

Electronic Supporting Information (ESI) for:

Oligoaniline-Functionalized Terpyridine Ligands and Their Ruthenium(II) Complexes: Synthesis, Spectroscopic Properties and Redox Behavior

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Figure S1. 300MHz ^1H NMR spectra of the BOC-substituted mononuclear and dinuclear Ru(II) complexes.

Figure S2. 300 MHz ^1H NMR spectra of Bu-substituted mononuclear Ru(II) complexes.

Figure S3. 300 MHz ^1H NMR spectra of oligoaniline functionalized mononuclear and dinuclear Ru(II) complexes.

Figure S4. UV-vis spectra of the BOC- and Bu-substituted ligands and complexes in DMF solutions.

Figure S5. Influence of oxidant and dopant on the UV-vis-NIR spectra of the ligands and complexes in DMF solutions.

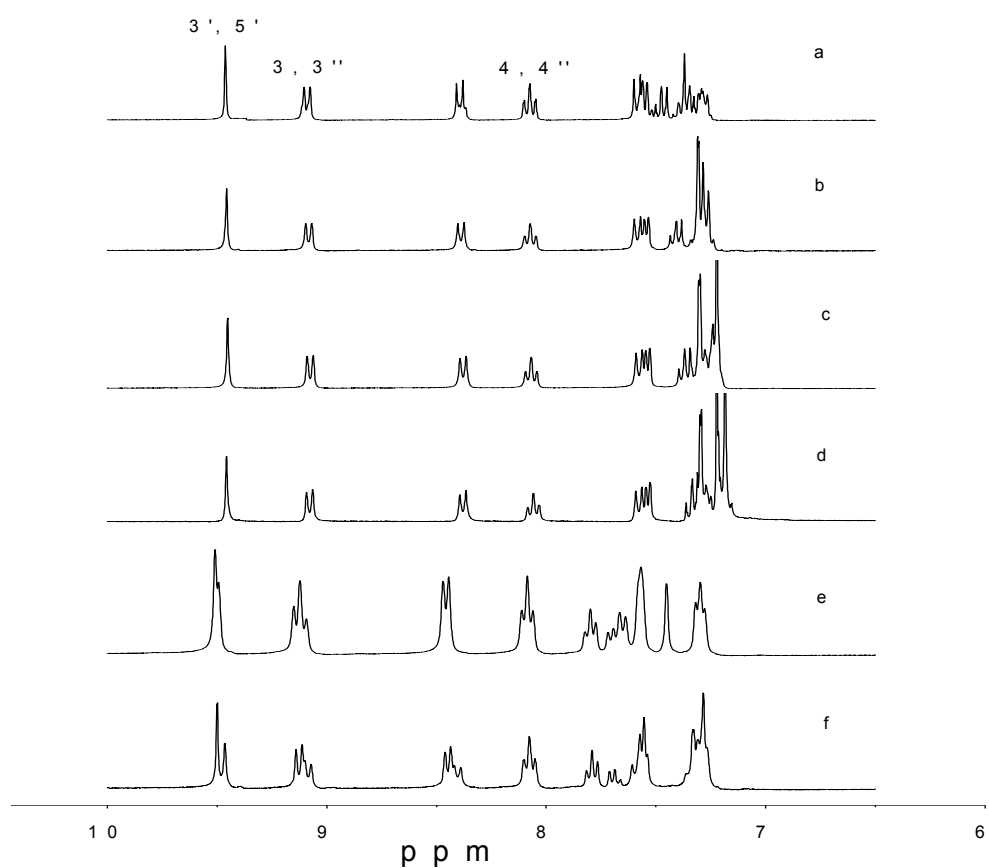


Fig. S1. 300 MHz ^1H NMR spectra of the BOC-substituted mononuclear and dinuclear Ru(II) complexes.

- (a) $[\text{Ru}(\text{L}^7)_2](\text{PF}_6)_2$; (b) $[\text{Ru}(\text{L}^8)_2](\text{PF}_6)_2$; (c) $[\text{Ru}(\text{L}^9)_2](\text{PF}_6)_2$; (d) $[\text{Ru}(\text{L}^{10})_2](\text{PF}_6)_2$;
(e) $[(\text{PTPY})\text{Ru}(\text{L}^{11})\text{Ru}(\text{PTPY})](\text{PF}_6)_4$; (f) $[(\text{PTPY})\text{Ru}(\text{L}^{12})\text{Ru}(\text{PTPY})](\text{PF}_6)_4$.

