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Supporting Information

Intrinsic Fluorescence–Spin Crossover Synergy in a 3D Fe(II) Hofmann-Type Framework Built from 1,6-dipyridylpyrene and $[M^{I}(CN)_2]^-$ (M^{I} = Ag, Au) bridging ligands

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Table S1. Relevant crystallographic data of **1Au**.

	300 K	**220 K**	**120 K**
Empirical formula	$C_{37}H_{20}N_6Au_2Fe$	$C_{37}H_{22.50}N_6Au_2Fe$	$C_{37}H_{24}N_6Au_2Fe$
*M*r	998.37	1000.89	1002.40
Crystal system	monoclinic		
Space group	$P2_1/c$		
a (Å)	18.4123(3)	18.2575(3)	18.1084(3)
b (Å)	13.3795(2)	13.3689(2)	13.3261(2)
c (Å)	15.9755(2)	15.6321(3)	15.2744(2)
β (°)	106.323(2)	105.192(2)	104.445(2)
V (Å^3)	3776.89(10)	3682.18(11)	3569.41(10)
Z	4		
Crystal color	yellow	orange	red
D_c (mg cm^{-3})	1.756	1.805	1.865
F (000)	1872	1882	1888
μ (Mo-K$_\alpha$) (mm^{-1})	17.599	18.052	18.623
Crystal size (mm)	0.02x0.02x0.10		
No. of total reflection	7637	7484	7257
No. of reflections [$I>2\sigma(I)$]	5688	5330	5998
R [$I>2\sigma(I)$]	0.0426	0.0501	0.0507
wR [$I>2\sigma(I)$]	0.1224	0.1291	0.1330
S	1.026	1.039	1.049

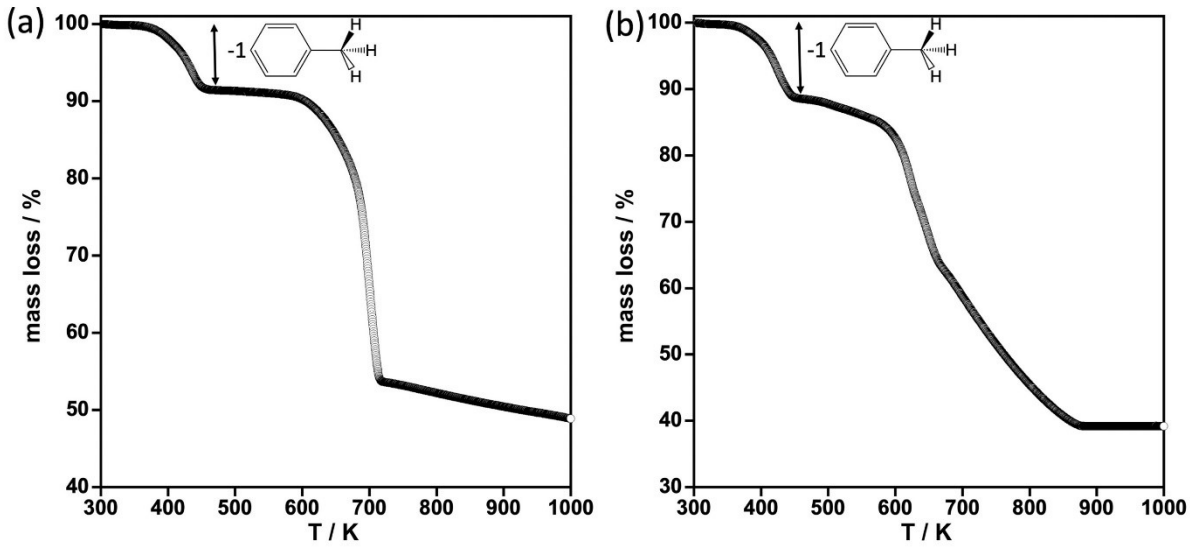

Figure S1. Thermogravimetric analysis of **1Au** (a) and **1Ag** (b).

