

Supporting Information of

**Ru(II) Complexes with *N*-Heterocyclic Carbene
Ligands or Terpyridine Analogues : Synthesis,
Characterization, and Electrochemical and
Proton-Dependent Spectrometric Properties.**

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Figure S1. Proton-dependent absorption changes of **BPPN**(upper) and **BPPT**(below). 1.0 M HCl in diethyl ether was used as a proton source. Recorded in 1.0×10^{-5} M solution in each case.

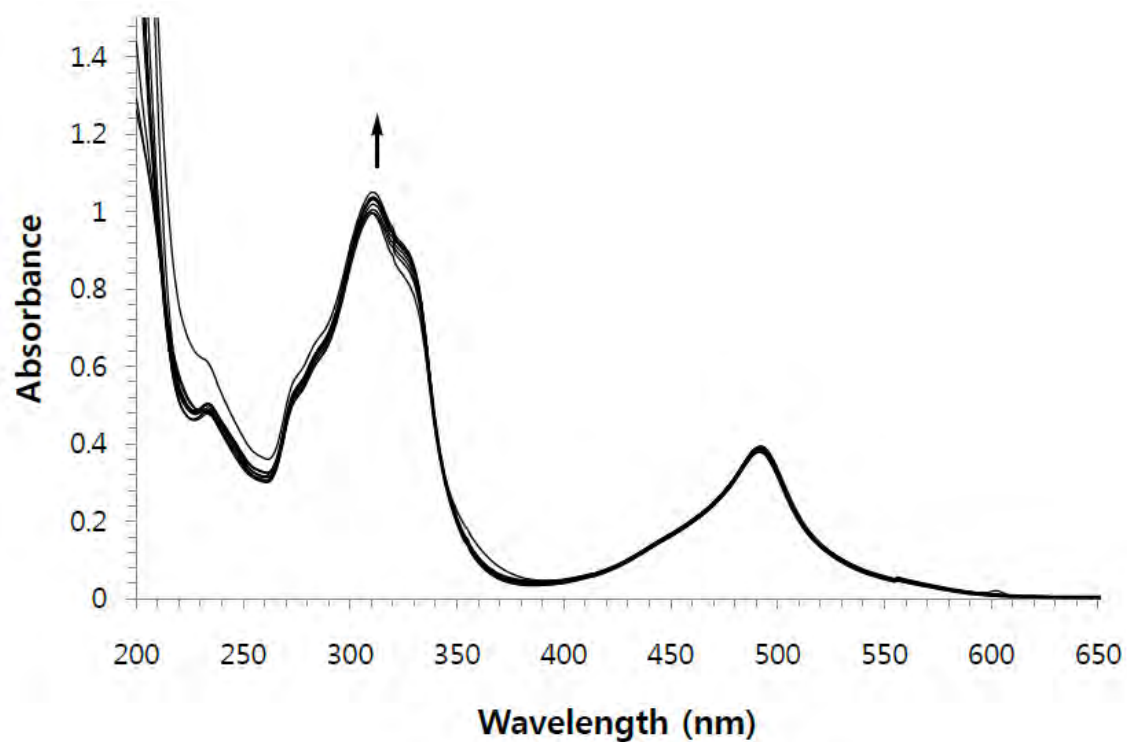
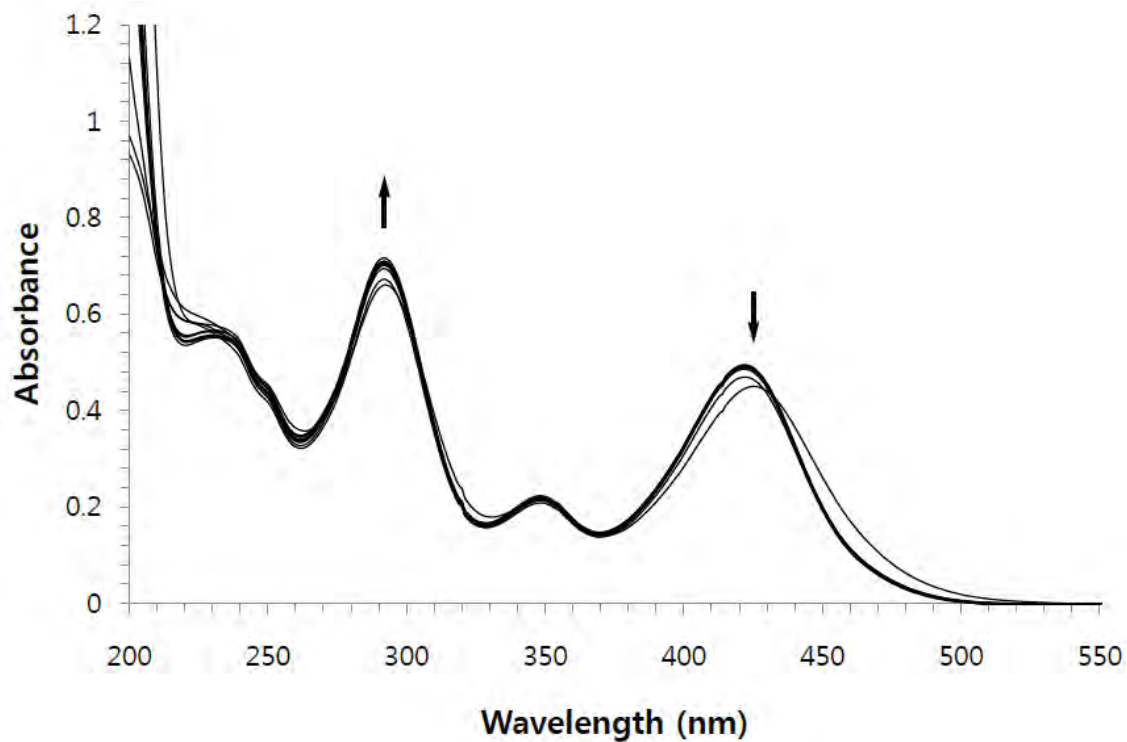
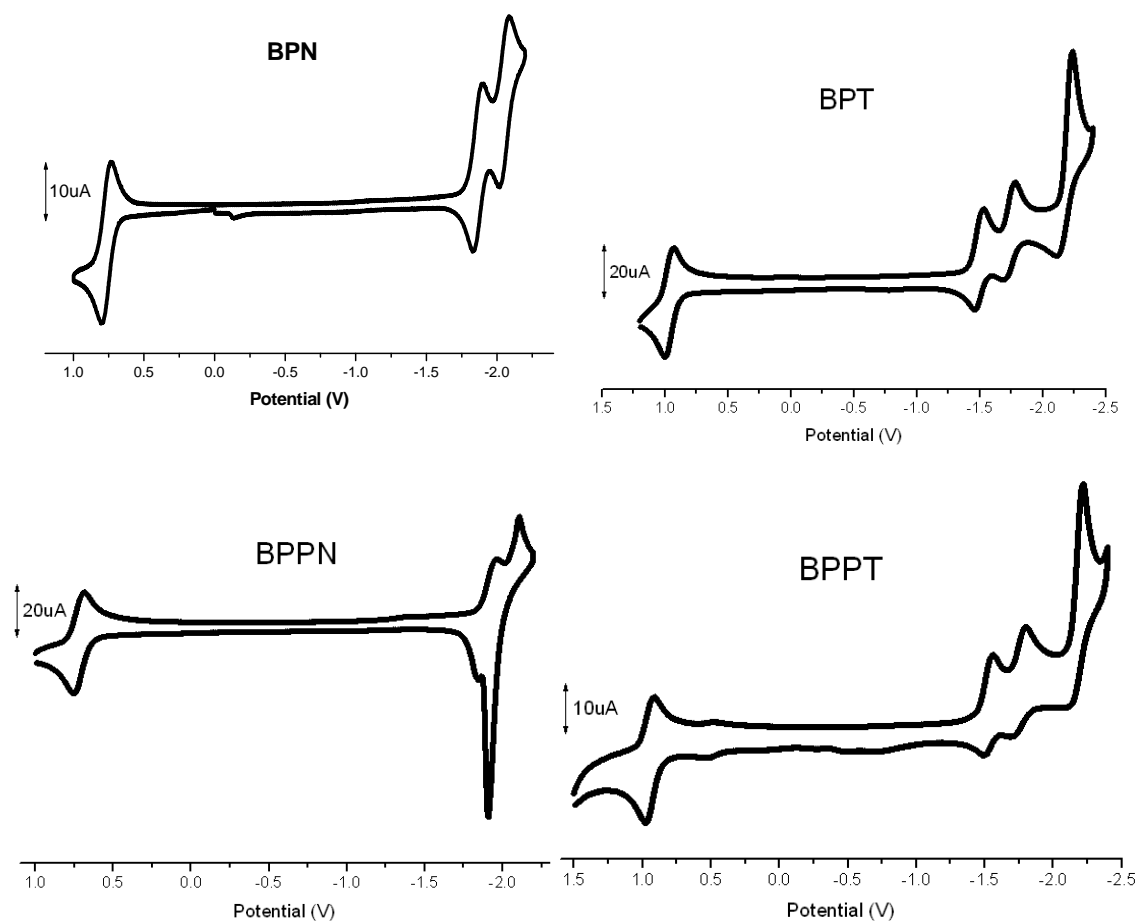


