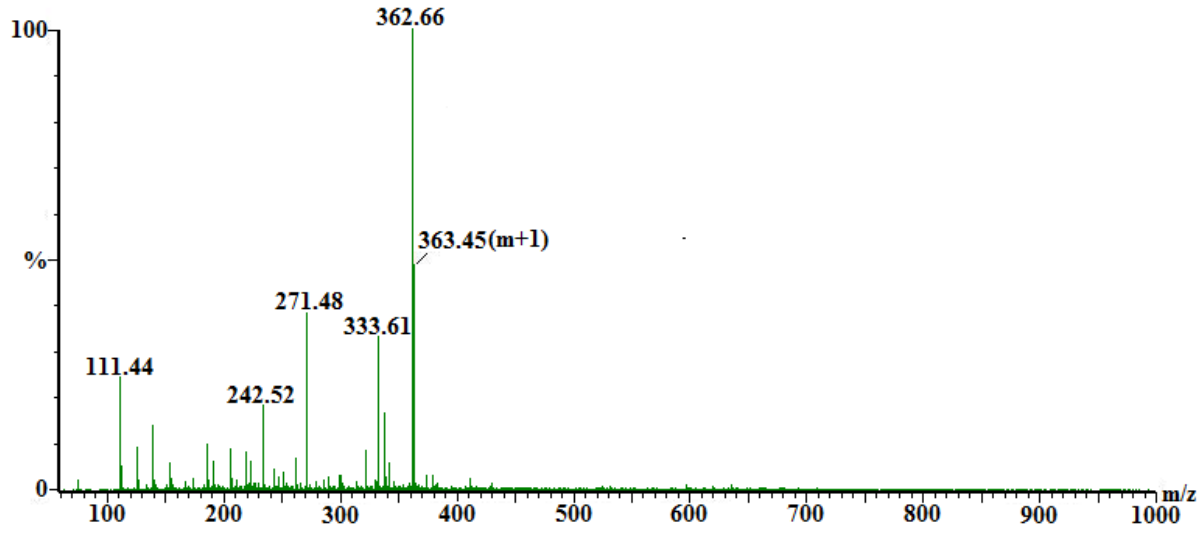

Figure S36: ESI-Mass spectrum of L_3'-ClO_4 in methanol

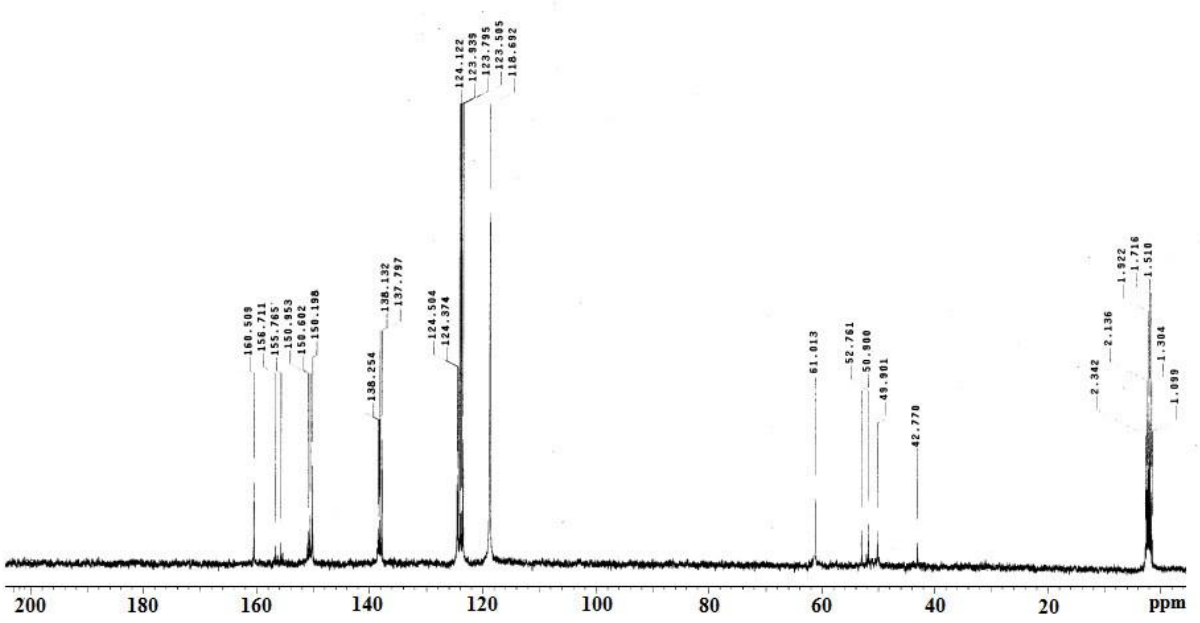

Figure 37: ^{13}C-NMR spectrum of L_3'-ClO_4 in D_2O and CD_3CN mixture

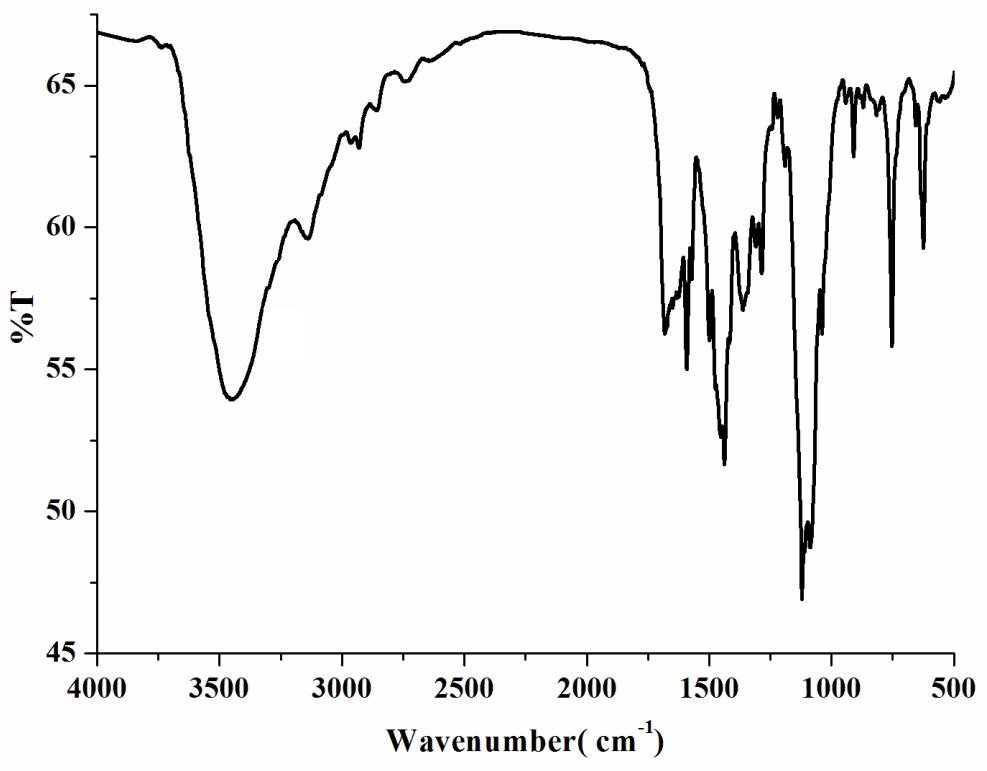

Figure S38: FT-IR spectrum of L_4'-ClO_4 in KBr pellet

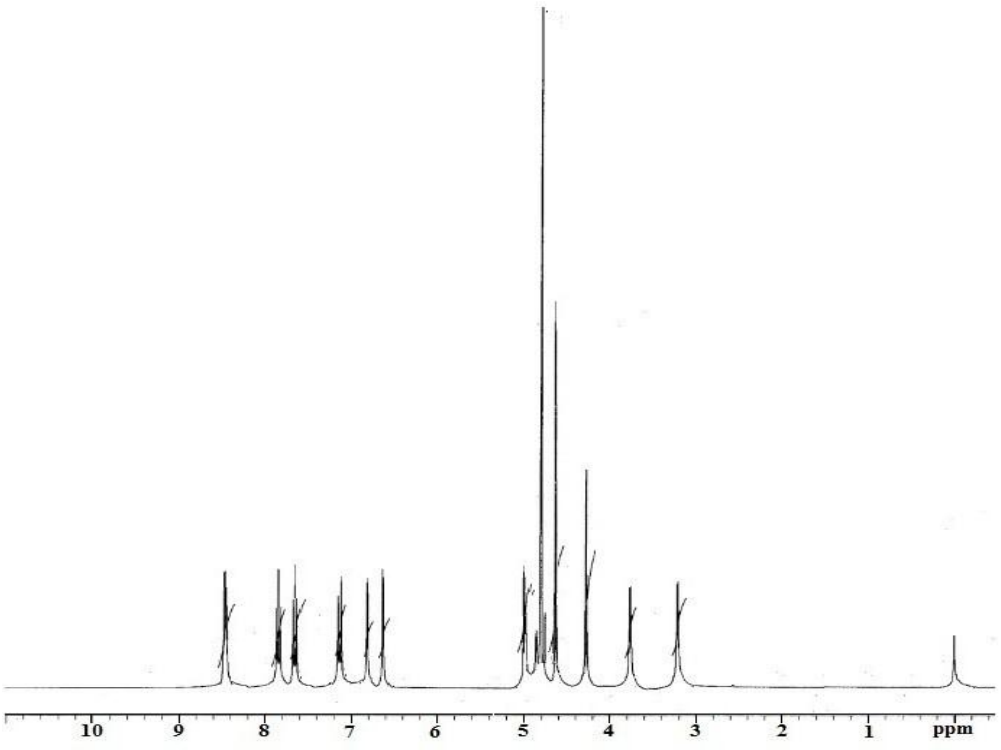

Figure S39: ^{1}H-NMR spectrum of L_4'-ClO_4 in D_2O

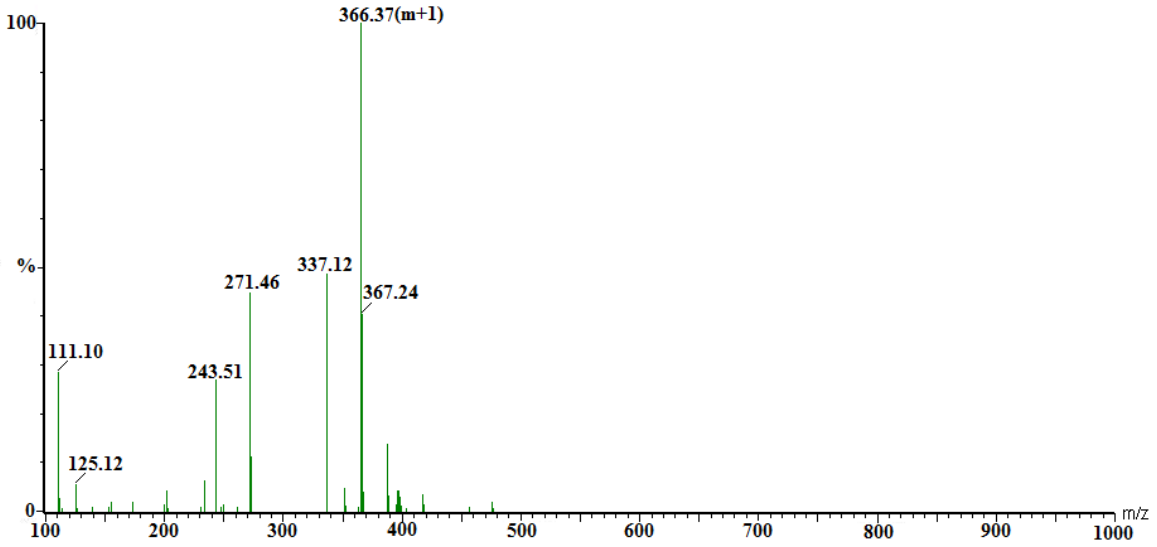

Figure S40: ESI-Mass spectrum of L_4'-ClO_4 in methanol

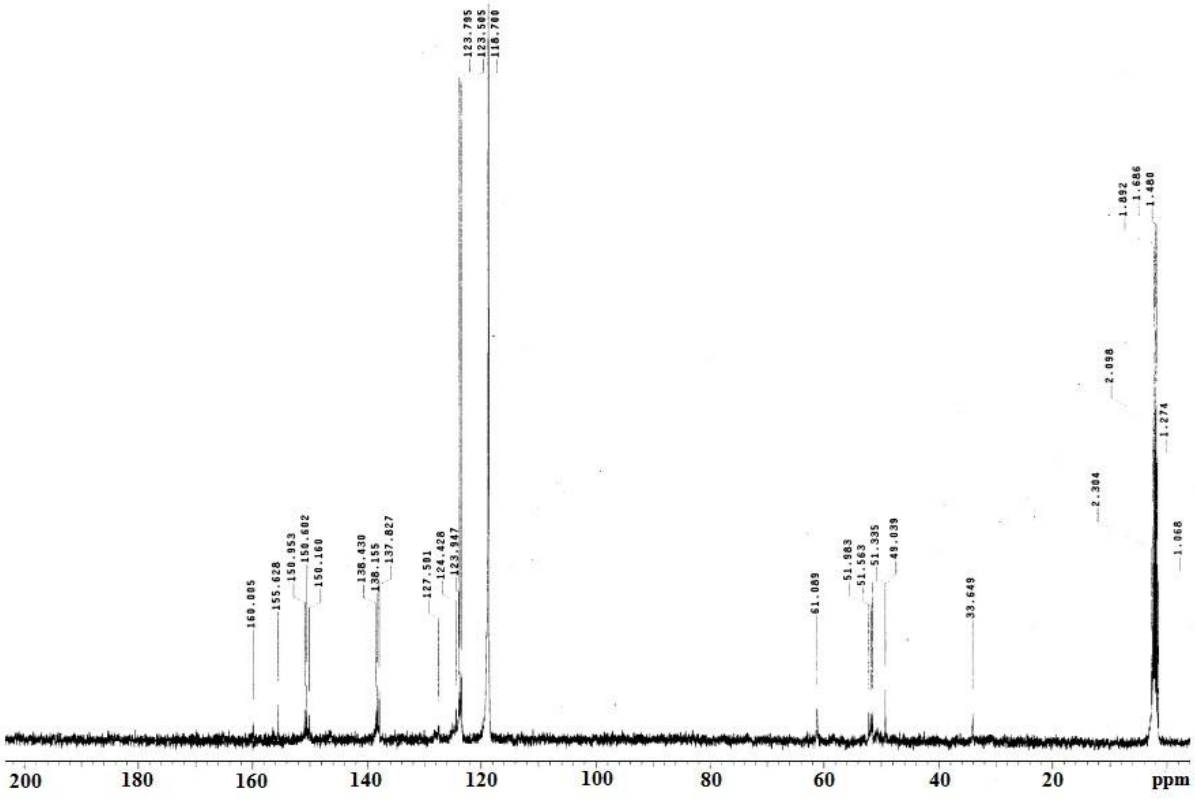

Figure S41: ^{13}C-NMR spectrum of L_4'-ClO_4 in D_2O and CD_3CN mixture.

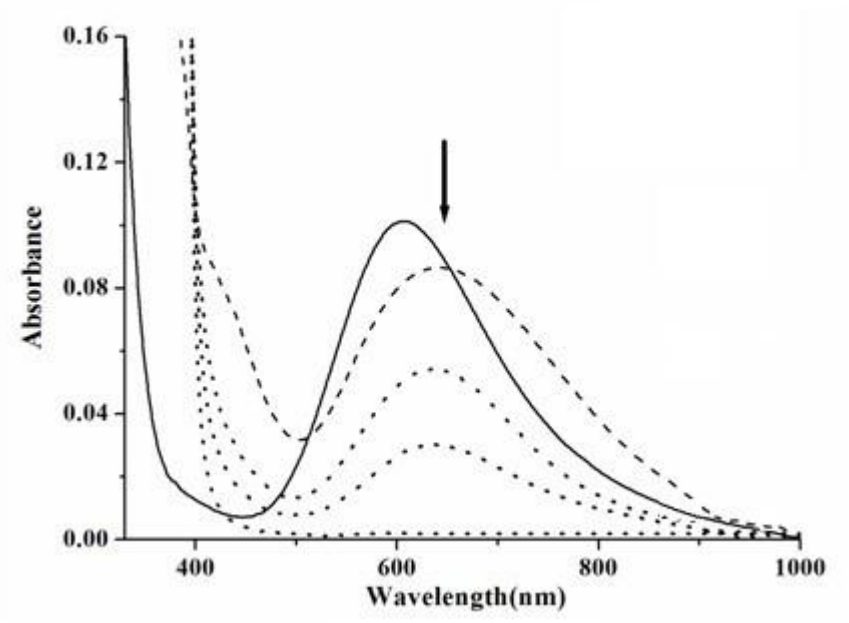

Figure S42. UV-visible spectra of complex 1 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (dotted line) purging nitric oxide

