Electronic Supplementary Information

Photoisomerization of di-nuclear rhenium(I) bpe-based compounds

Karina P. M. Frin*, Denis C. da Rocha, Júlia F. Mamud, André S. Polo

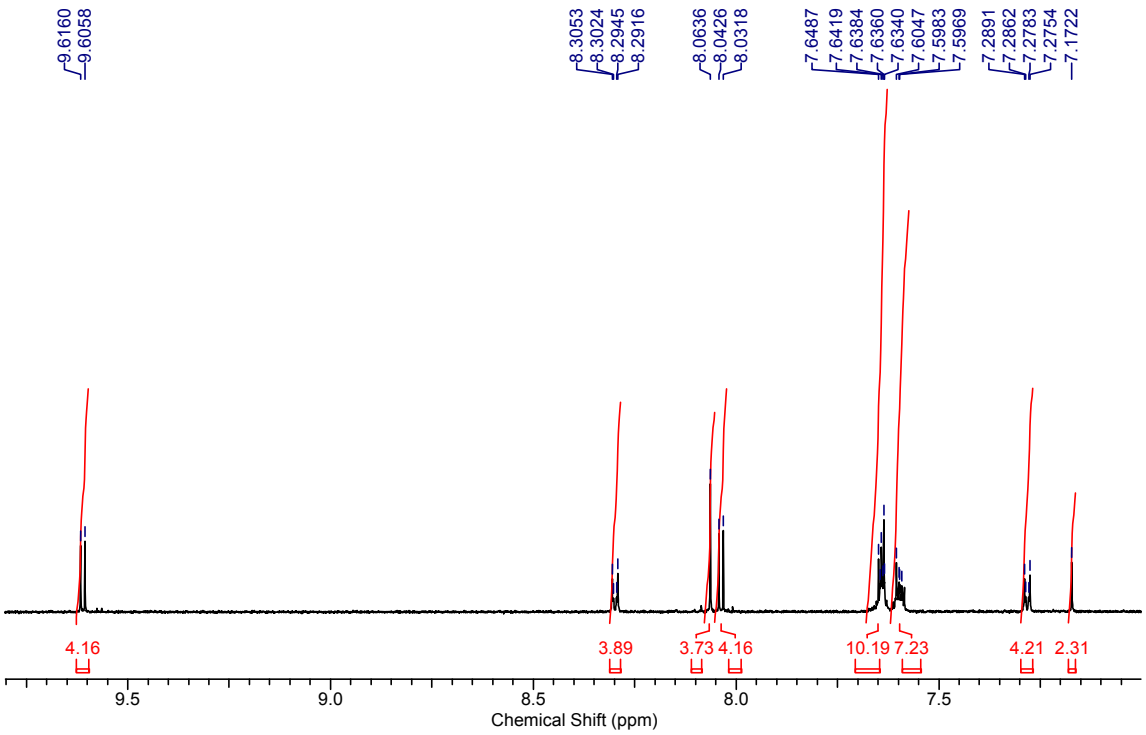


Figure S1. ^{1}H NMR spectrum of $[\{(ph_2phen)(CO)_3Re\}_2(\textit{trans}\text{-bpe})]^{+2}$ complex in CD_3CN (500 MHz).