Figure S2. Cyclic voltammograms of **BPN**, **BPT**, **BPPT**, and **BPPN** in 0.1 M Bu_4NPF_6 acetonitrile solution at room temperature.^a



^a In the complex **BPPN**, an abnormal reduction peak at around -1.85 is thought to be caused by adsorption of irreversibly reduced compound at the electrode surface.

Figure S3. Solvatochromic properties of **BPN**-acetonitrile solution (3 mL) with water and diethyl ether.

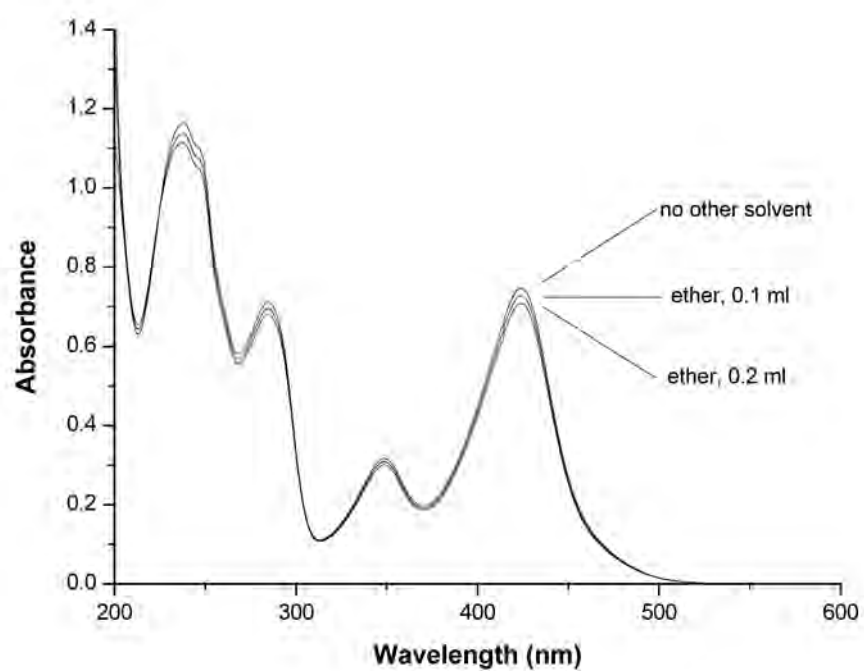
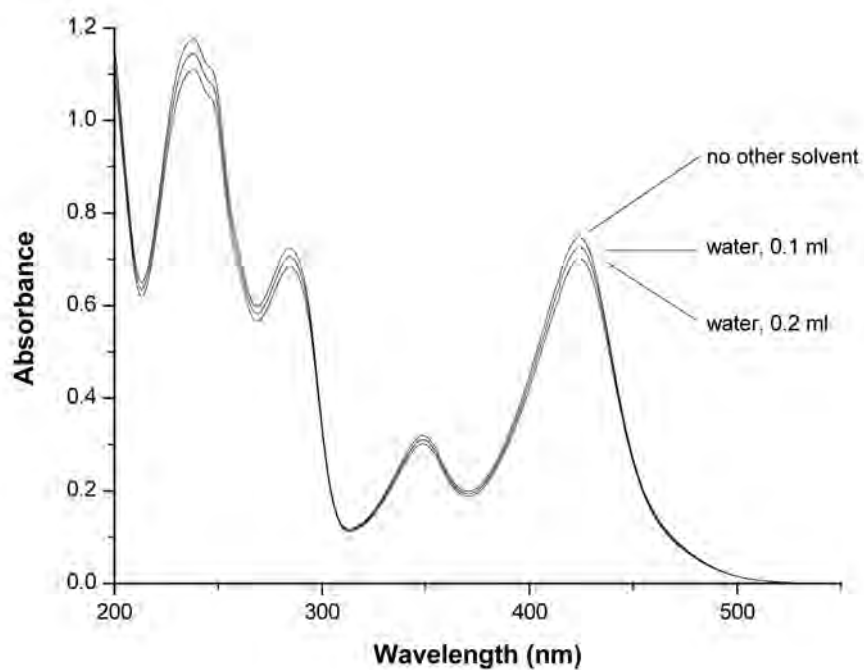