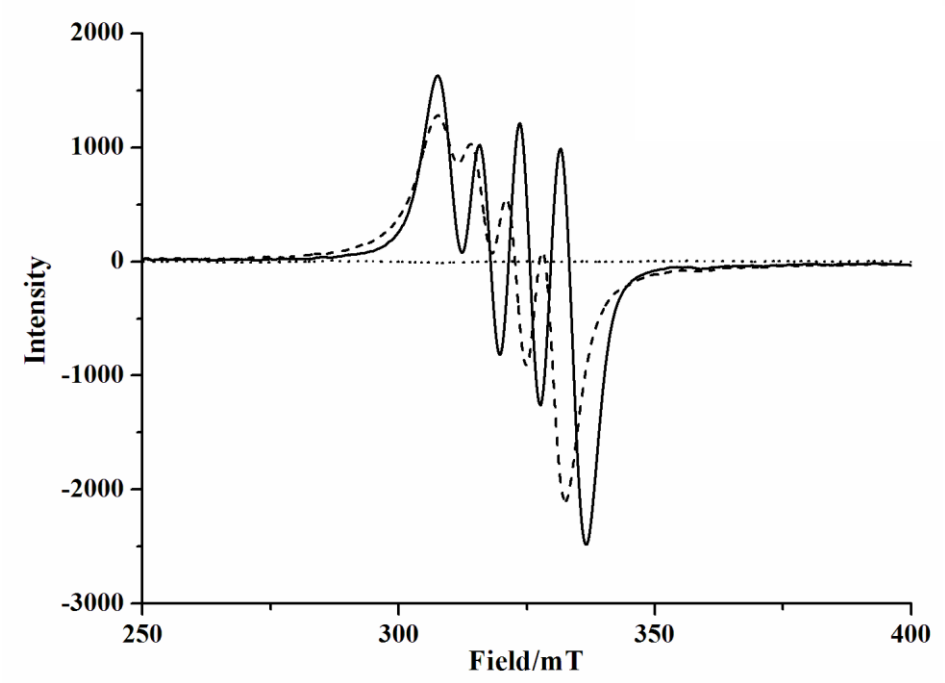

Figure S43. X-Band EPR spectra of complex 1 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (dotted line) purging nitric oxide

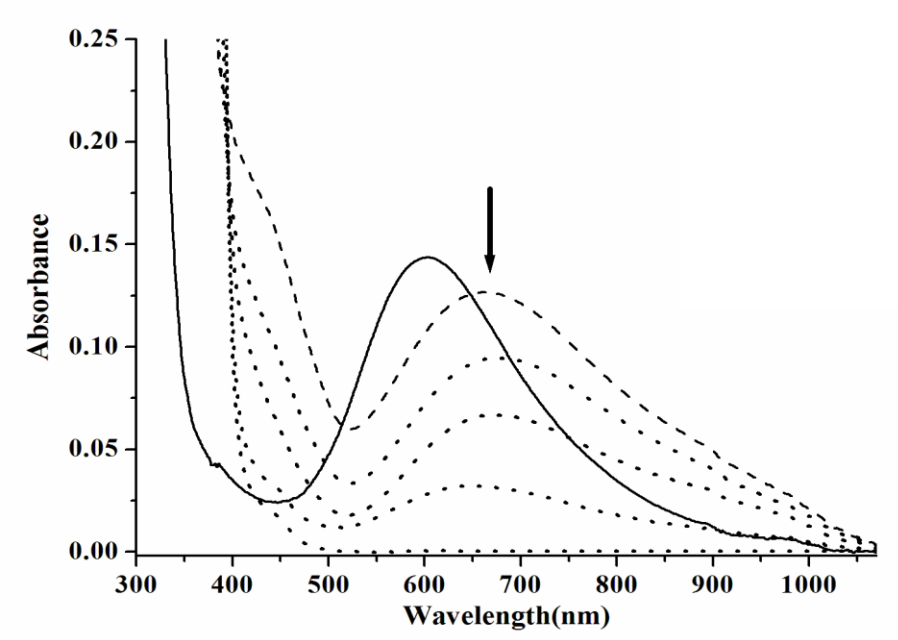

Figure S44. UV-visible spectra of complex 2 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (dotted line) purging nitric oxide

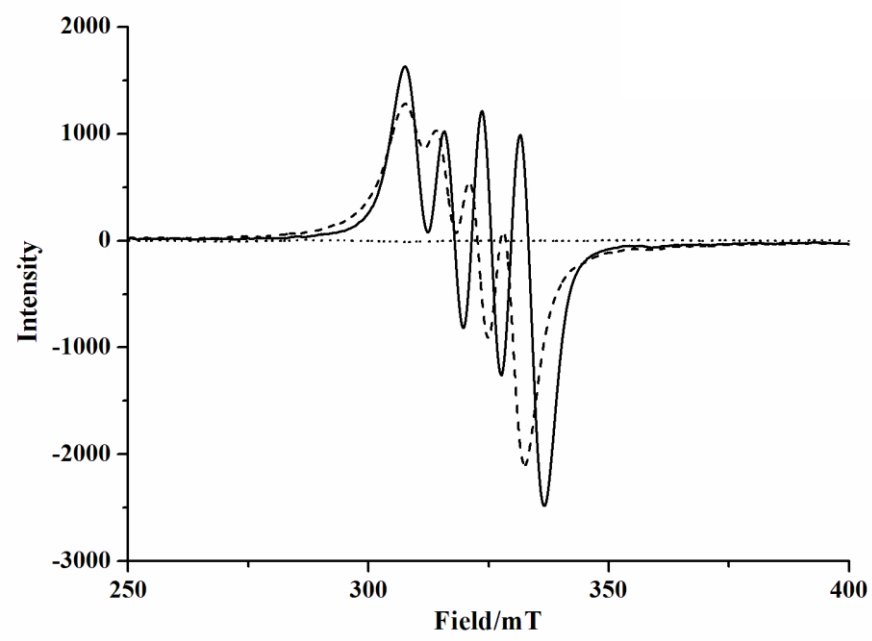

Figure S45. X-Band EPR spectra of complex 2 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (dotted line) purging nitric oxide

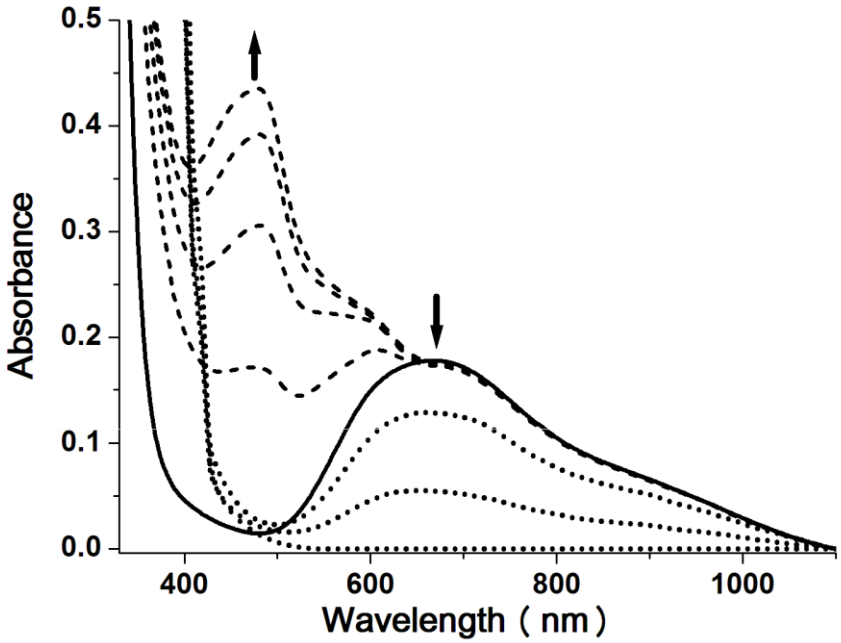

Figure S46. UV-visible spectra of complex 3 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (dotted line) purging nitric oxide