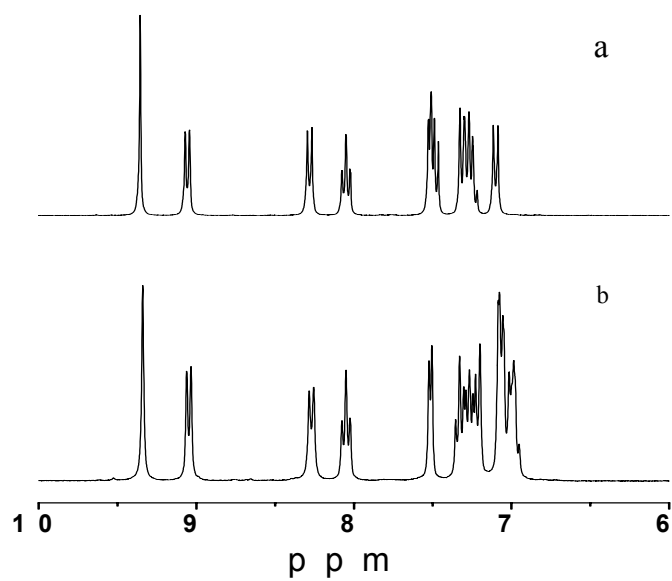


Fig. S2. 300 MHz ¹H NMR spectra of Bu-substituted mononuclear Ru(II) complexes.

(a) [Ru(L¹³)₂](PF₆)₂; (b) [Ru(L¹⁴)₂](PF₆)₂.

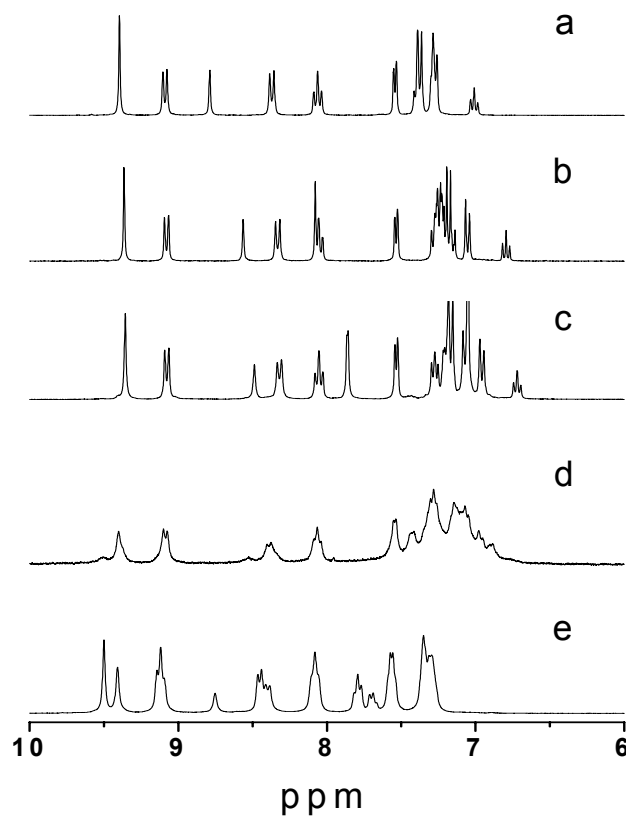
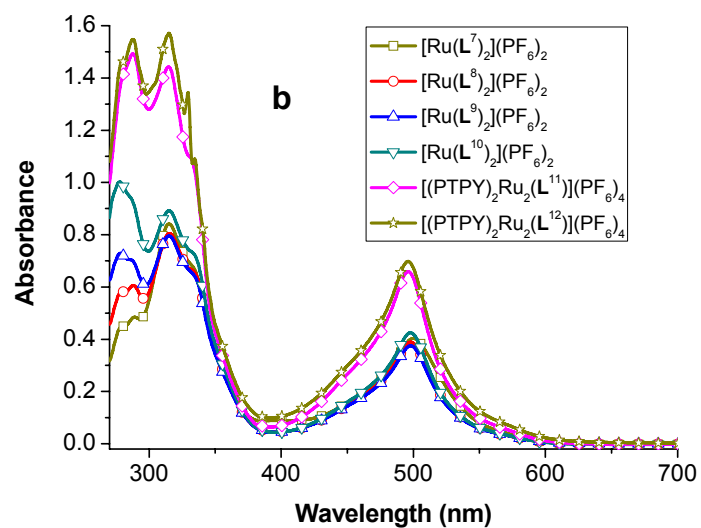
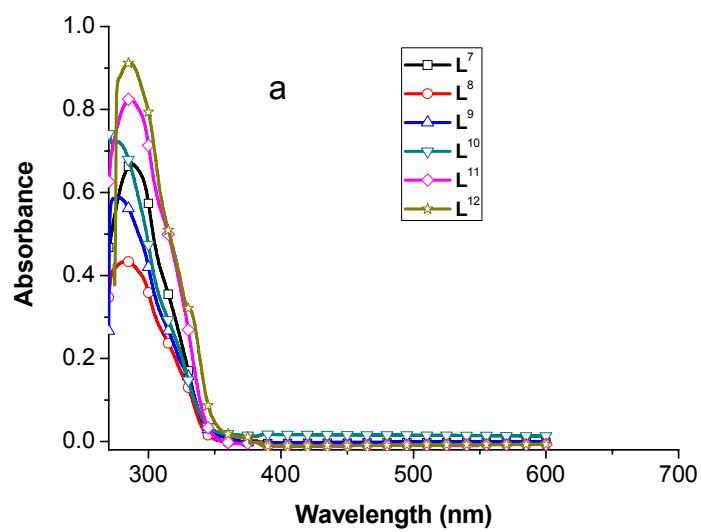