Figure S4. Absorption changes of **BPN** with various metal ions. **BPN**: 1×10^{-5} M, metal ion: 20 equiv.

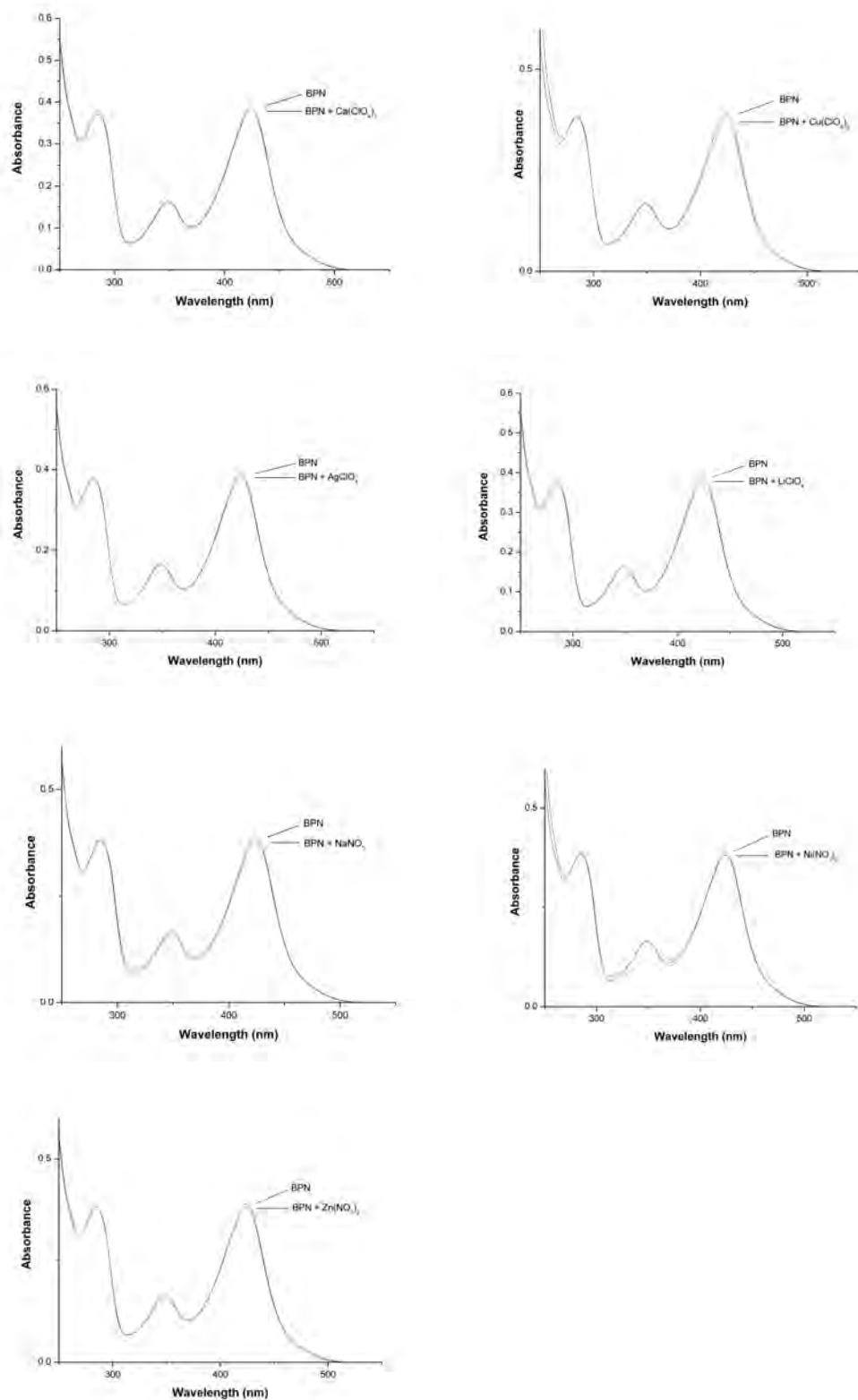


Figure S5. ^1H and ^{13}C NMR spectra of **BPN**.