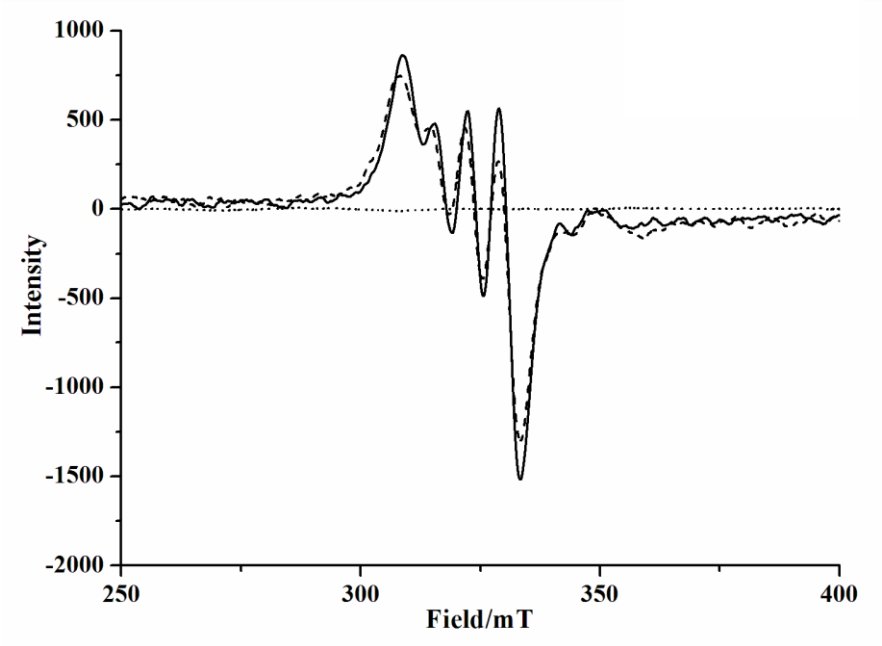

Figure S47. X-Band EPR spectra of complex 3 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (dotted line) purging nitric oxide

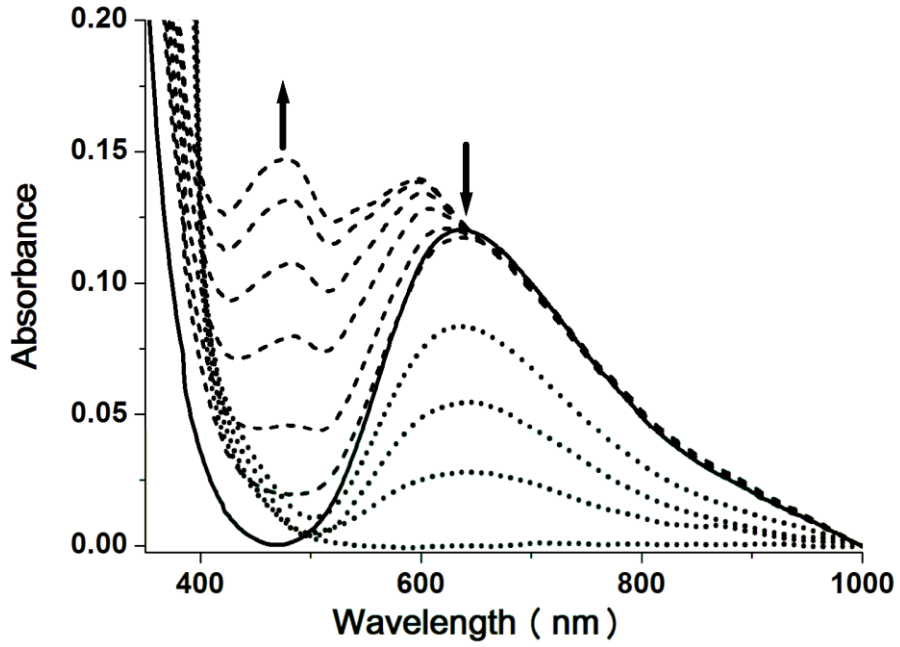

Figure S48. UV-visible spectra of complex 4 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (doted line) purging nitric oxide

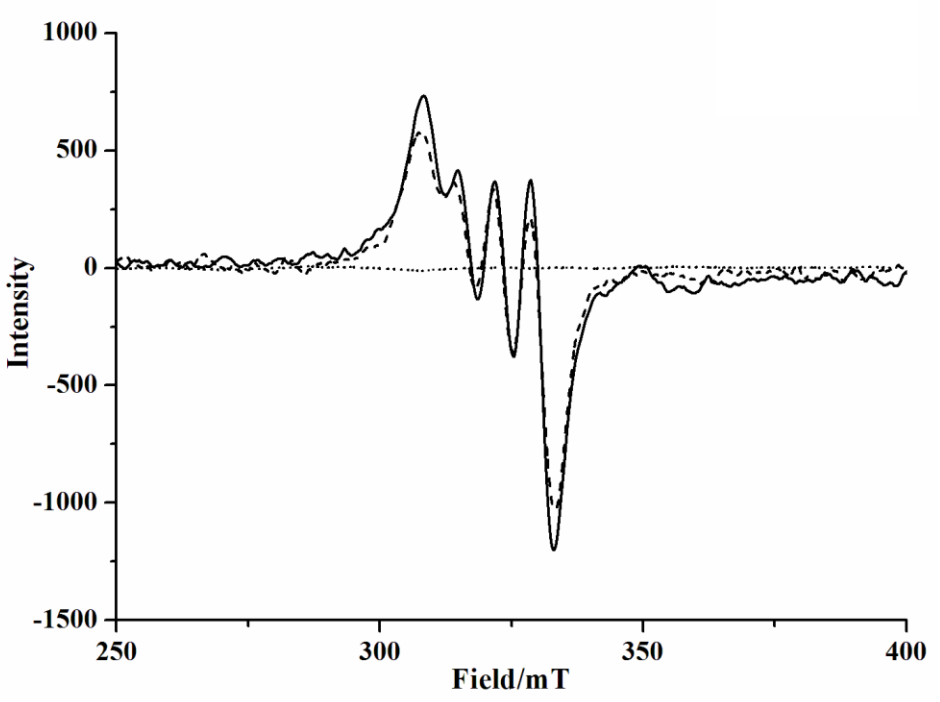

Figure S49. X-Band EPR spectra of complex 4 in methanol before (solid line), after (dash line) addition of one equivalent of sodium ethoxide and after (dotted line) purging nitric oxide

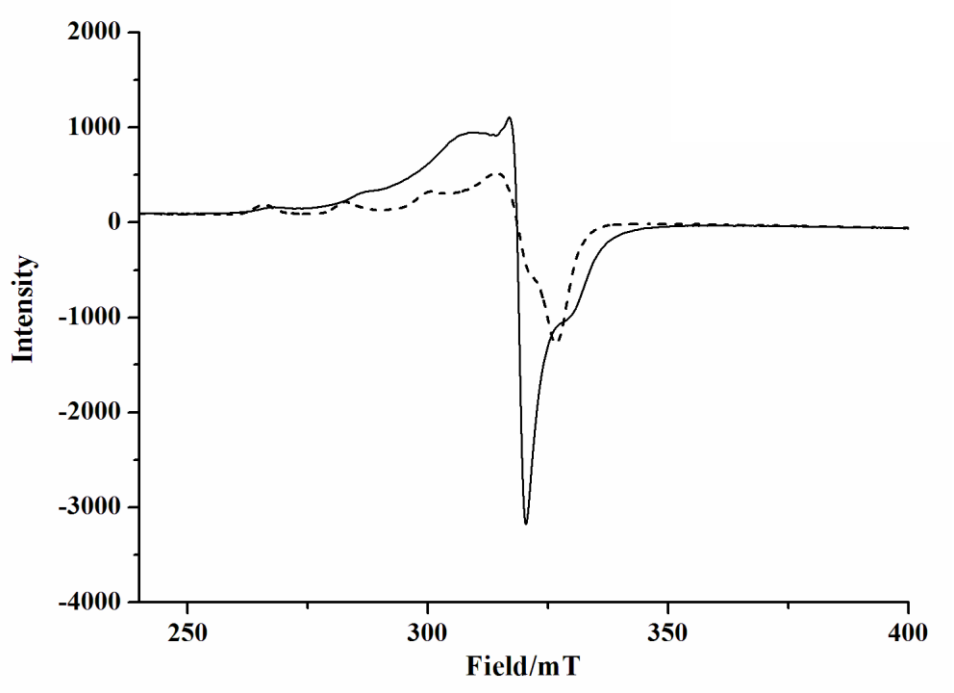

Figure S50: X-Band EPR spectra of complex 1 before (solid line) and after (dashed line) one equivalent of NaOEt in methanol medium at 77K

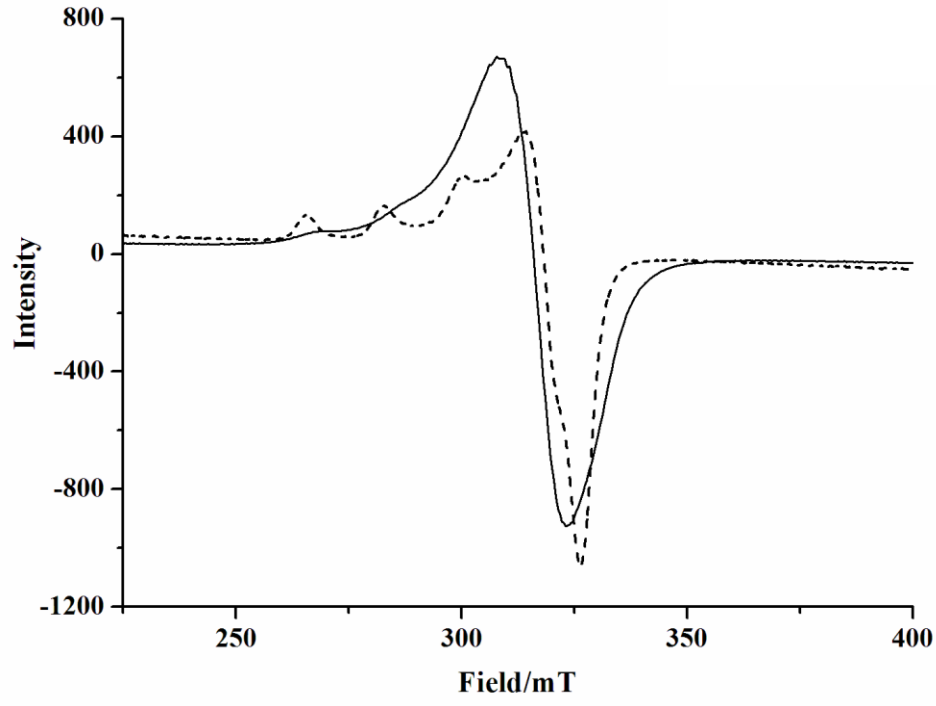

Figure S51: X-Band EPR spectra of complex 2 before (solid line) and after (dashed line) one equivalent of NaOEt in methanol medium at 77K

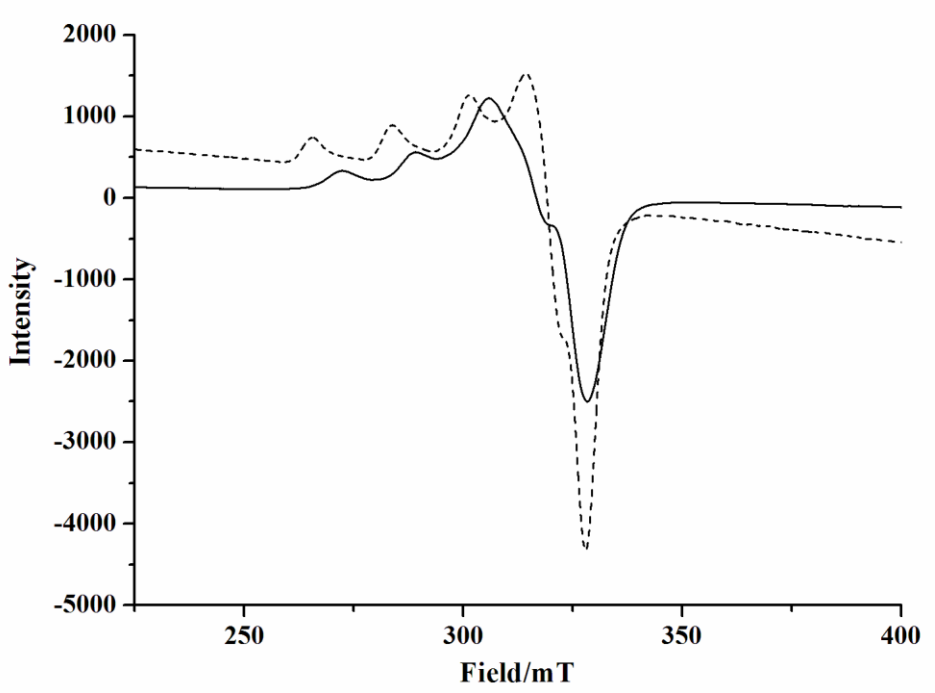

Figure S52: X-Band EPR spectra of complex 3 before (solid line) and after (dashed line) one equivalent of NaOEt in methanol medium at 77K

