

**Recyclable Calix[4]arene-Lanthanoid Luminescent Hybrid Materials with
Color-Tuning and Color-Switching Properties**

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Supplementary Information

Excitation and emission spectra from solutions of **1H** and single lanthanoid salts

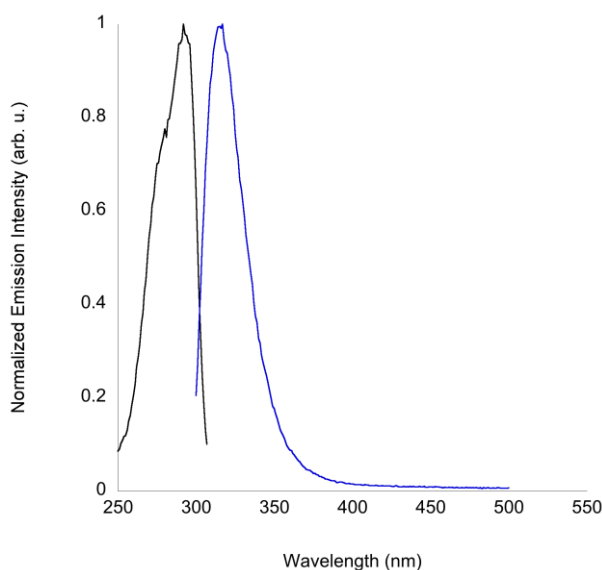


Figure S1. Excitation and emission spectra for a ca. 10^{-5} M solution of **1H** in dichloromethane/ethanol (1:1).

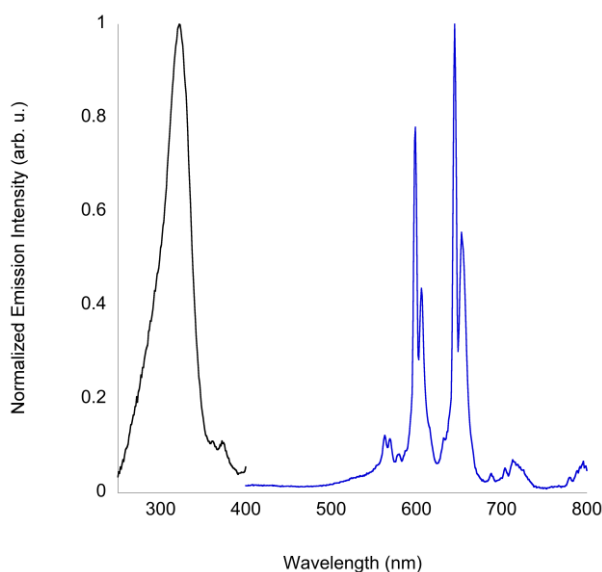


Figure S2. Excitation and emission spectra for a ca. 10^{-5} M solution of **1H** and $[\text{Sm}(\text{NO}_3)_3(\text{DMSO})_n]$ (1:1) in dichloromethane/ethanol (1:1).

The excitation and emission profiles for an equimolar amount of **1H** and $[\text{Tb}(\text{NO}_3)_3(\text{DMSO})_n]$ have already been reported (see ref. 20 in the manuscript). On the other hand, the solutions containing equimolar amounts of **1H** and $[\text{Tm}(\text{NO}_3)_3(\text{DMSO})_n]$ or **1H** and $[\text{Gd}(\text{NO}_3)_3(\text{DMSO})_n]$ display extremely weak emissions at room temperature.