Oximated Ruthenium Tris-bipyridyl Complex: Synthesis and Luminescent Response Specifically for ClO\(^{-}\) in Water Containing Multiple Ions

Supporting Information

Various Spectra

**Figure S-1.** Luminescence emission spectrum of Ru-C=N-OH (10 μM) upon addition of 20 equiv of various metal ions (F\(^{-}\), Cl\(^{-}\), Br\(^{-}\), I\(^{-}\), HCO\(_3\)^{-}, HSO\(_4\)^{-}, S\(_2\)O\(_3\)^{2-}, SO\(_3\)^{2-}, NO\(_3\)^{-}, H\(_2\)PO\(_4\)^{-}, HPO\(_4\)^{2-}, PO\(_4\)^{3-}, HPO\(_3\)^{2-}, NO\(_3\)^{-}, AcO\(^{-}\), and H\(_2\)O\(_2\)) in water.

**Figure S-2.** TOF-MS spectrum of isolated complex from the reaction of Ru-C=N–OH and ClO\(^{-}\). The peaks at m/z = 314.0179 correspond to [M-2PF\(_6\)]\(^{2+}\) (calc.314.0579).
Figure S-3. TOF-MS spectrum of Ru-COOH. The peaks at m/z = 314.0142 correspond to [M-2PF$_6$]$^{2+}$ (calc. 314.0579).

Figure S-4. $^1$H NMR spectra in d$_6$-DMSO solutions. (a) Ru-C=N-OH; (b) Isolated product from the reaction of Ru-C=N-OH with ClO$^-$. (c) Ru-CO$_2$H.
Figure S-5. IR spectrum of isolated complex from the reaction of Ru-C=N-OH and ClO⁻.

Figure S-6. IR spectrum of Ru-C=N-OH.