

Supplementary Materials

New Branched Iron(III) Complexes in Fluorescent Environment Created by Carbazole Moieties: Synthesis and Structure, Static Magnetic and Resonance Properties

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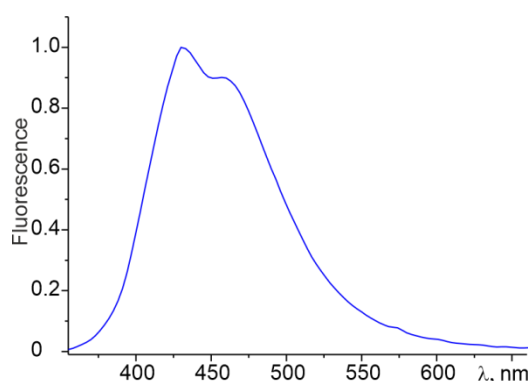
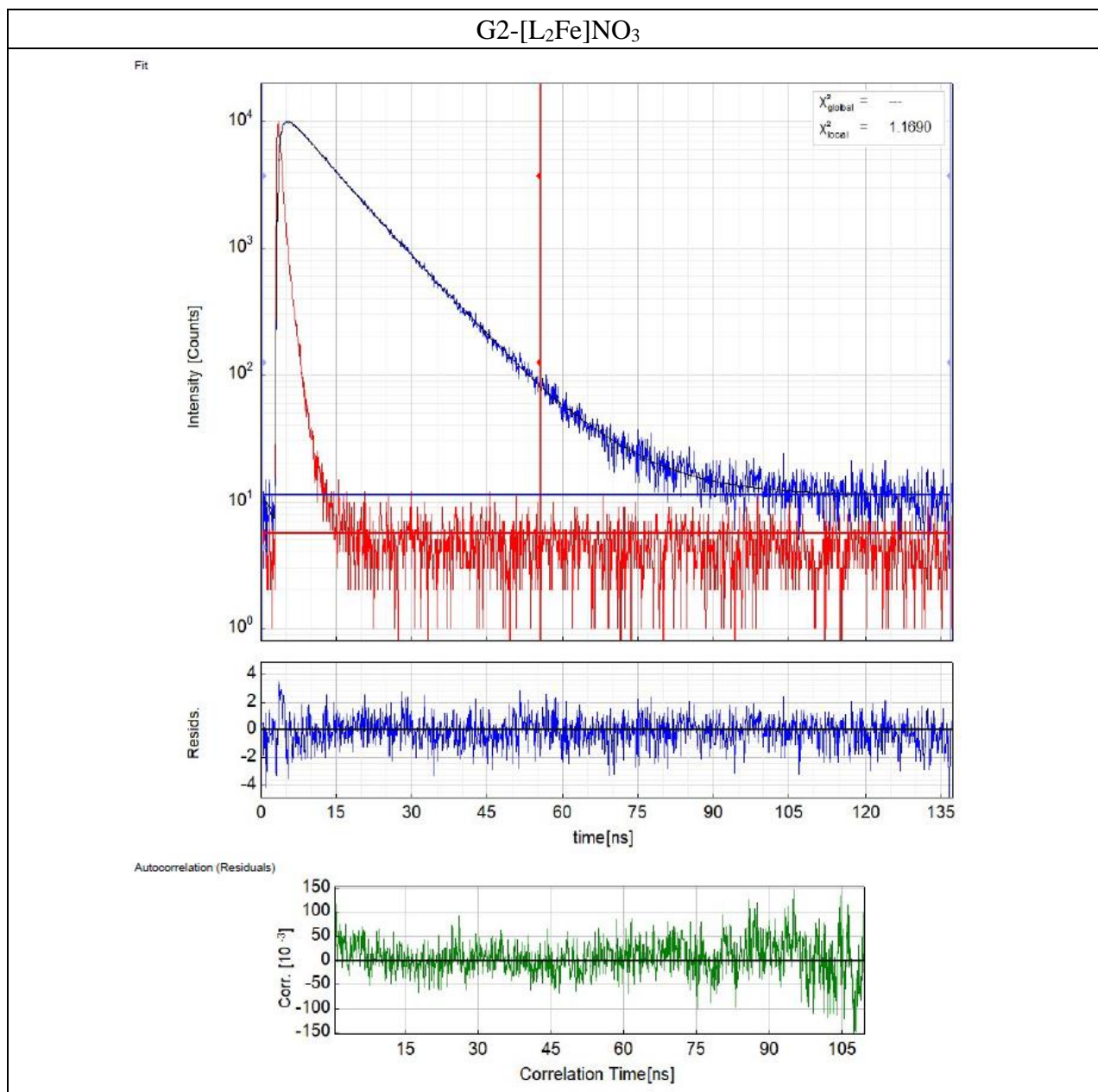


