Electronic Supplementary Material (ESI) for Dalton Transactions

Supplementary Information For: Heterobimetallic Lanthanide-Gold Coordination Polymers: Structure and Emissive Properties of Isomorphous $[^{n}Bu_4N]_2[Ln(NO_3)_4Au(CN)_2]$ 1-D Chains

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Infrared Spectroscopy

Table S1: Observed infrared frequency for the asymmetric and symmetric vibrational modes of ν_{CN} stretching modes in $[^nBu_4N]_2[Ln(NO_3)_4Au(CN)_2]$ (Ln = Nd, Eu, Gd, Tb) and $[^nBu_4N][Au(CN)_2]\cdot\frac{1}{2}H_2O$ compounds.

	ν_{CN} (cm^{-1})	
Complex	Asymmetric	Symmetric
$[^nBu_4N][Au(CN)_2]\cdot\frac{1}{2}H_2O$	2145	2104
Nd - **1**	2180	2150
Eu - **2**	2182	2141
Gd - **3**	2183	2153
Tb - **4**	2184	2143

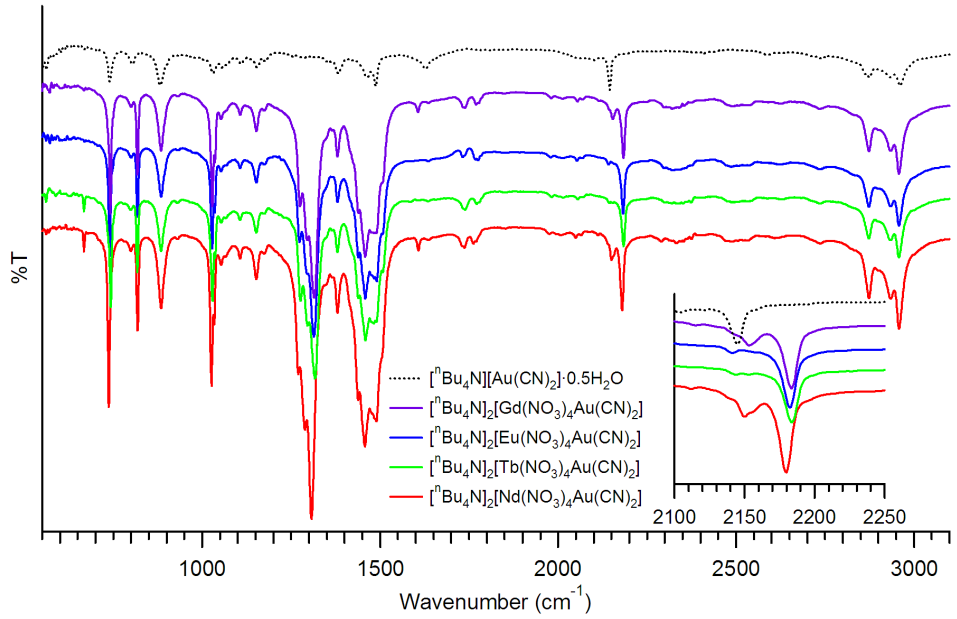

Figure S1: Infrared spectra of $[^nBu_4N]_2[Ln(NO_3)_4Au(CN)_2]$ (Ln = Nd, Eu, Gd, Tb) compounds and of $[^nBu_4N][Au(CN)_2]\cdot\frac{1}{2}H_2O$. Close-up of the ν_{CN} stretching spectral region (2100 - 2250 cm^{-1}) is shown in the inset.