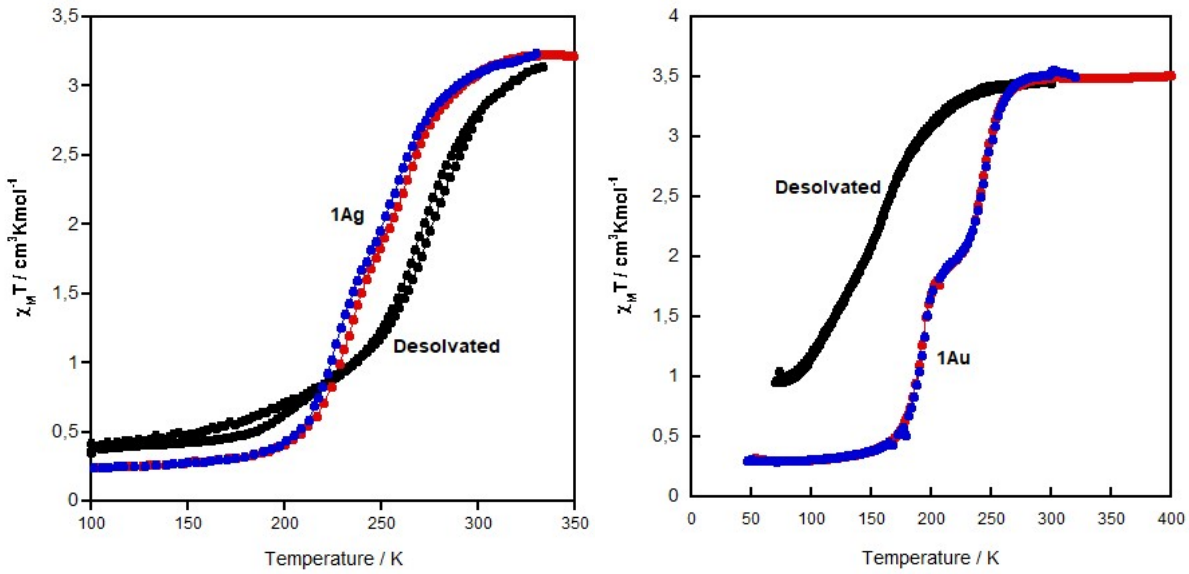

Figure S2. $\chi_M T$ vs. T plots for **1Ag** and **1Au**, before and after toluene release.

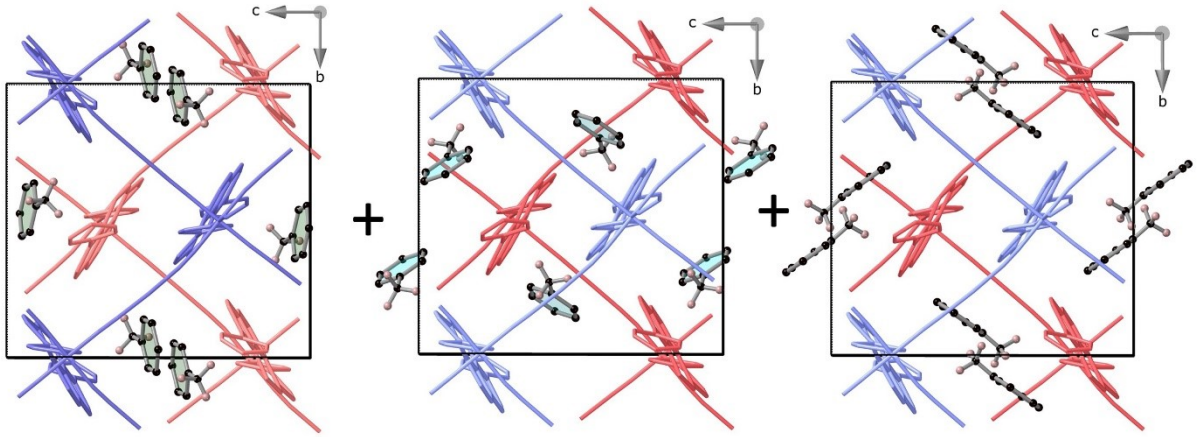

Figure S3. Positional disorder of the toluene molecule resolved in three separated snapshots.