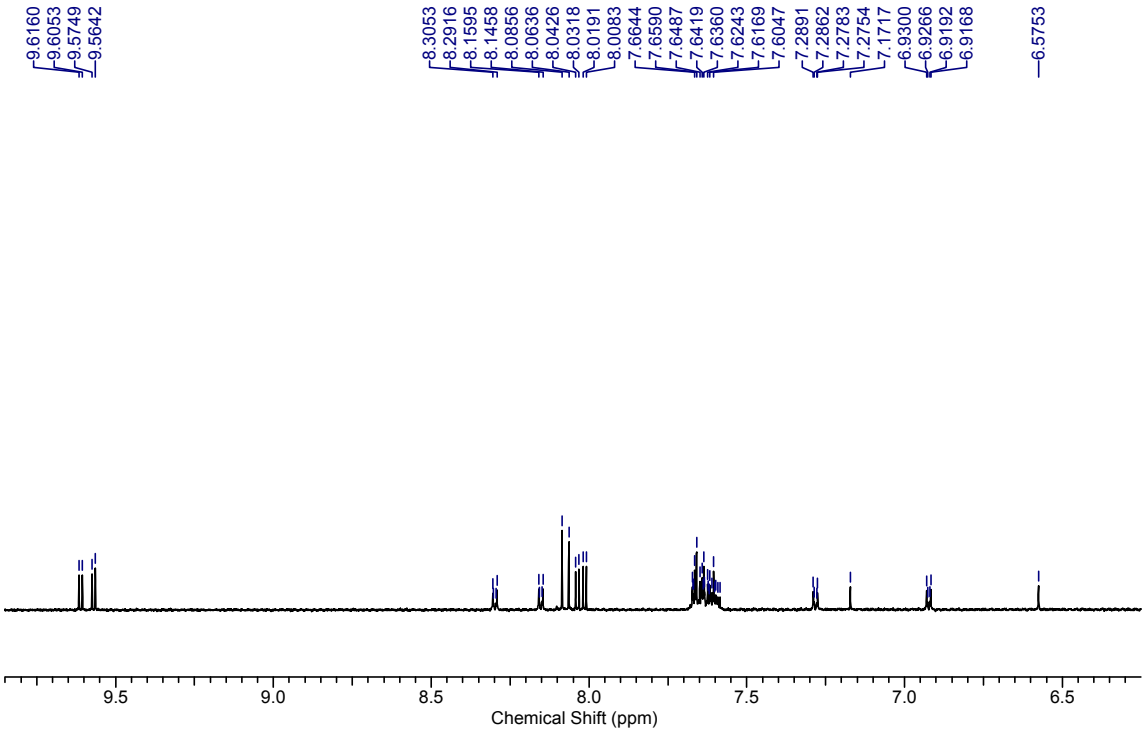


Figure S2. ^{1}H NMR spectrum of a PSS solution of [{$(ph_2phen)(CO)_3Re$}$_2$(bpe)]$^{+2}$ in CD_3CN (500 MHz).

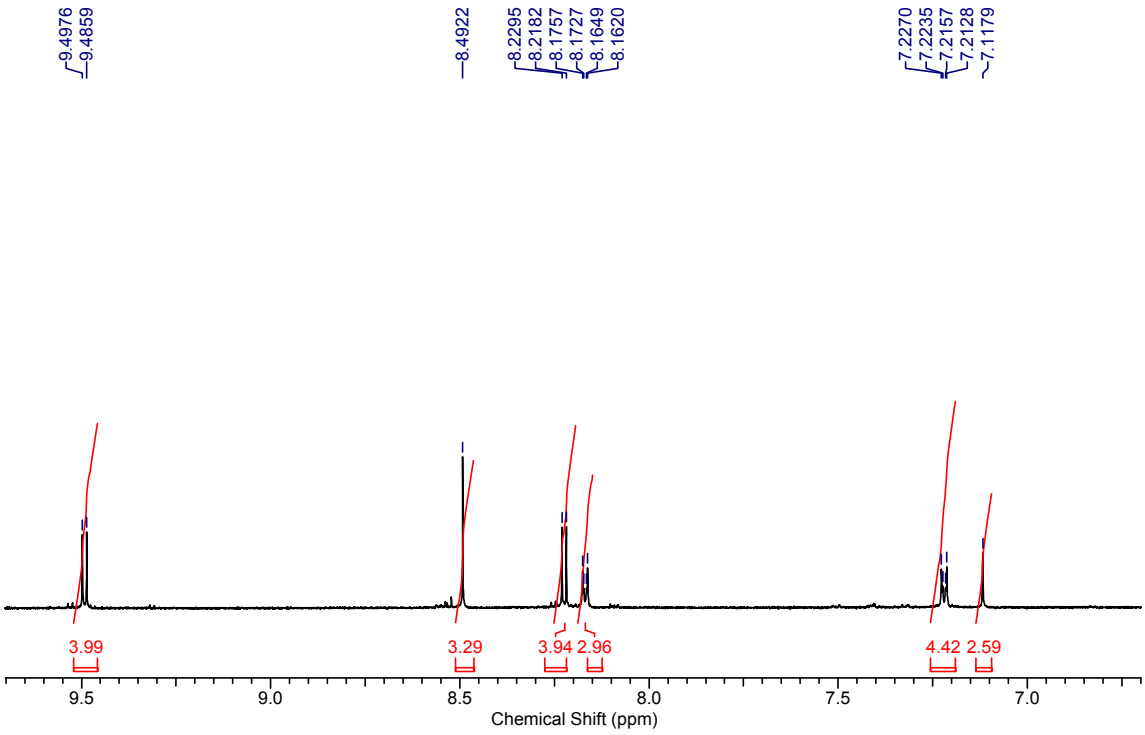


Figure S3. ^{1}H NMR spectrum of [{$(Cl_2phen)(CO)_3Re$}$_2$(*trans*-bpe)]$^{+2}$ complex in CD_3CN (500 MHz).

