Electronic Supplementary Information (ESI) for

" ***Chiroptical and magnetic properties of star-shaped Fe^{III}_4 complexes from chiral Schiff bases. Structural and magnetic correlations based on continuous shape measurements*** "

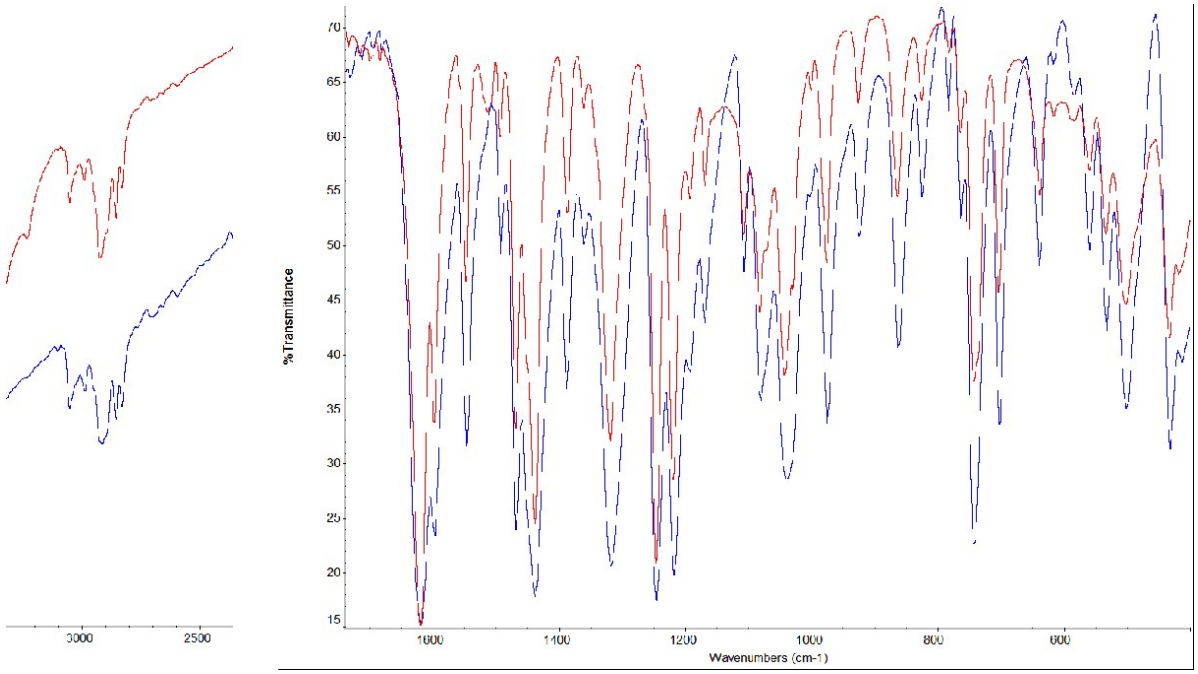

Fig S1. IR spectra for the enantiomers of **1*R*** (red) and **1*S*** (blue).

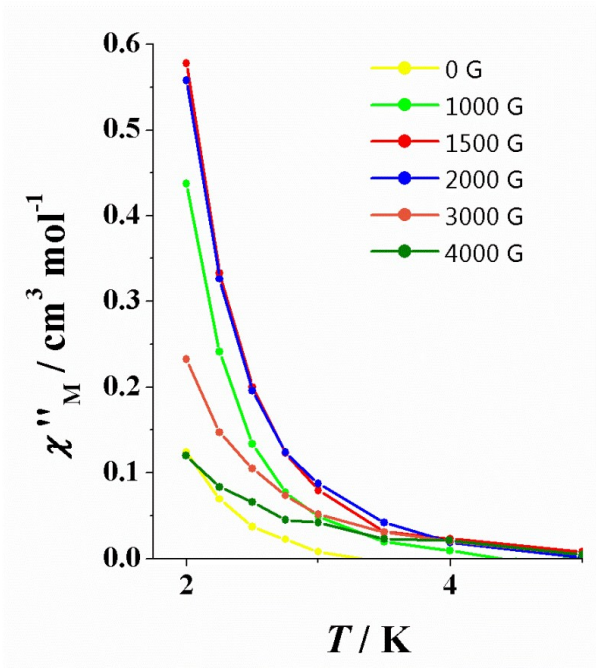

Fig S2. AC response of the under different static fields and at the 1000 Hz frequency for complex **1*R***. From these data the 1500 G field was selected for the alternate current measurements.