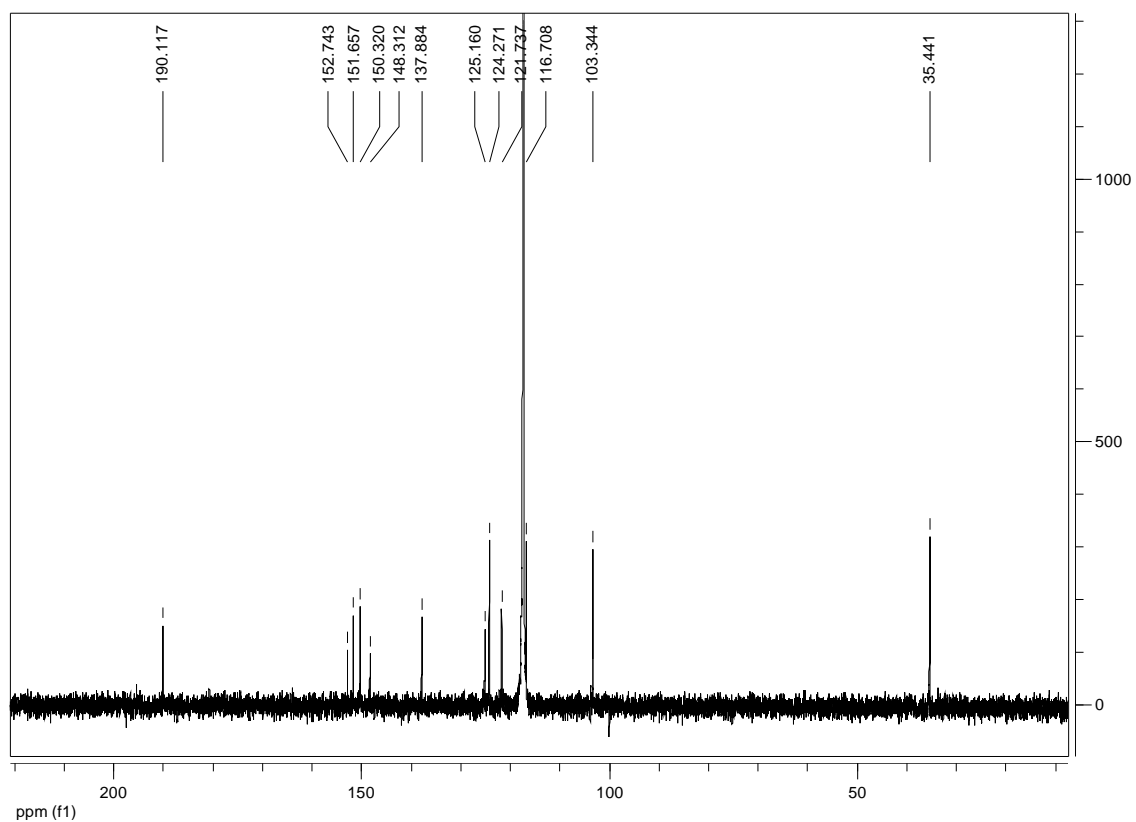
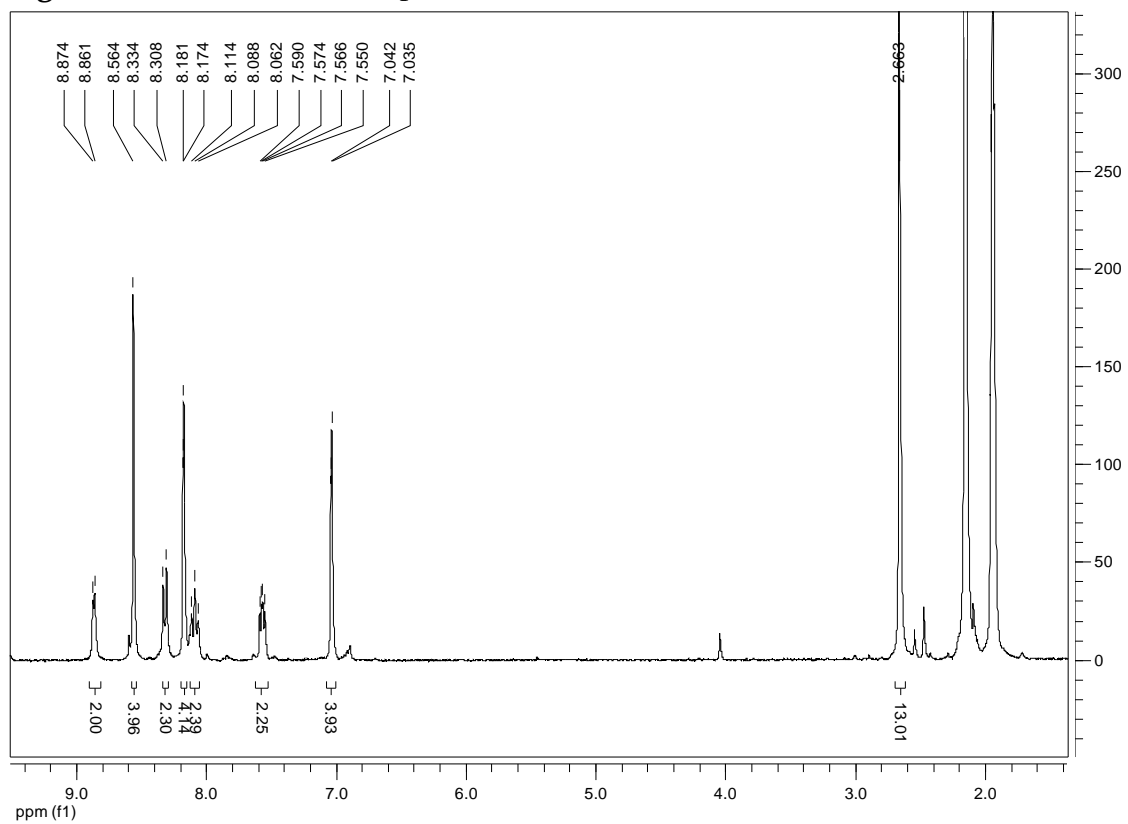


Figure S6. ^1H and ^{13}C NMR spectra of **BPPN**.