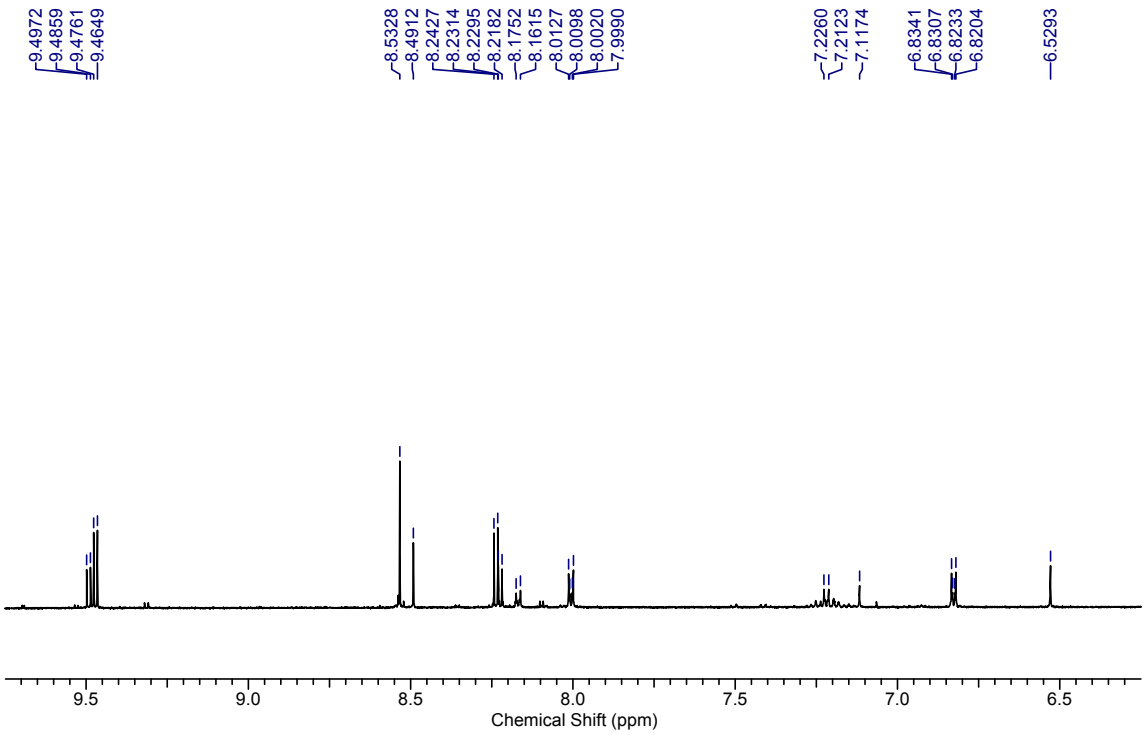
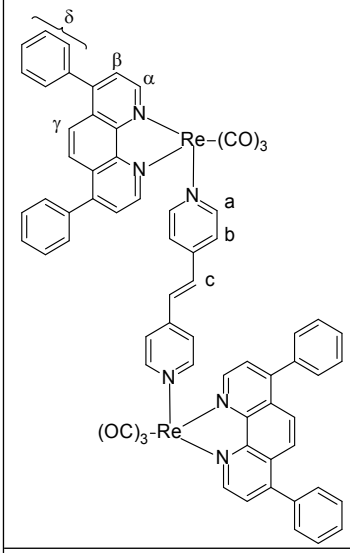
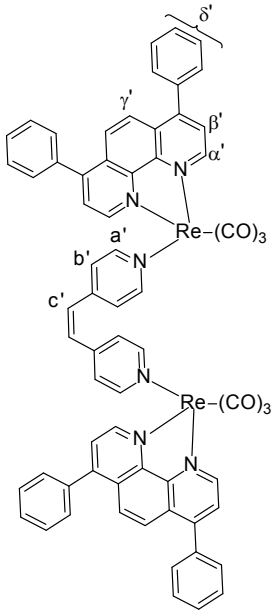
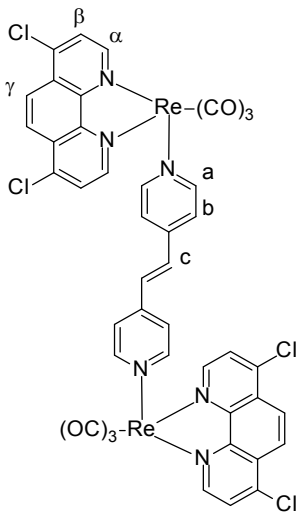
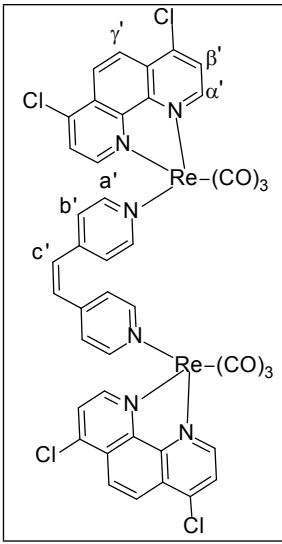