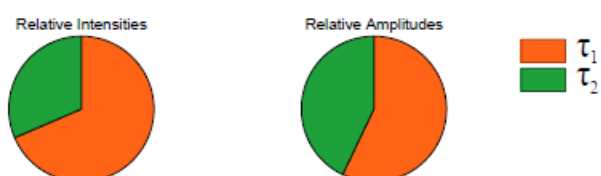
Figure S1. Fluorescence spectrum of G2-[L2Fe]PF₆ in the solid state.

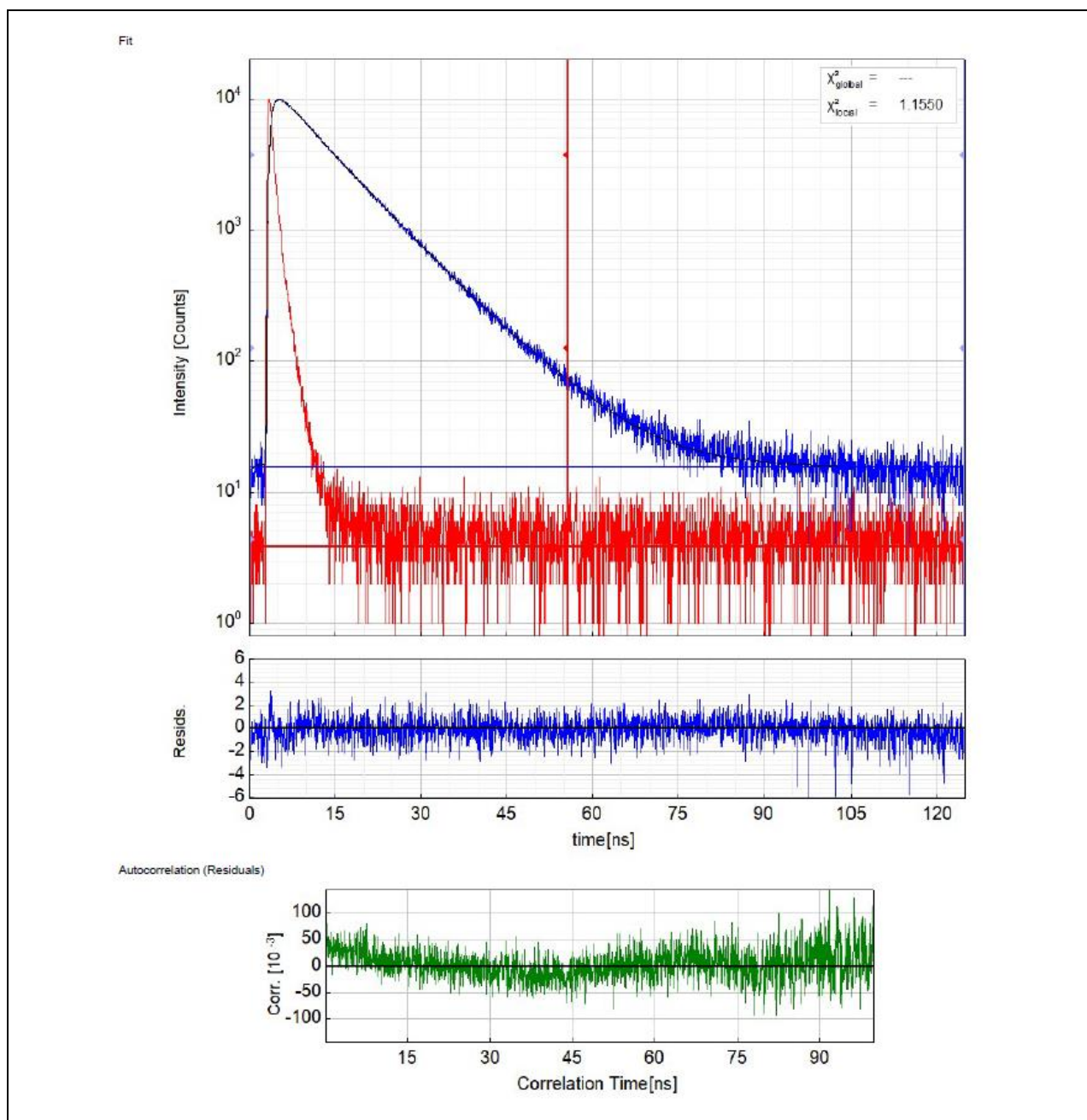
Table S1. Absorption band maxima in UV–vis spectra of complexes in CH₂Cl₂.