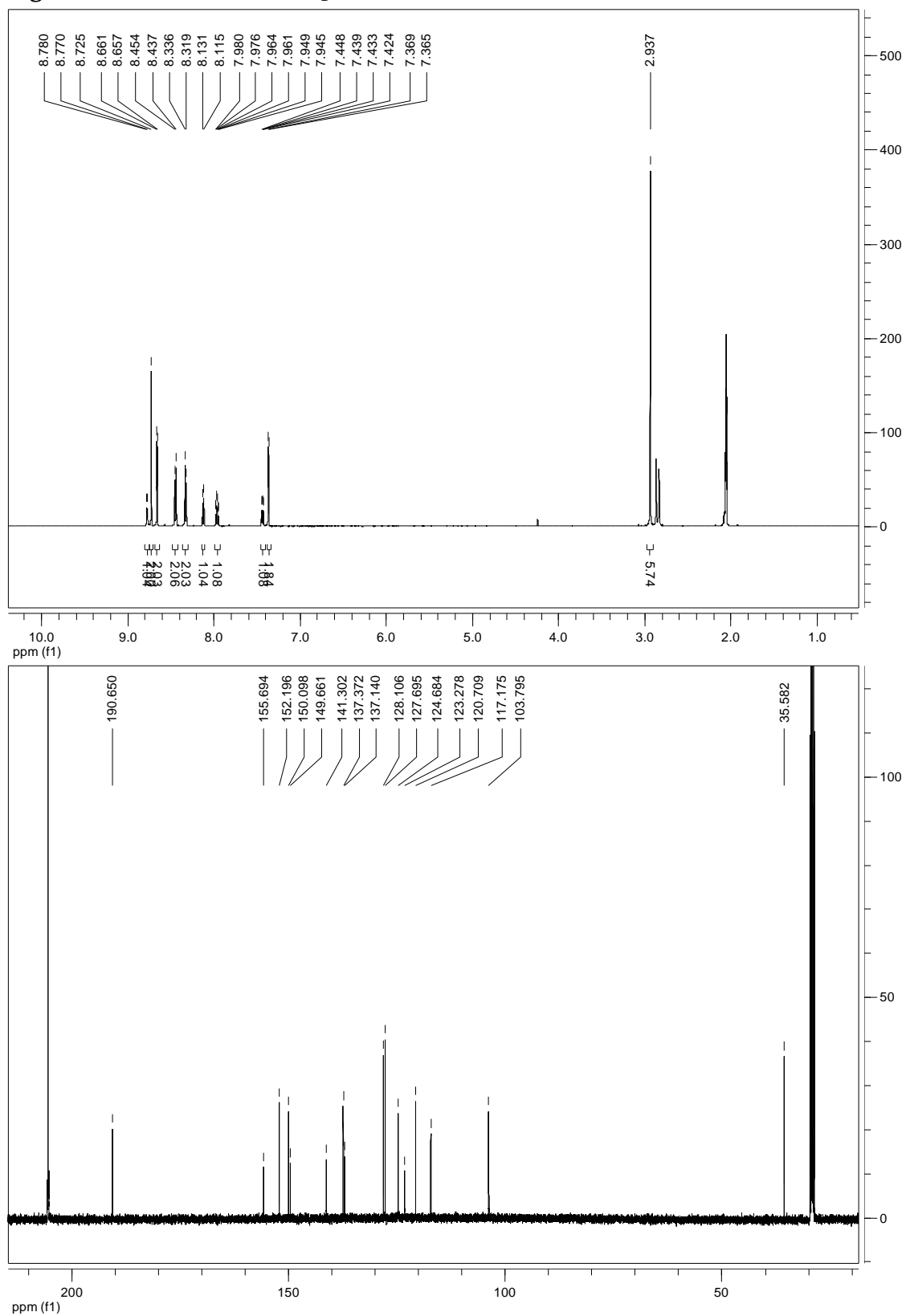


Figure S7. ^1H and ^{13}C NMR spectra of BPPT.