Figure S4. ^{1}H NMR spectrum of a PSS solution of $[\{(Cl_2phen)(CO)_3Re\}_2(bpe)]^{+2}$ in CD_3CN (500 MHz).

Table S1. ^{1}H NMR spectral data for [{(NN)(CO)$_3$Re}$_2$(*trans*-bpe)]$^{+2}$ and [{(NN)(CO)$_3$Re}$_2$(*cis*-bpe)]$^{+2}$ in CD_3CN (500 MHz).

Compound	Proton	δ / ppm	J / Hz
	Hα (4H, d) Hβ (4H, d) Hγ (4H, s) Hδ (20H, m) Ha (4H, dd) Hb (4H, dd) Hc (2H, s)	9.61 8.04 8.06 7.64-7.59 8.29 7.28 7.17	5.1 5.4 5.4; 2.9 5.4; 2.9
	Hα' (4H, d) Hβ' (4H, d) Hγ' (4H, s) Hδ' (20H, m) Ha' (4H, dd) Hb' (4H, dd) Hc' (2H, s)	9.57 8.01 8.08 7.67-7.58 8.15 6.92 6.57	5.4 5.4 5.4; 2.9 5.2; 2.9
	Hα (4H, d) Hβ (4H, d) Hγ (4H, s) Ha (4H, dd) Hb (4H, dd) Hc (2H, s)	9.49 8.22 8.49 8.16 7.22 7.11	5.9 5.4 5.5; 3.0 5.5; 3.2

	Hα' (4H, d) Hβ' (4H, d) Hγ' (4H, s) Ha' (4H, dd) Hb' (4H, dd) Hc' (2H, s)	9.47 8.24 8.53 8.01 6.83 6.53	5.6 5.7 5.4; 3.0 5.3; 3.1

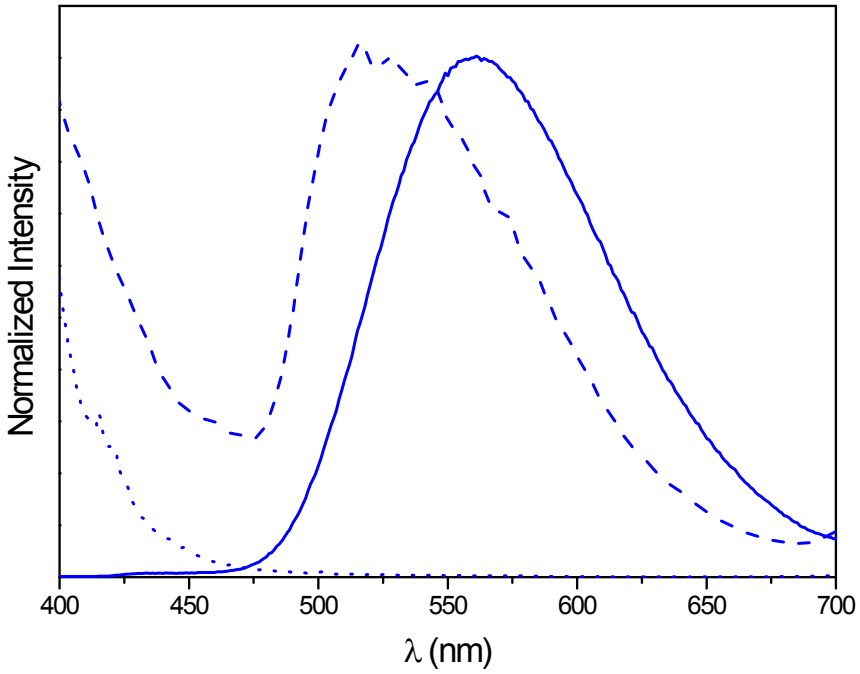


Figure S5. Emission spectra of a PSS solution of [{$(ph_2phen)(CO)_3Re$}$_2$(*cis*-bpe)]$^{+2}$ in CH_3CN at 298 K (—) and in ethanol/methanol 4:1 at 77 K (---) and of ph_2phen in ethanol/methanol 4:1 at 77 K (…).