Complex	λ_{max1}	λ_{max2}	λ_{max3}	λ_{max4}
G2-[L ₂ Fe]NO ₃	237	297	335	346
G2-[L ₂ Fe]Cl	237	297	335	346
G2-[L ₂ Fe]PF ₆	237	297	335	346

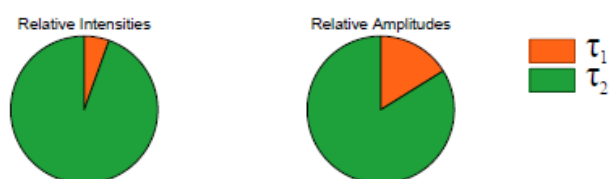
Table S2. The time-resolved fluorescence spectroscopy results for complexes in dichloromethane.

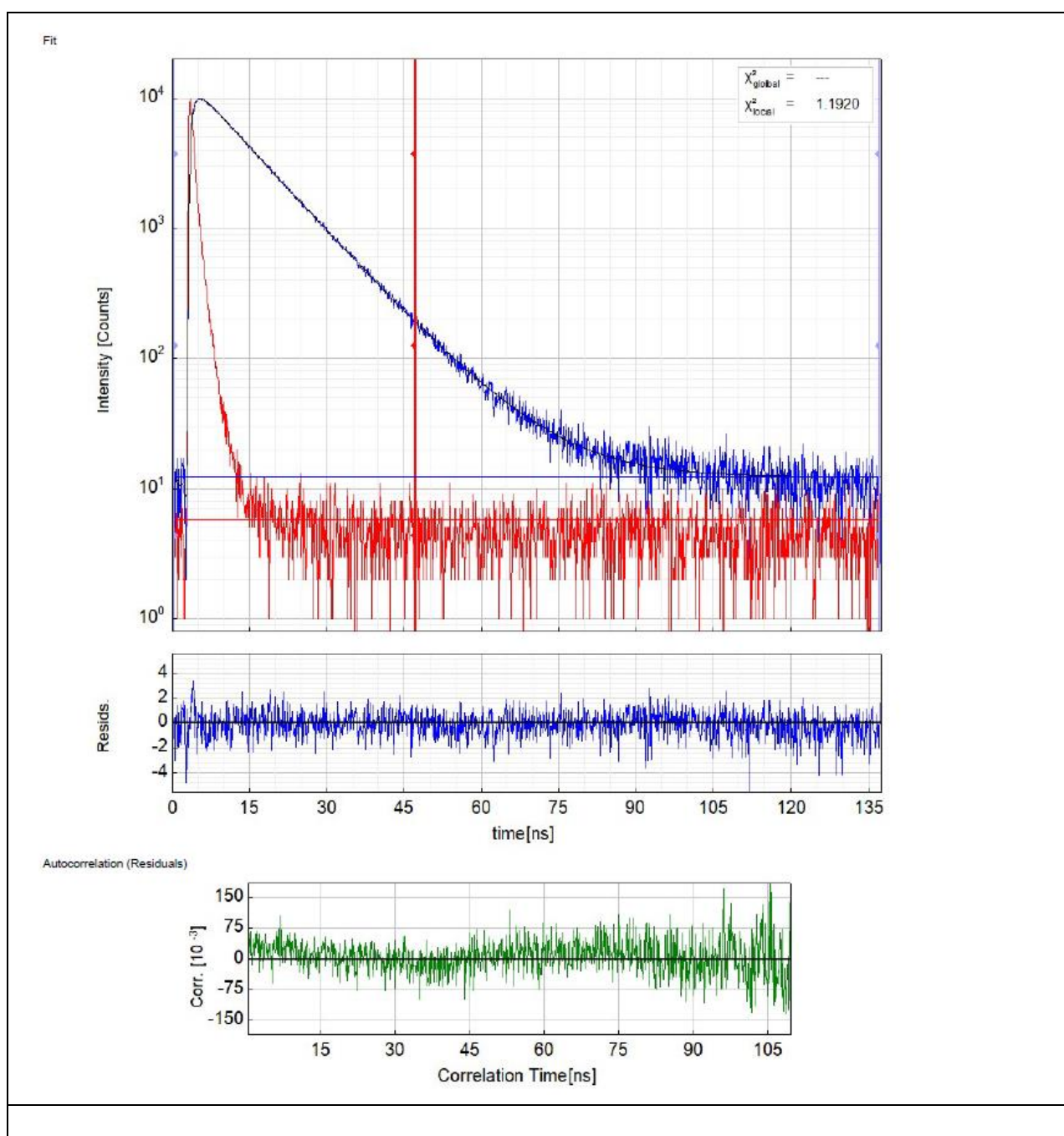
Parameter	Value	Δ	δ
A_1 [kCnts/Chnl]	7.8	± 1.8	23%
τ_1 [ns]	11.18	± 0.53	4.7%
I_1 [kCnts]	870	± 180	17%
A_2 [kCnts/Chnl]	5.9	± 1.8	30%
τ_2 [ns]	6.83	± 0.63	9.2%
I_2 [kCnts]	400	± 180	39%
Bkg _{Dec} [kCnts]	0.0114	± 0.0003	2.0%
Bkg _{IRF} [Cnts/Chnl]	5.59	± 0.34	5.9%
Shift _{IRF} [ps]	-9.9	± 2.8	28%
τ_{avint} [ns]	9.806	± 0.051	0.5%

G2-[L₂Fe]Cl



Parameter	Value	Δ	δ