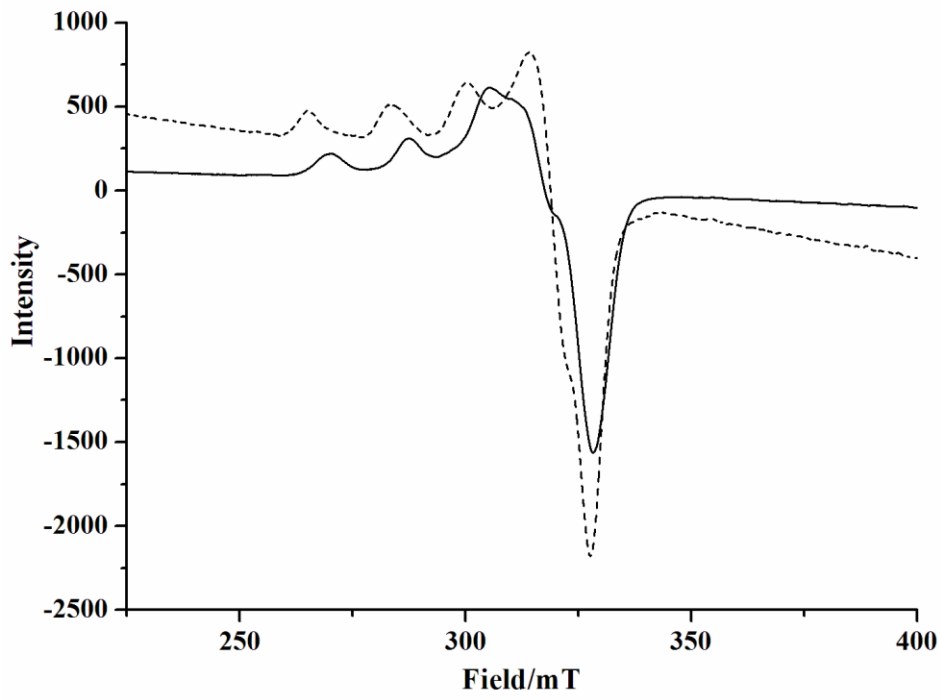

Figure S53: X-Band EPR spectra of complex 4 before (solid line) and after (dashed line) one equivalent of NaOEt in methanol medium at 77K

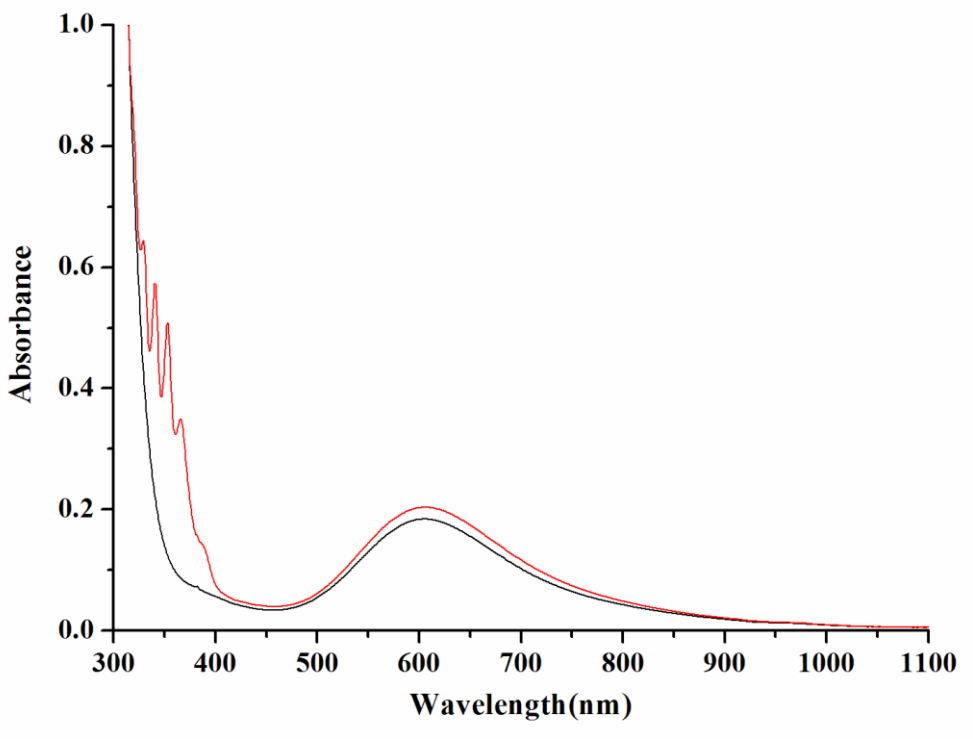

Figure S54: UV-visible spectra of complex 1 in methanol before (black line), after (red line) purging excess nitric oxide in absence of NaOEt.

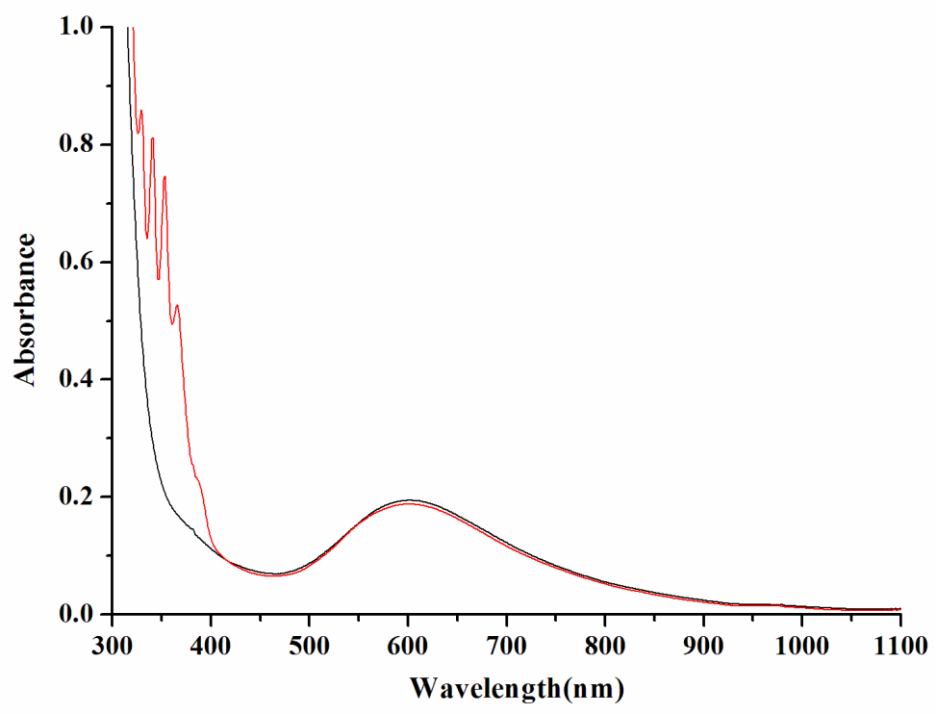

Figure S55: UV-visible spectra of complex 2 in methanol before (black line), after (red line) purging excess nitric oxide in absence of NaOEt.

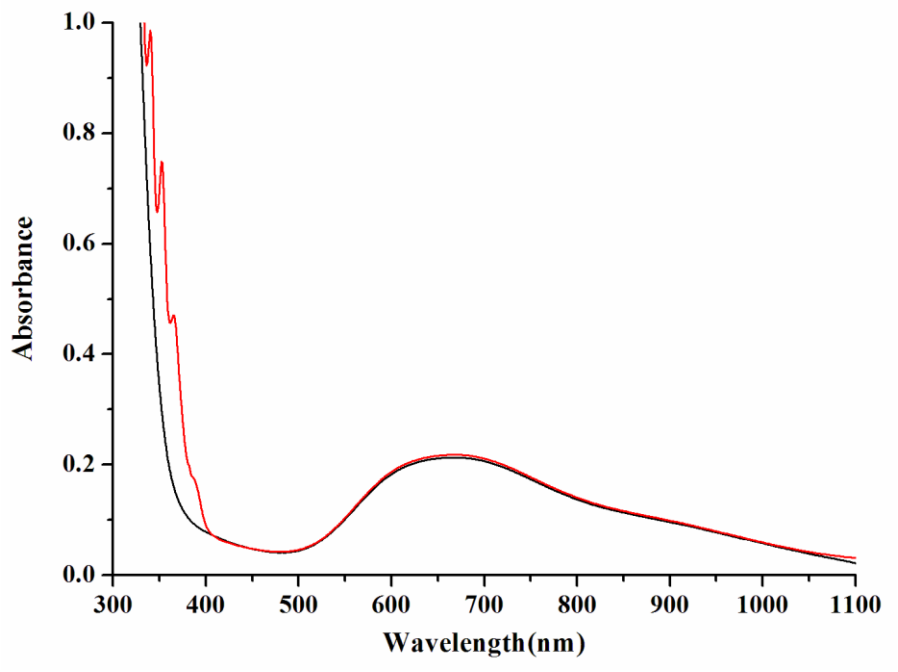

Figure S56: UV-visible spectra of complex 3 in methanol before (black line), after (red line) purging excess nitric oxide in absence of NaOEt.

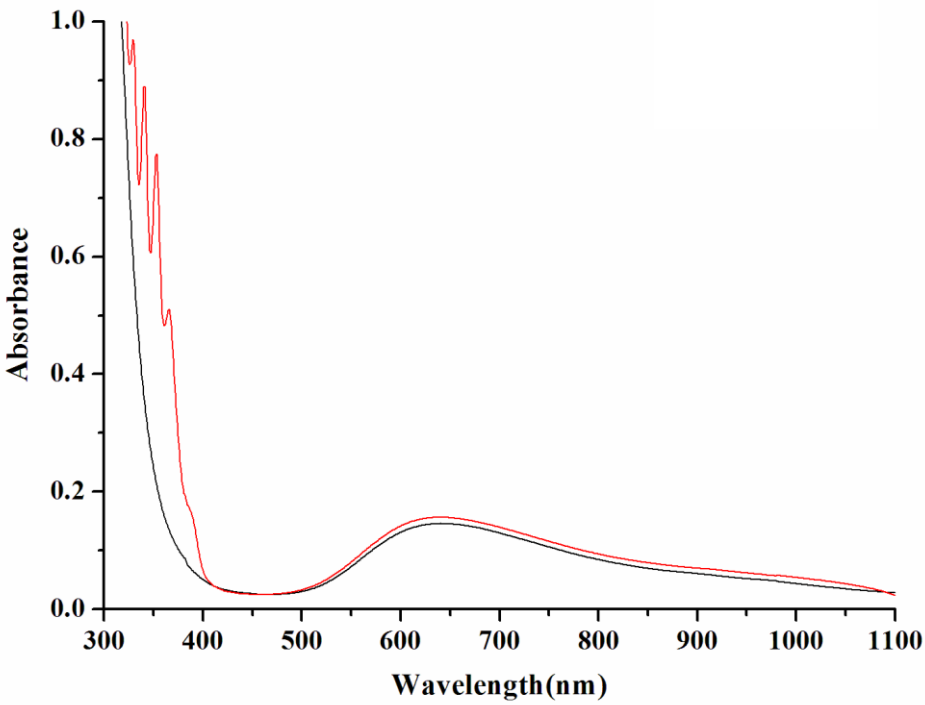

Figure S57: UV-visible spectra of complex 4 in methanol before (black line), after (red line) purging excess nitric oxide in absence of NaOEt.