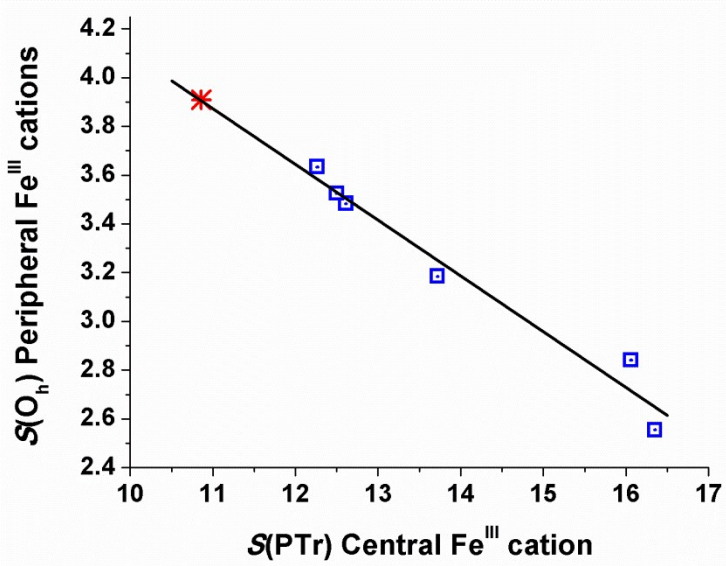

Fig S3. *S*(PTr) for the central Fe^{III} cations versus *S*(O*h*) for the peripheral ones, showing the correspondence between both distortions for the reported complexes type **VI**. (Red star shows the values for complex **1*S*** that shows the larger distortion from the regular polyhedra.

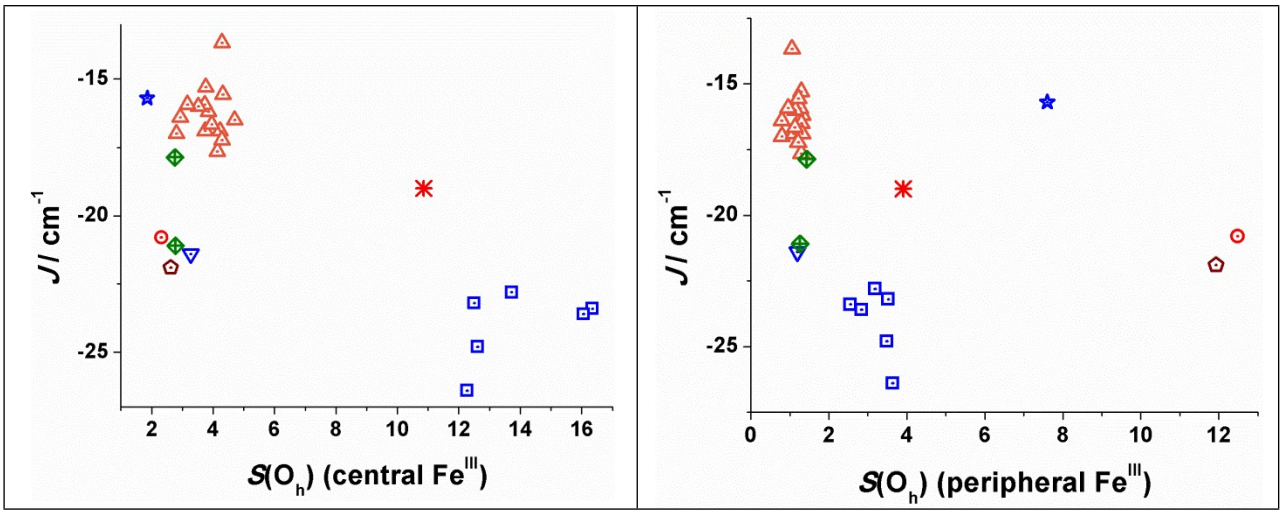

Fig S4 *S*(O*h*) vs. *J* for the all the reported Fe_4 complexes. Any direct correlation can be extracted between the distortion of the central or peripheral environments and the magnitude of the interaction. However, each type of complexes shows a range of characteristic values.

Table S1. Selected bond distances (Å) and angles (°) for the core of compound **2*RS***.

Fe1-O1	1.901(2)	Fe1-O5	1.931(2)
Fe1-O2	1.963(2)	Fe1-N1	2.137(2)
Fe1-O4	2.206(2)	Fe1-N2	2.128(2)
O1-Fe1-O2	161.22(7)	O4-Fe1-O5	154.56(7)
O1-Fe1-O4	95.76(7)	O4-Fe1-N1	92.23(7)
O1-Fe1-O5	99.53(8)	O4-Fe1-N2	73.90(7)
O1-Fe1-N1	78.31(8)	O5-Fe1-N1	110.66(8)
O1-Fe1-N2	91.09(8)	O5-Fe1-N2	85.55(8)
O2-Fe1-O4	83.07(7)	N1-Fe1-N2	161.75(8)
O2-Fe1-O5	88.70(7)		
O2-Fe1-N1	82.99(8)		
O2-Fe1-N2	106.45(8)		

Table S2. Fit values for the τ_0 and U_{eff} parameters from the ln(χ''/χ') vs. 1/*T* plots.