A_1 [kCnts/Chnl]	2.26	± 0.12	5.0%
τ_1 [ns]	2.85	± 0.54	19%
I_1 [kCnts]	129	± 26	20%
A_2 [kCnts/Chnl]	11.71	± 0.21	1.8%
τ_2 [ns]	9.441	± 0.072	0.8%
I_2 [kCnts]	2 210	± 24	1.1%
Bkg _{Dec} [kCnts]	0.0155	± 0.0002	0.6%
Bkg _{IRF} [Cnts/Chnl]	3.84	± 0.21	5.4%
Shift _{IRF} [ps]	-36.7	± 2.7	7.2%
τ_{Avint} [ns]	9.079	± 0.025	0.3%

G2-[L₂Fe]PF₆



Parameter	Value	Δ	δ
A_1 [kCnts/Chnl]	2.77	± 0.86	31%
τ_1 [ns]	6.49	± 0.91	14%
I_1 [kCnts]	180	± 89	49%
A_2 [kCnts/Chnl]	10.45	± 0.93	8.9%
τ_2 [ns]	10.69	± 0.16	1.4%
I_2 [kCnts]	1 117	± 94	8.4%
Bkgroed[kCnts]	0.0124	± 0.0002	1.4%
Bkgnois[Cnts/Chnl]	5.71	± 0.33	5.7%
Shift _{ref} [ps]	-10.3	± 1.8	17%
τ_{Aver} [ns]	10.109	± 0.023	0.2%

Relative Intensities



Relative Amplitudes