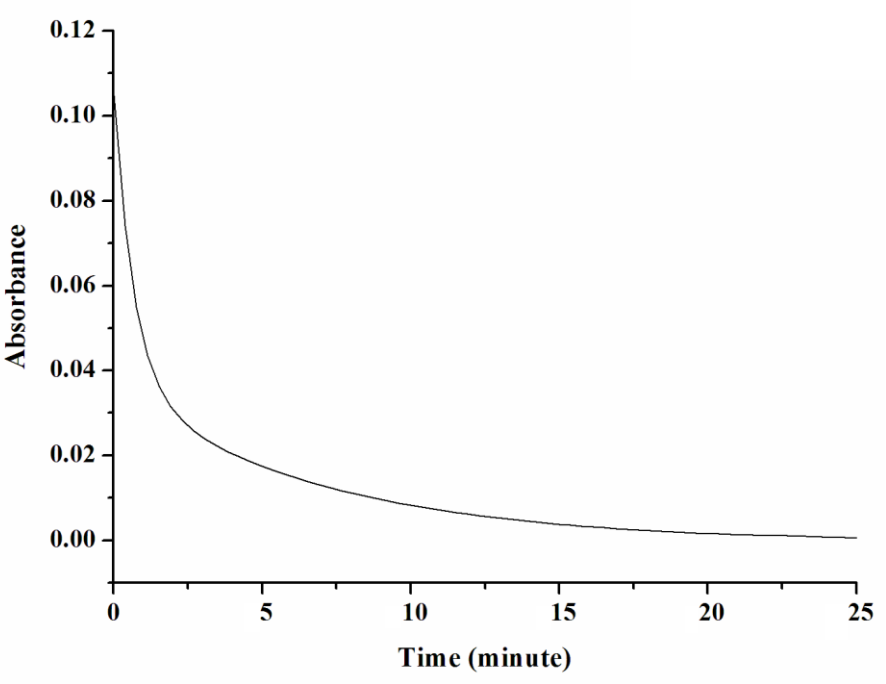

Figure S58: Time scan plot of complex 1 (λ_{max}= 642 nm) after reaction with nitric oxide in presence of one equivalent NaOEt at room temperature.

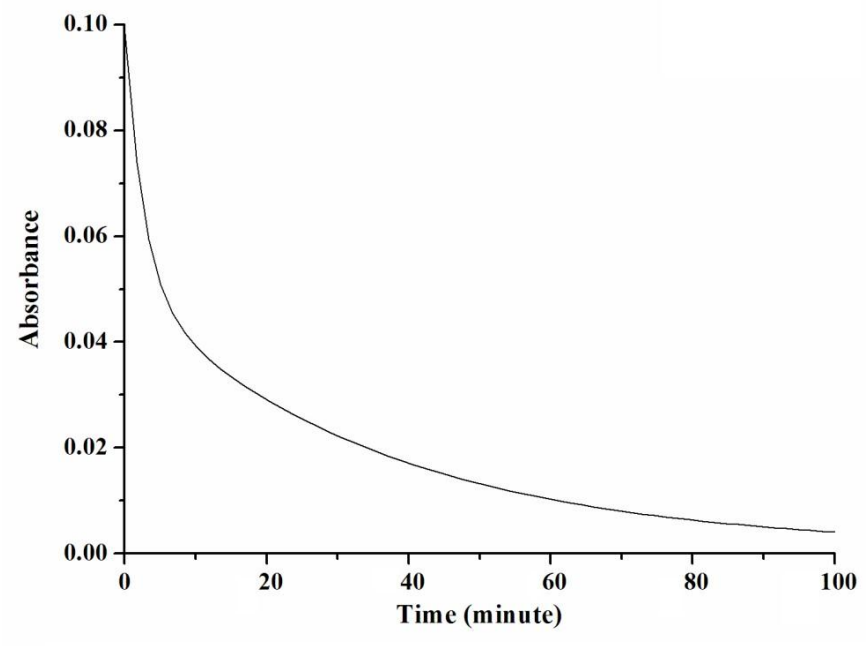

Figure S59: Time scan plot of complex 2 (λ_{max}= 664 nm) after reaction with nitric oxide in presence of one equivalent NaOEt at room temperature.

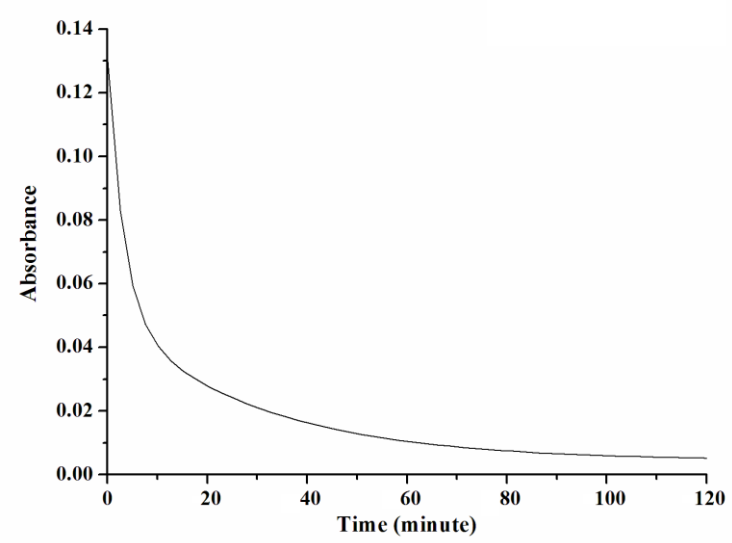

Figure S60: Time scan plot of complex 3 (λ_{max}= 668) after reaction with nitric oxide in presence of one equivalent NaOEt at room temperature.

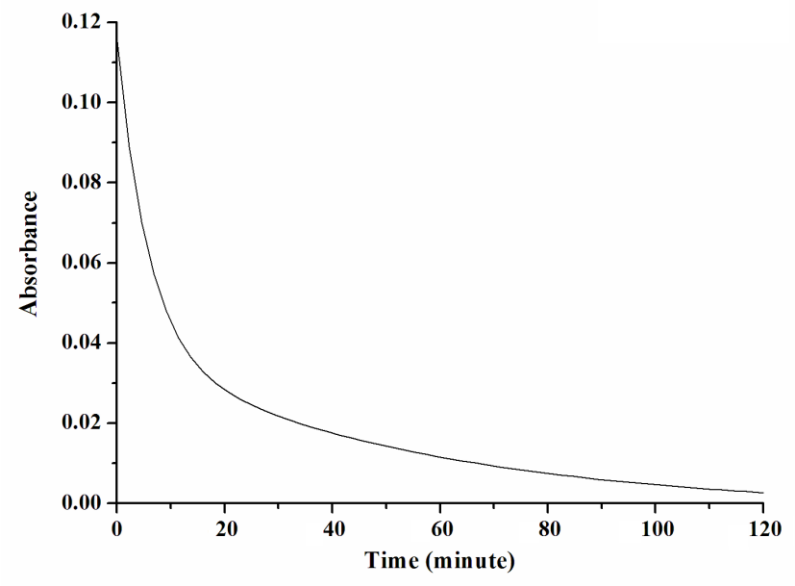

Figure S61: Time scan plot of complex 4 (λ_{max}=640) after reaction with nitric oxide in presence of one equivalent NaOEt at room temperature.

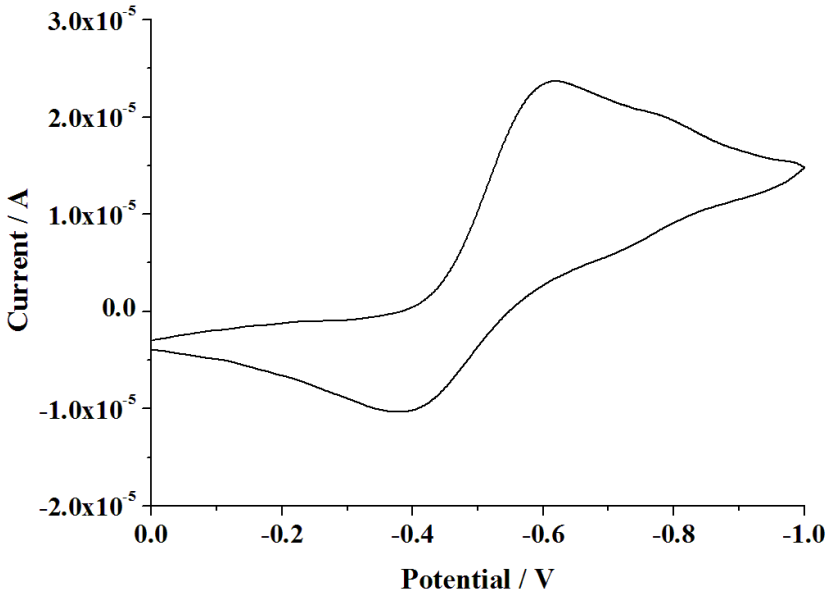

Figure S62: Cyclic voltammogram of complex 1 in acetonitrile solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

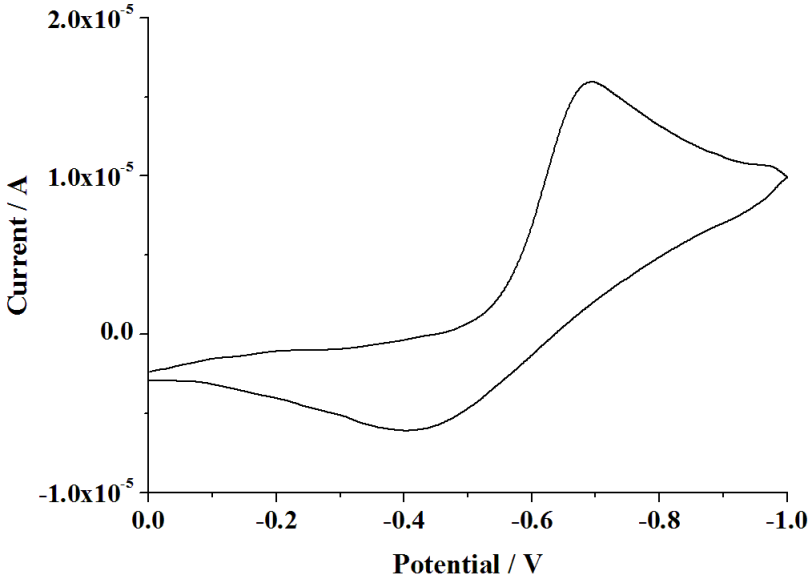

Figure S63: Cyclic voltammogram of complex 2 in acetonitrile solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

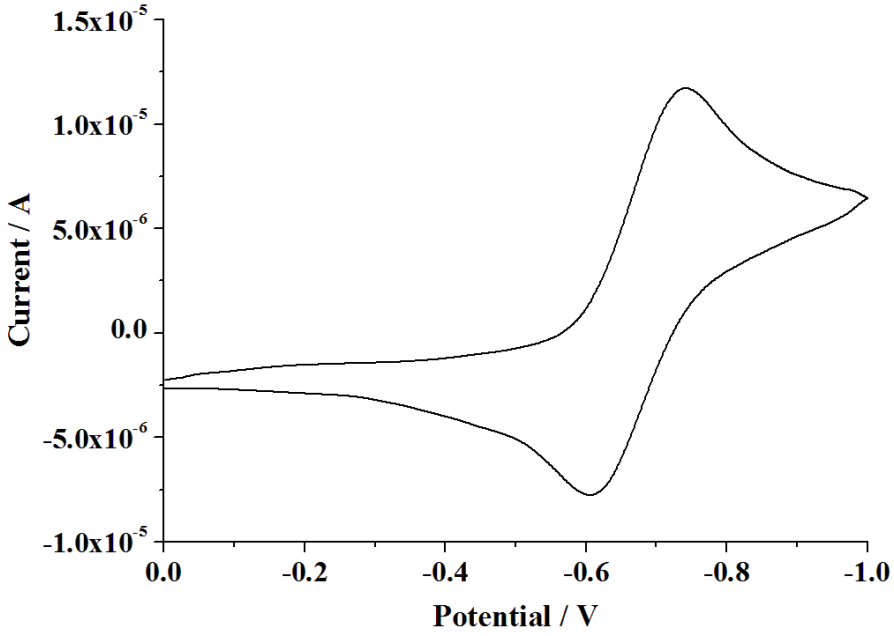

Figure S64: Cyclic voltammogram of complex 3 in acetonitrile solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