Frequency (Hz)	τ_0	U_{eff}
1488.1	7.02 E-07	10.22
1320.4	5.61 E-07	10.68
1143.3	4.77 E-07	11.03
997.3	5.06 E-07	10.96
852.3	5.24 E-07	10.94
679.3	5.19 E-07	11.02
509.5	6.02 E-07	10.81
349.8	8.29 E-07	10.31

Table S3 *S*(O*h*) and *S*(PTr) values calculated for the central and peripheral cation of the reported Fe_4 star-shaped systems.

		Central Fe^{III}		Peripheral Fe^{III}						Peripheral Fe^{III}	
CCDC	**Type**	**S(O*h*)**	***S*(PTr)**	**S_1(O*h*)**	***S_1*(PTr)**	**S_2(O*h*)**	***S_2*(PTr)**	**S_3(O*h*)**	***S_3*(PTr)**	**Mean *S*(O*h*)**	**Mean *S*(TPr)**
AGAQIJ	**I**	3.849	5.630	1.263	10.096	1.274	10.006	1.445	9.557	1.327	9.886
DOPKAV	**I**	3.114	6.488	1.120	10.559	0.868	11.381	0.696	12.199	0.895	11.380
DUFNUO	**I**	2.809	7.149	0.991	11.613	0.601	13.051			0.796	12.332
DUFPAW	**I**	2.936	6.860	0.958	11.876	0.623	12.875			0.790	12.375
DUPSAK	**I**	3.727	5.658	1.382	10.119	1.149	10.358			1.265	10.239
ICOCIN	**I**	3.767	5.619	1.443	10.081	1.130	10.430			1.287	10.255
ITAKUJ	**I**	4.701	4.676	1.295	10.102					1.295	10.102
KAXGUN	**I**	3.746	5.644	1.141	10.627	1.061	10.632			1.101	10.630
NIPJEC	**I**	4.228	5.161	1.346	9.674	1.286	10.163			1.316	9.919
TACFUA	**I**	4.292	4.990	1.005	10.822	1.105	10.634			1.055	10.728
TACGAH	**I**	3.957	5.396	1.380	9.613	0.873	11.646			1.127	10.629
VOBXUG	**I**	3.520	5.983	1.226	10.391	1.050	10.768			1.138	10.580
XUBVUM	**I**	4.140	5.254	1.576	9.171	1.093	10.725	1.207	10.210	1.292	10.036
XUBWAT	**I**	4.294	5.043	1.395	9.577	1.033	11.023			1.214	10.300
XUBWEX	**I**	4.317	5.026	1.405	9.581	1.036	11.026			1.220	10.304
XUBWIB	**I**	3.167	6.414	0.921	11.156	0.992	11.060			0.956	11.108
ICOCOT	**II**	3.277	7.523	1.193	11.619					1.193	11.619
DEKPAK	**III**	2.780	8.687	1.413	10.391	1.113	12.439			1.263	11.415
GANWEA	**III**	2.766	8.882	1.630	9.762	1.229	11.867			1.430	10.814
ABOKIL	**IV**	2.449	9.947	11.733	3.734	10.817	4.824			11.275	4.279
ABOLEI	**IV**	2.400	9.858	12.439	3.632	12.606	3.094			12.522	3.363
MEMKAR	**IV**	2.318	10.452	14.082	3.413	11.412	3.981	11.953	3.190	12.482	3.528
SAGBOU	**IV**	2.654	9.572	13.013	3.816	11.868	3.911	11.790	4.008	12.224	3.912
CUHJEW	**V**	1.859	12.764	5.124	5.882	9.085	2.769	8.593	2.919	7.601	3.857
TACHIR	**V**	1.792	13.075	6.953	4.008	6.617	4.035	8.570	3.298	7.380	3.780
JORWAQ	**VI**	16.350	0.466	2.554	9.721					2.554	9.721
UVIPUL	**VI**	16.059	0.550	2.800	9.166	3.114	9.172	2.608	9.559	2.841	9.299
XOKDEI	**VI**	12.611	0.975	3.444	8.048	3.725	7.148	3.283	8.419	3.484	7.872
XOKDIM	**VI**	12.502	0.987	3.913	6.941	3.262	8.389	3.401	8.032	3.525	7.787
XOKDOS	**VI**	12.266	1.094	3.668	7.857	4.273	7.018	2.961	8.416	3.634	7.763
XOKQAR	**VI**	13.718	0.790	3.332	8.486	3.087	8.528	3.134	8.819	3.184	8.611
1*S*	**VI**	10.861	1.618	4.082	7.147	2.421	9.530	5.225	6.318	3.909	7.665
AHOTEX	**VII**	2.624	10.588	11.628	6.205	11.684	6.228	12.476	6.001	11.929	6.144
DAMREQ	**VIII**	0.843	15.123	3.305	6.029	2.844	6.771			3.074	6.400
GAGREM	**VIII**	5.888	3.855	1.284	13.660	1.270	13.577			1.277	13.619

LEBRIU	**VIII**	3.234	8.247	3.078	7.170	PyQ*	PyQ*	3.078	7.170

* Square pyramidal environment.