Fig. S3. 300 MHz ^1H NMR spectra of oligoaniline functionalized mononuclear and dinuclear Ru(II) complexes.

(a) $[\text{Ru}(\text{L}^1)_2](\text{PF}_6)_2$; (b) $[\text{Ru}(\text{L}^2)_2](\text{PF}_6)_2$; (c) $[\text{Ru}(\text{L}^3)_2](\text{PF}_6)_2$; (d) $[\text{Ru}(\text{L}^4)_2](\text{PF}_6)_2$;

(e) $[(\text{PTPY})\text{Ru}(\text{L}^5)\text{Ru}(\text{PTPY})](\text{PF}_6)_4$.



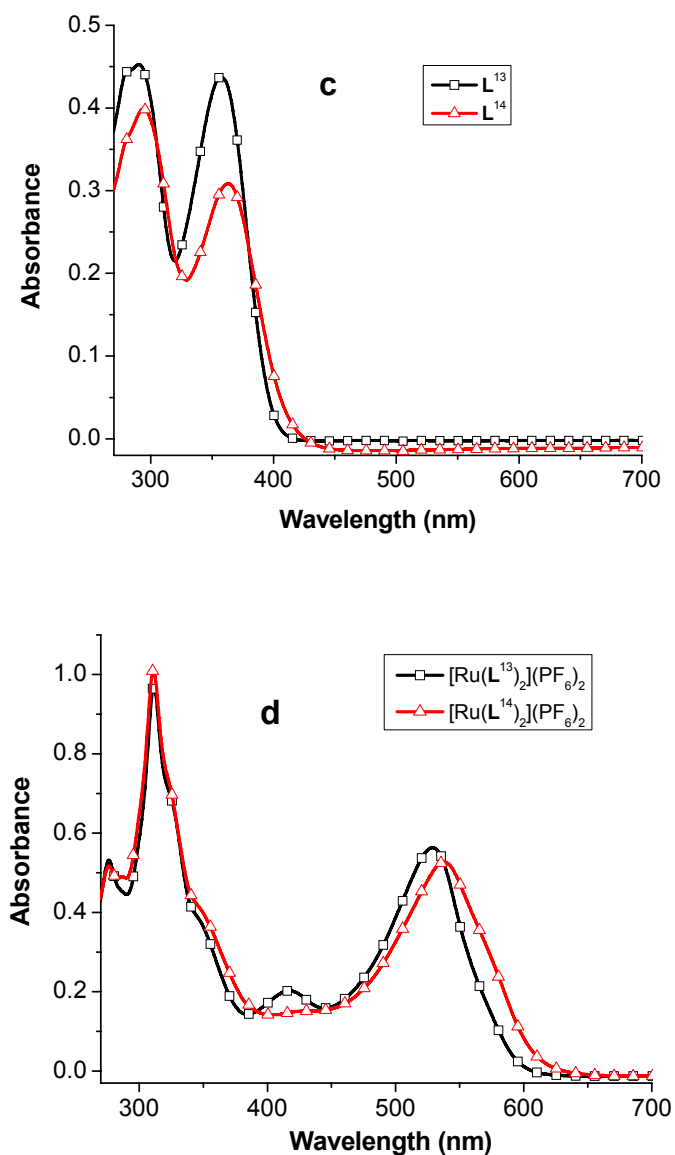


Fig. S4. UV-vis spectra of the BOC- and Bu-substituted ligands and complexes in DMF solutions.

