Synthesis and characterization of ruthenium polypyridyl complexes with hydroxypyridine derivatives: Effect of protonation and ethylation at the pyridyl nitrogen

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S1
**Fig. S1** UV-visible spectrum of 1 in distilled water at 298 K.

**Fig. S2** UV-visible spectra of 1 (black line), 2 (red line), and 3 (blue line) in distilled water at 298 K.
**Fig. S3** Emission spectra of 1 with 0, 1, and 2 equivalents of 0.02 M NaOH in DMSO at 298 K.
**Fig. S4** Full NMR spectrum of 1 in C₂D₆OS.

**Fig. S5** Aromatic region of NMR spectrum of 1 in C₂D₆OS with assignments of related proton signals.
**Fig. S6** Selected NMR spectra of 1 in C$_2$D$_6$OS with addition of NaOH (0, 0.25, 0.5, 0.75, and 1 eq). Each color represents H$_A$ (red line), H$_B$ (blue line), H$_\alpha$ (green line), H$_\beta$ (light blue line), and H$_\gamma$ (purple line).
Fig. S7 Cyclic voltammograms of (a) 1, (b) 2, and (c) 3 in acetonitrile/0.1 M NBu₄PF₆ at 298 K. Scan rate: 100 mV s⁻¹. Each cycle started at 0 V towards the positive potential.
Fig. S8 Reductive differential pulse voltammograms of 1 (black line), 2 (red line), and 3 (blue line) in acetonitrile/0.1 M NBu₄PF₆ at 298 K. Scan rate: 4 mVs⁻¹.

Fig. S9 Cyclic voltammogram of 2,3ʹ-dihydroxypyridine in acetonitrile/0.1 M NBu₄PF₆ at 298 K. Scan rate: 100 mVs⁻¹. The scan started at 0 V towards the positive potential.
**Fig. S10** Full spectral overlays from the spectroelectrochemistry of $3^0$ (blue line) and $3^{1-}$ (red line) in DMSO/0.1M NBu$_4$PF$_6$ at 298 K.