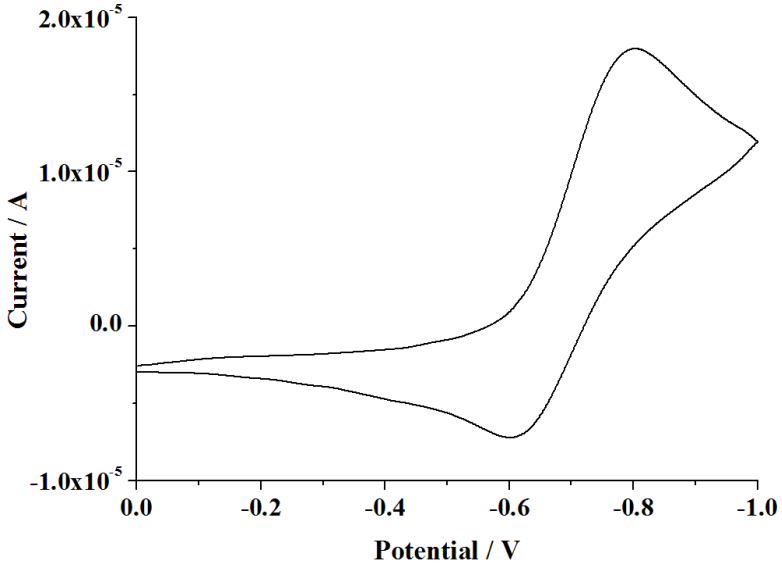

Figure S65: Cyclic voltammogram of complex 4 in acetonitrile solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

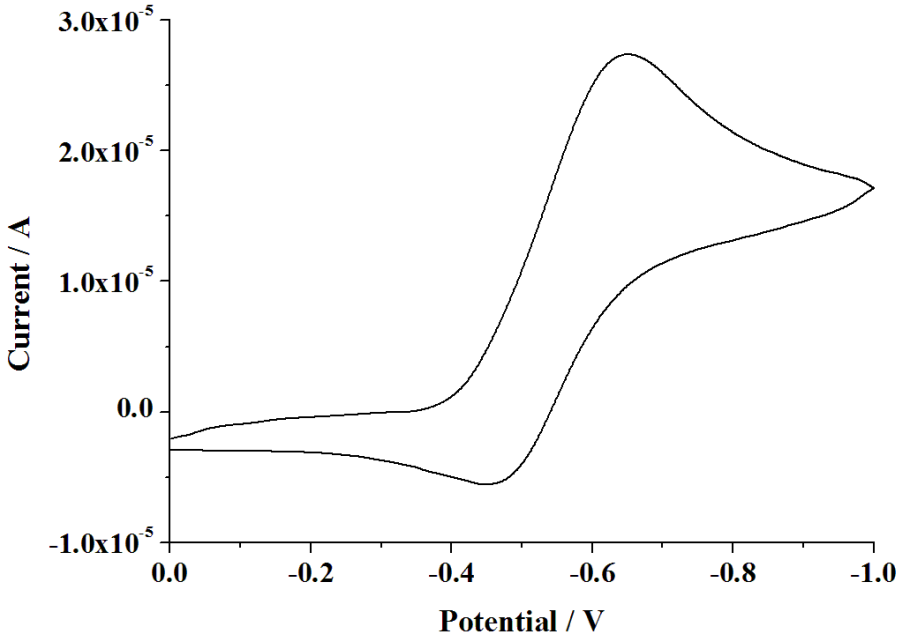

Figure S66: Cyclic voltammogram of complex 1 in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

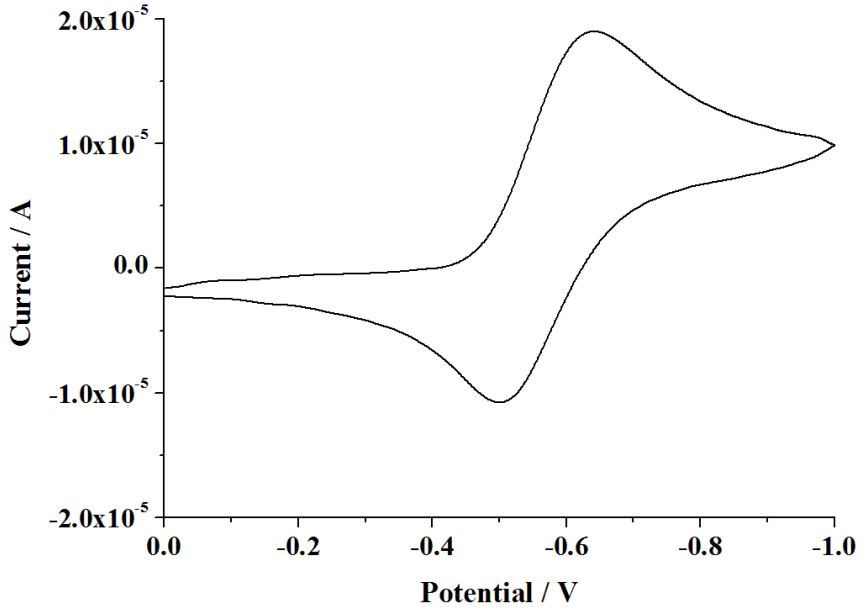

Figure S67: Cyclic voltammogram of complex 1 + one equivalent NaOEt in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

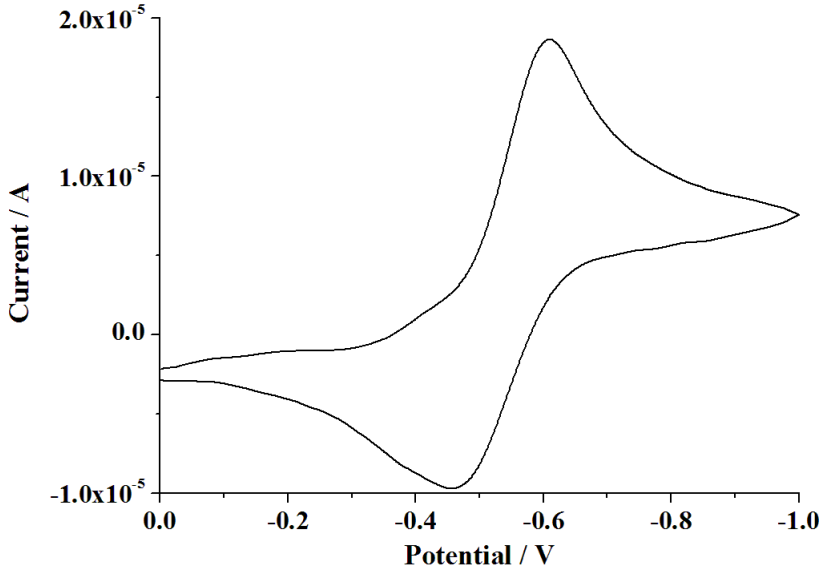

Figure S68: Cyclic voltammogram of complex 2 in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

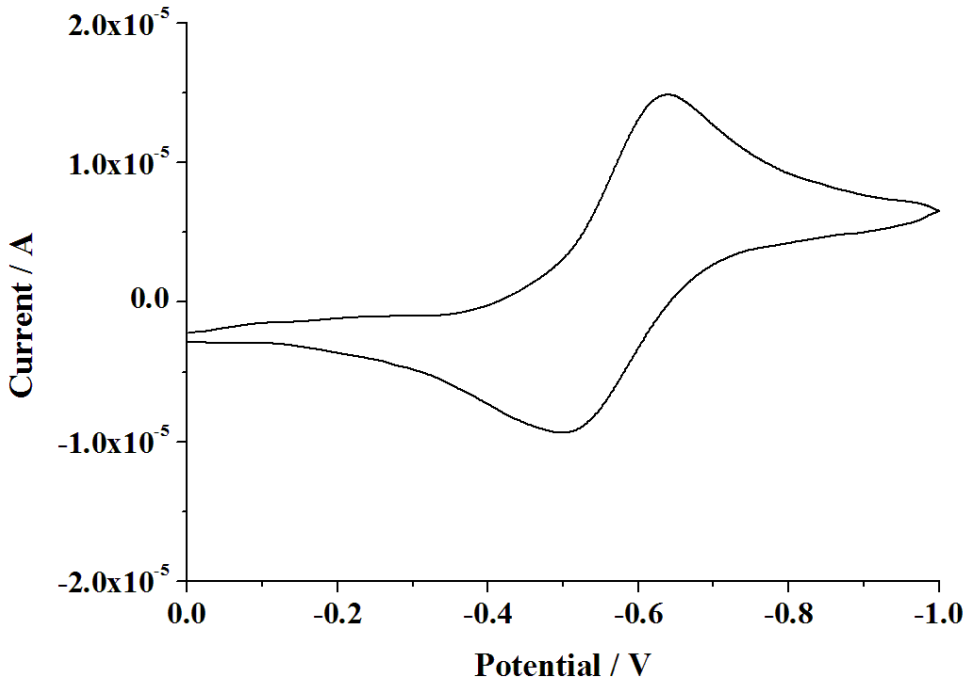

Figure S69: Cyclic voltammogram of complex 2 + one equivalent NaOEt in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

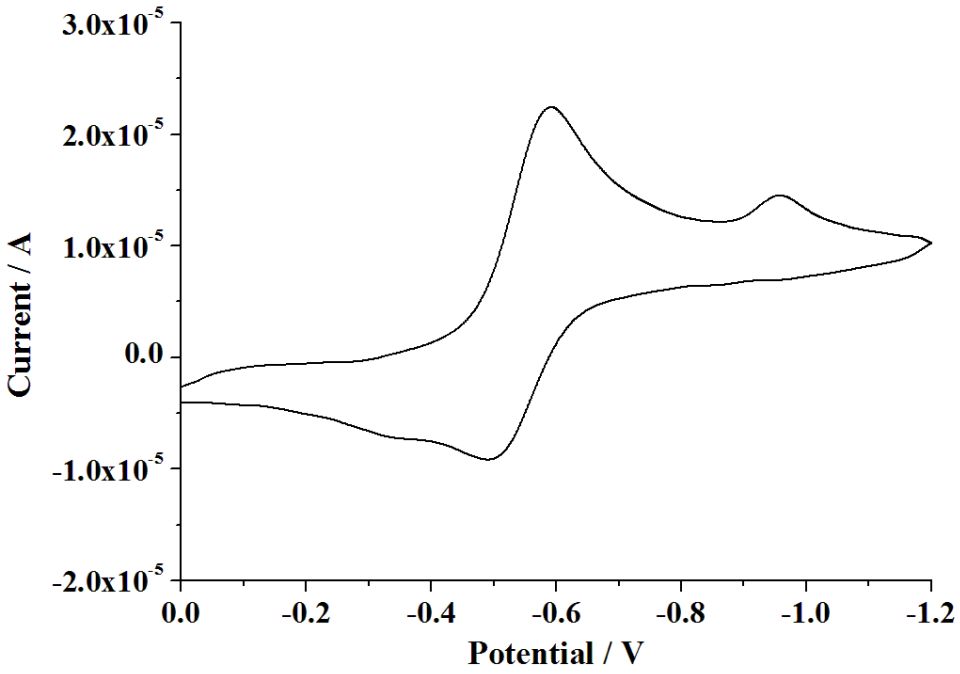

Figure S70: Cyclic voltammogram of complex 3 in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

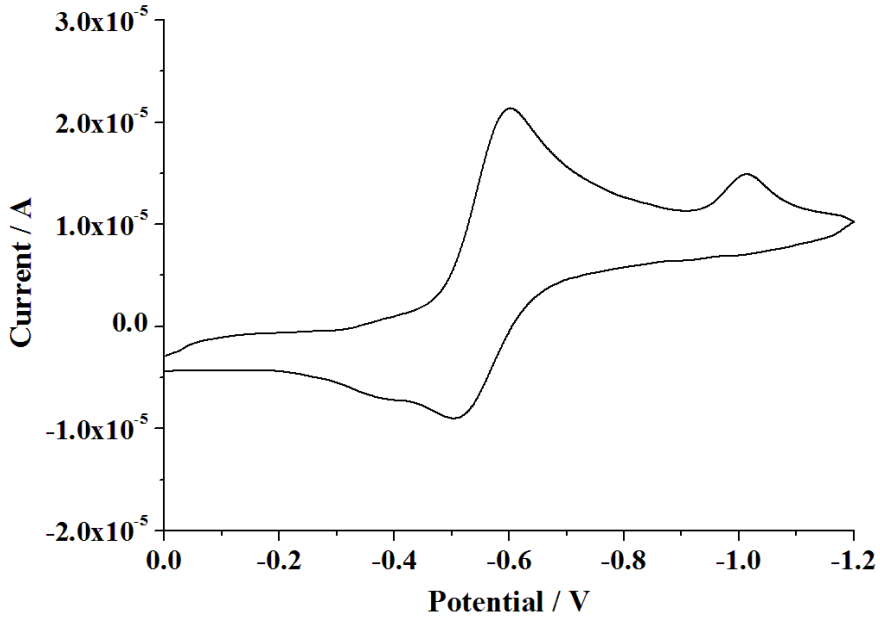

Figure S71: Cyclic voltammogram of complex 3 + one equivalent NaOEt in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