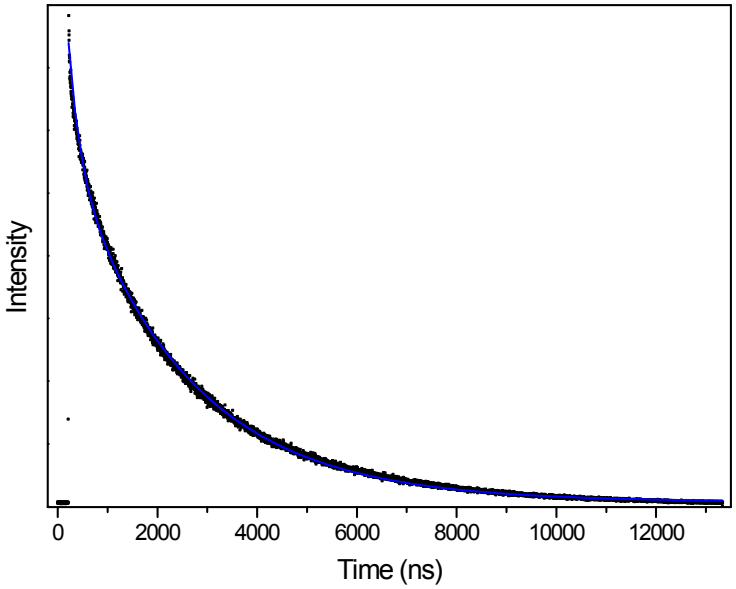


Figure S6. Time-resolved decay curve of [{(ph$_2$phen)(CO)$_3$Re}$_2$(*cis*-bpe)]$^{+2}$ probed at a maximum wavelength after 375 nm laser excitation in CH_3CN solution at room temperature.

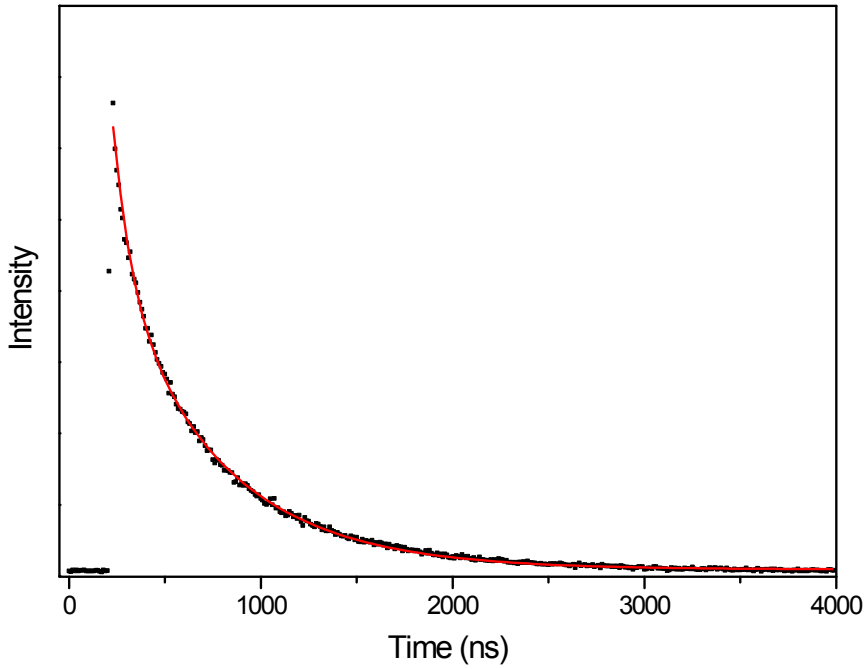


Figure S7. Time-resolved decay curve of $[\{(Cl_2phen)(CO)_3Re\}_2(cis\text{-bpe})]^{+2}$ probed at a maximum wavelength after 375 nm laser excitation in CH_3CN solution at room temperature.