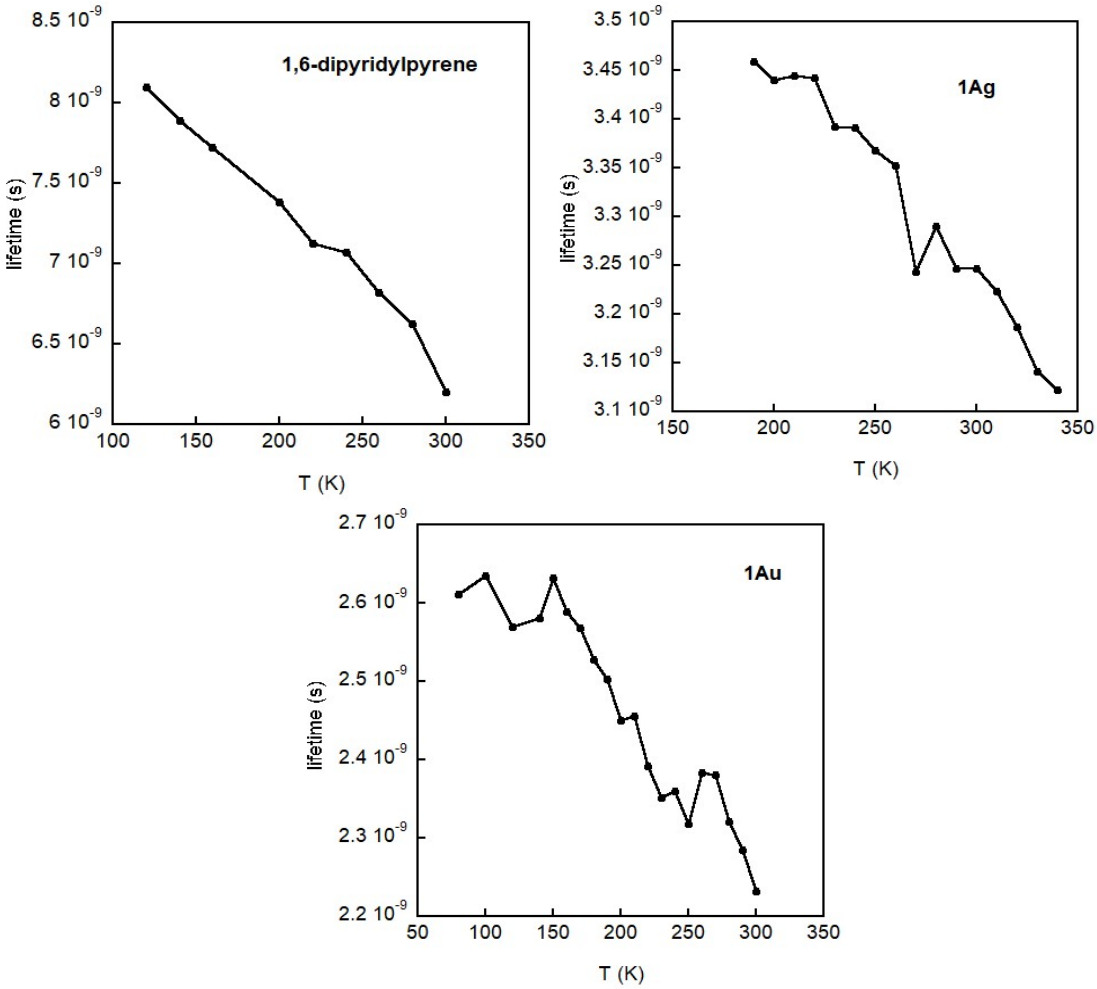

Figure S4. Intensity average lifetime as a function of temperature for the free ligand 1,6-dipuridylpyrene, and the compounds 1**Ag** and **1Au**.