- (a) the BOC-substituted ligands;
- (b) the BOC-substituted complexes;
- (c) the Bu-substituted ligands;
- (d) the Bu-substituted complexes.

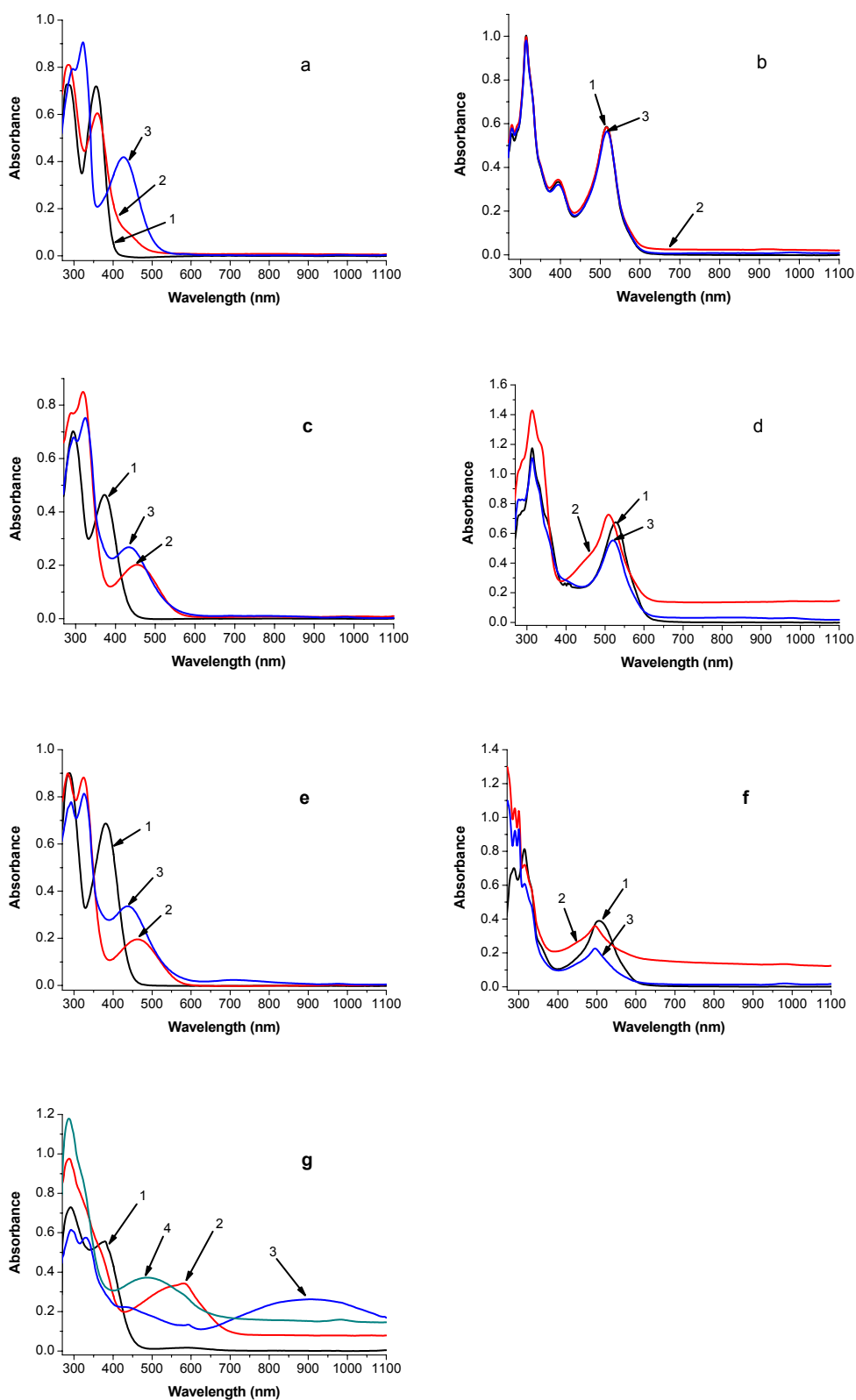


Fig. S5. Influence of oxidant and dopant on the UV-vis-NIR spectra of the ligands and complexes in DMF solutions.

(a) L^1 ; (b) $[Ru(L^1)_2](PF_6)_2$; (c) L^2 ; (d) $[Ru(L^2)_2](PF_6)_2$; (e) L^5 ;

(f) [(PTPY)Ru(L⁵)Ru(PTPY)](PF₆)₄; (g) L⁶: the LEB form (1); the EB form (2);
the doped form (3); the PNB form (4).