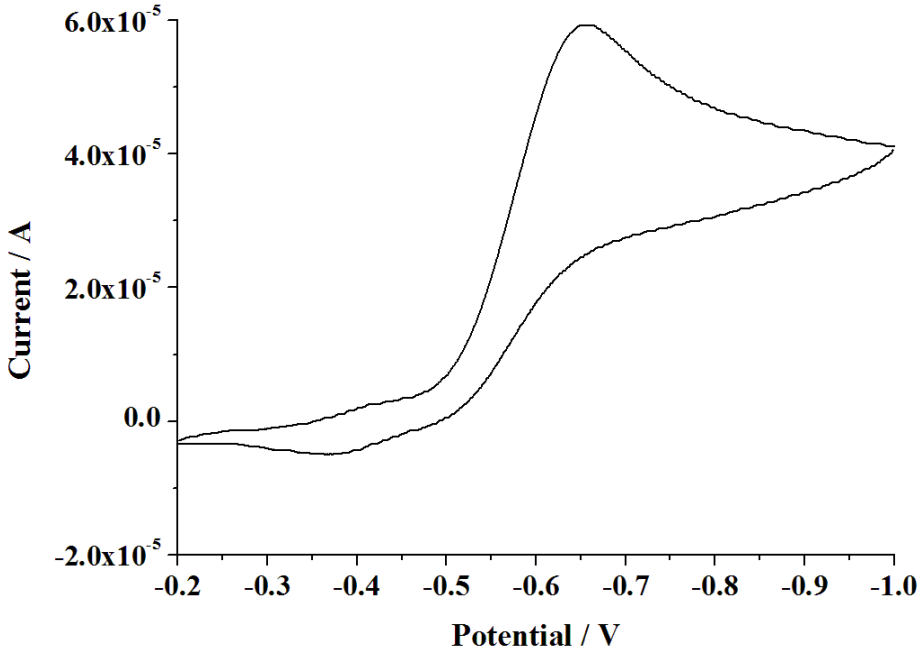

Figure S72: Cyclic voltammogram of complex 4 in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

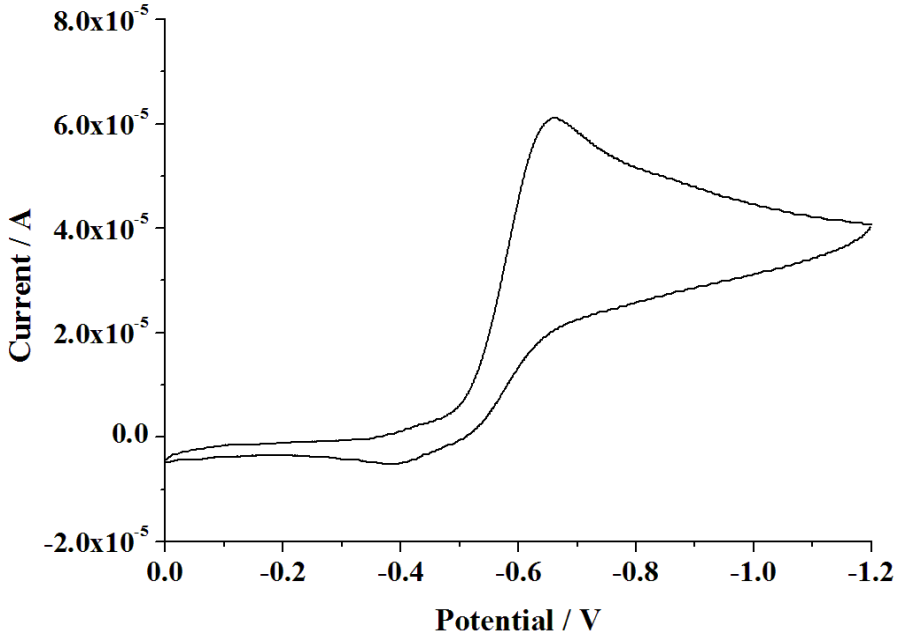

Figure S73: Cyclic voltammogram of complex 4 + one equivalent NaOEt in methanol solvent. Working electrode, Pt; Reference electrode, Ag/Ag+; TBAP supporting electrolyte; scan rate 50 mv/s.

Table S1: X-Band EPR data of the complexes after addition of one equivalent NaOEt at 77K.

Compound	$g_{\perp}$	g_{II}	A X 10^4 (cm^{-1})
1+base	2.027	2.256	161
2+ base	2.025	2.256	160
3+base	2.018	2.250	161
4+base	2.025	2.221	136

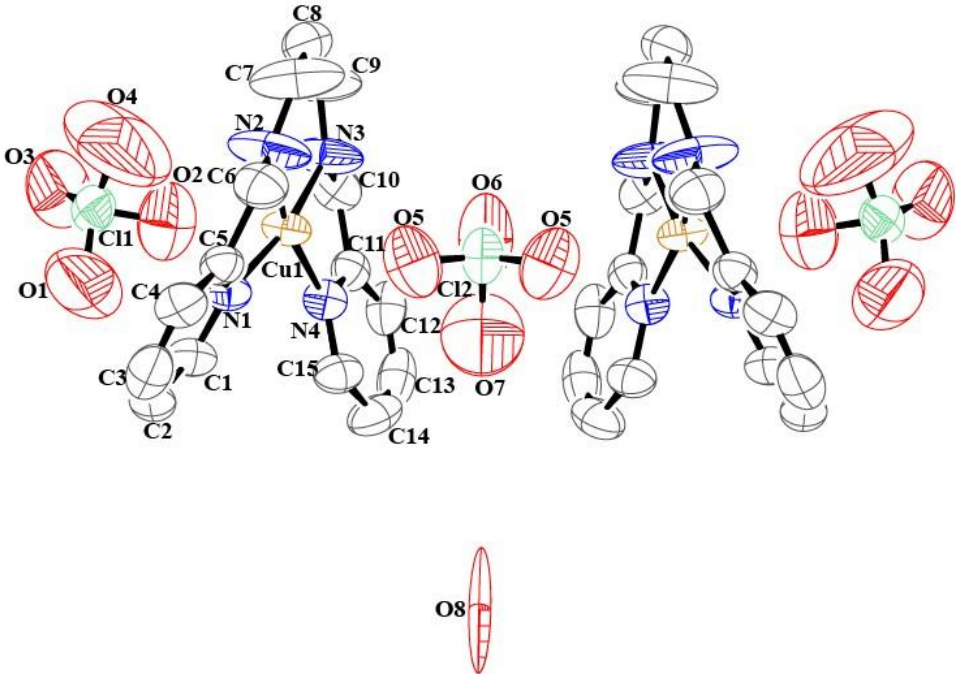

Figure S74: ORTEP diagram of complex 2 (50% thermal ellipsoid plot; H-atoms removed for clarity).

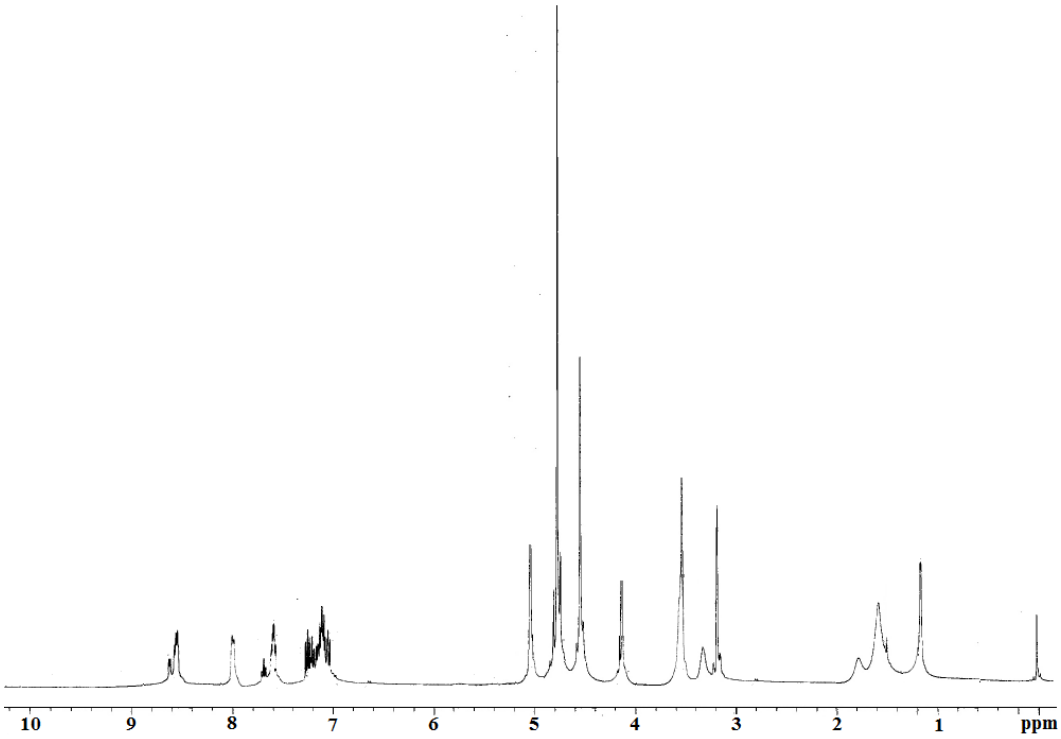

Figure S75. ^{1}H-NMR spectrum of complex 3 after addition of one equivalent of sodium ethoxide and then purging of excess of nitric oxide in CD_3OD.

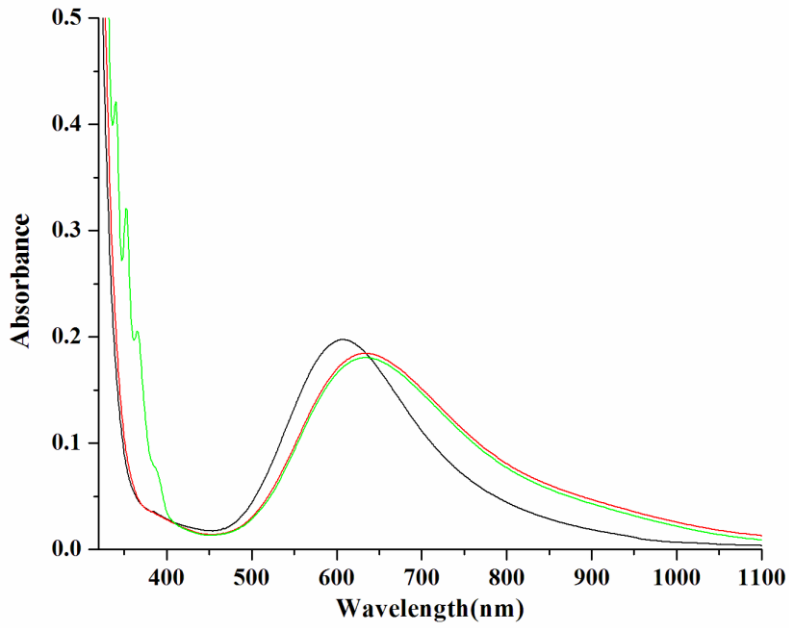

Figure S76. UV-visible spectra of complex 1 in methanol (black), after addition of 1 equivalent of HCl (red) and then addition of excess NO (green).