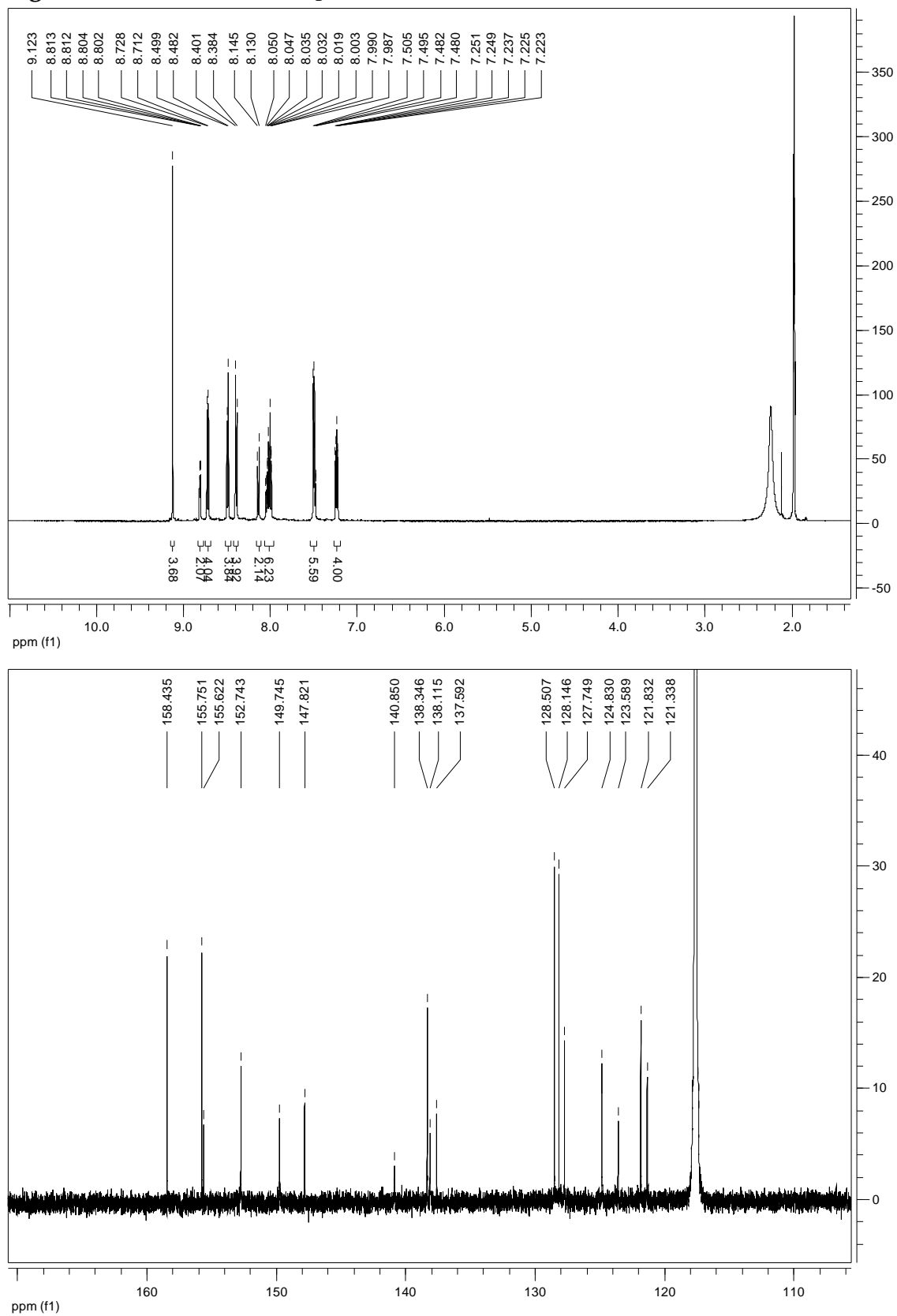


Figure S8. Emission decay profiles.

