Supporting Information

Synthesis and photoluminescence properties of rhenium(I) complexes based on 2,2’,6,2’-terpyridine derivatives with hole-transporting units

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**Fig. S1** Normalized absorption spectra of the ligands L1 - L6 in CH₂Cl₂ solutions at room temperature.
CH₂Cl₂ solution
ReL₁(CO)₃Cl
τ = 2.02 μs
χ² = 0.989

CH₂Cl₂ solution
ReL₂(CO)₃Cl
τ = 1.37 μs
χ² = 0.988
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**Fig. S2** Photoluminescence lifetimes of Re(I) complexes in CH$_2$Cl$_2$ solution at room temperature. The excitation wavelength is 468 nm, and the emission is monitored at emission maxima.
Solid
ReL1(CO)₃Cl
τ = 1.95 μs
χ² = 0.983

Solid
ReL2(CO)₃Cl
τ = 1.66 μs
χ² = 0.987
Solid ReL₃(CO)₃Cl
\[ \tau = 1.97 \mu s \]
\[ \chi^2 = 0.987 \]

Solid ReL₄(CO)₃Cl
\[ \tau = 1.78 \mu s \]
\[ \chi^2 = 0.987 \]
**Fig. S3** Photoluminescence lifetimes of Re(I) complexes in solid at room temperature. The excitation wavelength is 468 nm, and the emission is monitored at emission maxima.
Fig. S4 Cyclic voltammograms for forrence and ligands L1 – L6 (5 × 10^{-4} M) measured in CH\(_2\)Cl\(_2\) solutions (vs SCE) of (Bu\(_4\)N)PF\(_6\) (0.1 M) at a sweep rate of 0.1 V/s. A Pt metal and a Pt mesh were used as the working electrode and the counter electrode, respectively.
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Fig. S5 Cyclic voltammograms for complexes ReL1(CO)3Cl – ReL6(CO)3Cl (5 × 10⁻⁴ M) measured in CH₂Cl₂ solutions of (Bu₄N)PF₆ (0.1 M) at a sweep rate of 0.1 V/s. Inserted figures are the parts of the oxidation of Re(I). A Pt metal and a Pt mesh were used as the working electrode and the counter electrode, respectively.