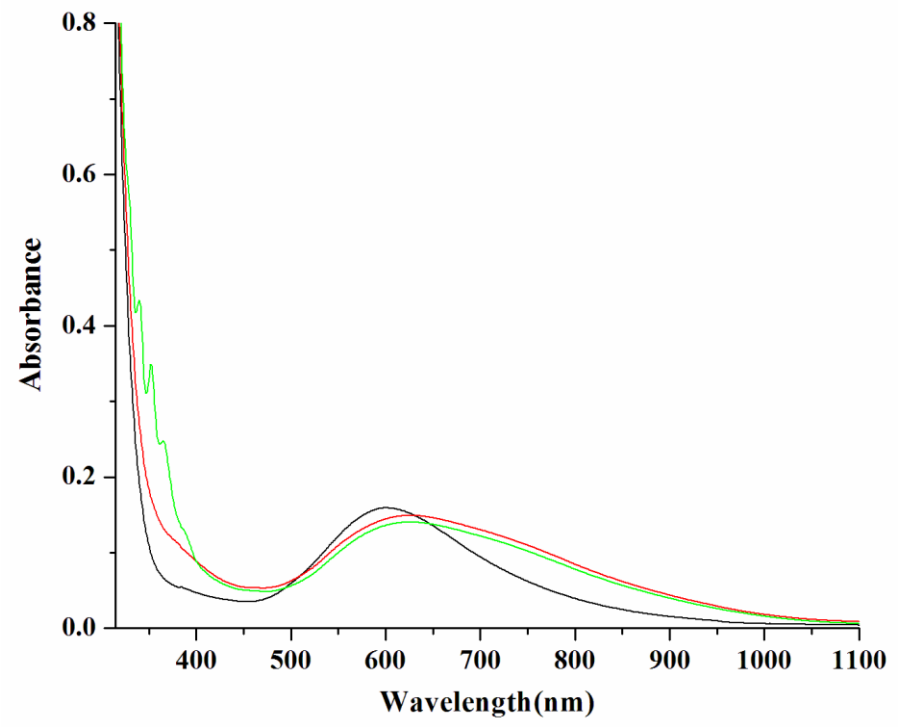

Figure S77. UV-visible spectra of complex 2 in methanol (black), after addition of 1 equivalent of HCl (red) and then addition of excess NO (green).

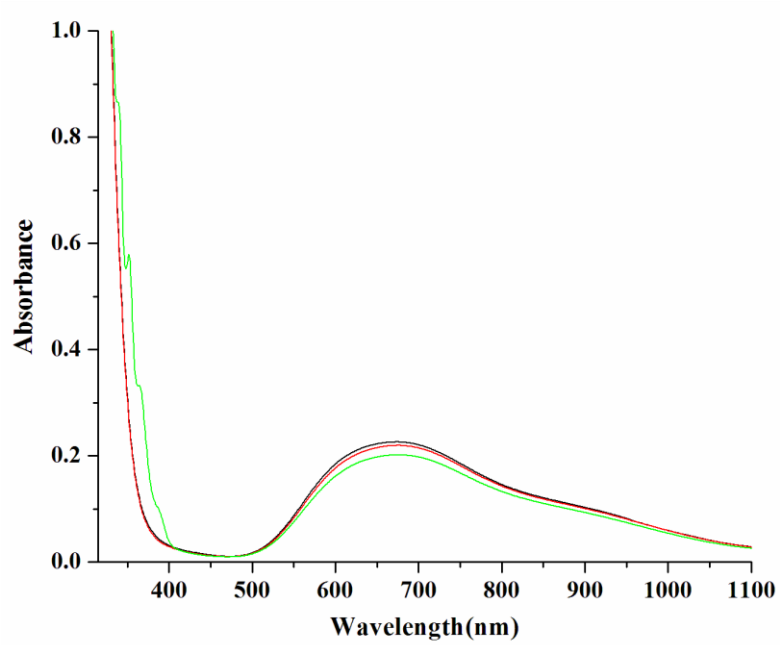

Figure S78. UV-visible spectra of complex 3 in methanol (black), after addition of 1 equivalent of HCl (red) and then addition of excess NO (green).

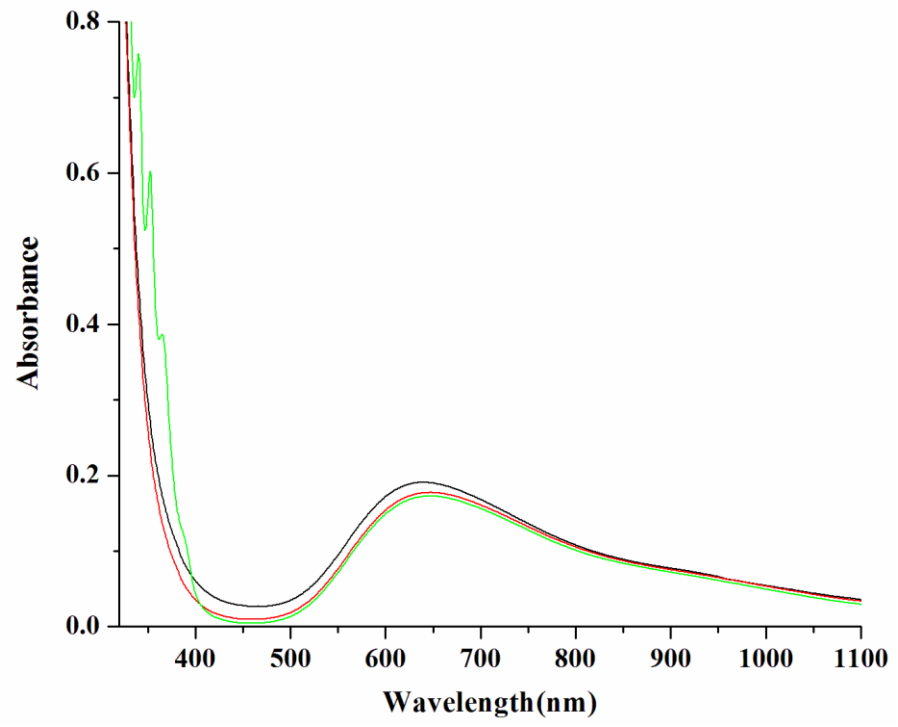

Figure S78. UV-visible spectra of complex 4 in methanol (black), after addition of 1 equivalent of HCl (red) and then addition of excess NO (green).

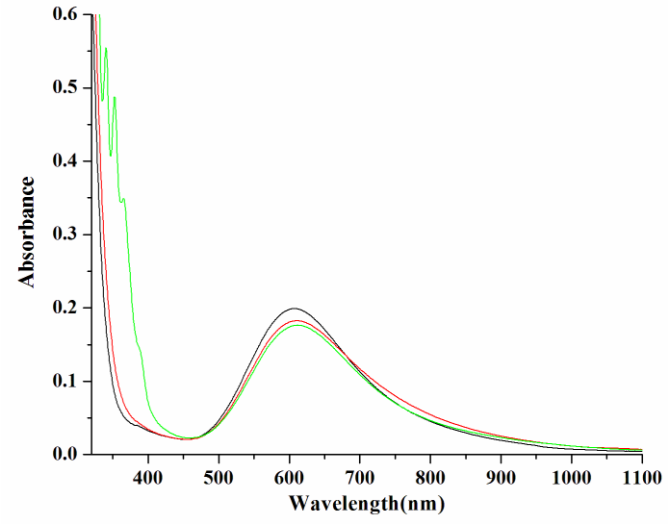

Figure S79. UV-visible spectra of complex 1 in methanol (black), after addition of four equivalent of triethylamine (red) and then addition of excess NO (green).

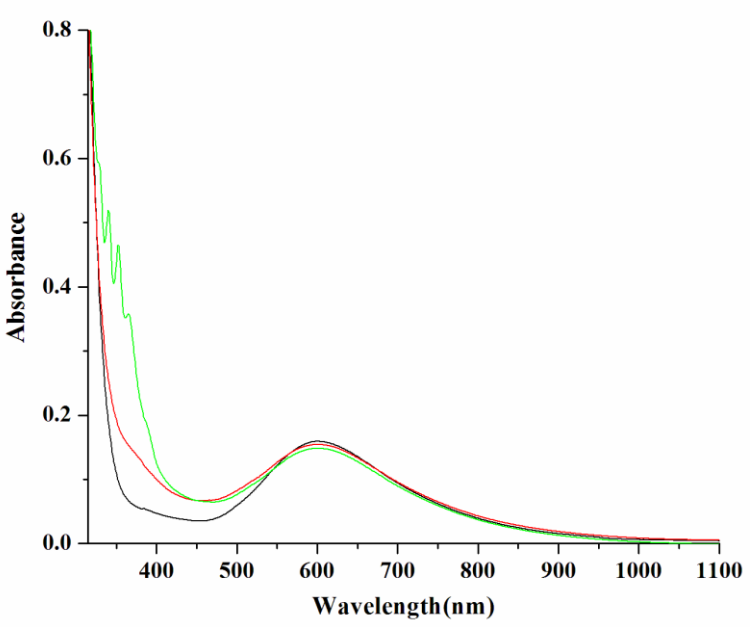

Figure S80. UV-visible spectra of complex 2 in methanol (black line), after addition of four equivalent of triethylamine (red) and then addition of excess NO (green).

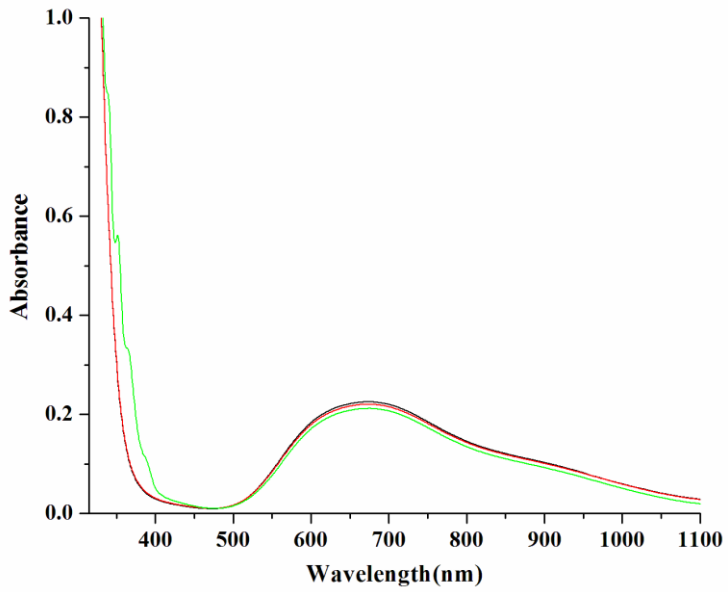

Figure S81. UV-visible spectra of complex 3 in methanol (black), after addition of four equivalent of triethylamine (red) and then addition of excess NO (green).

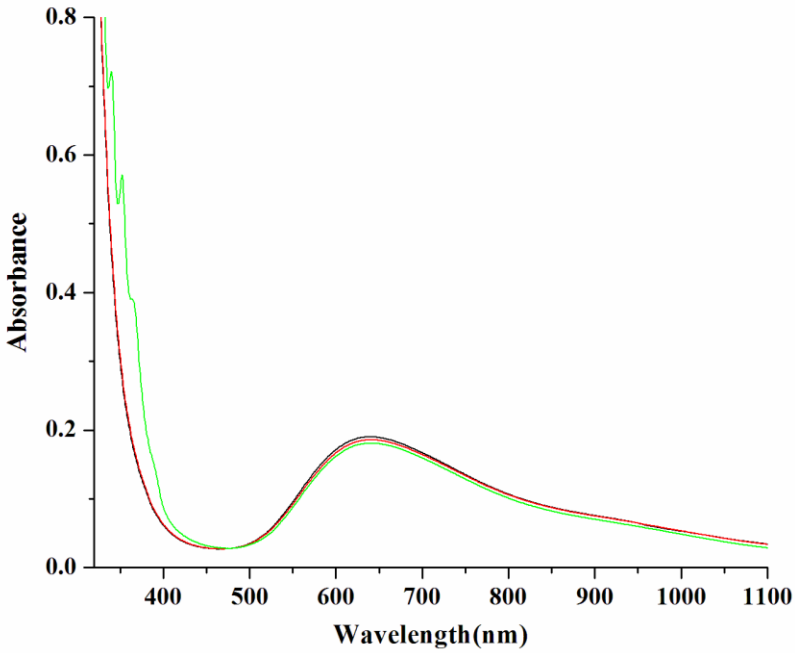

Figure S82. UV-visible spectra of complex 4 in methanol (black), after addition of four equivalent of triethylamine (red) and then addition of excess NO (green).