

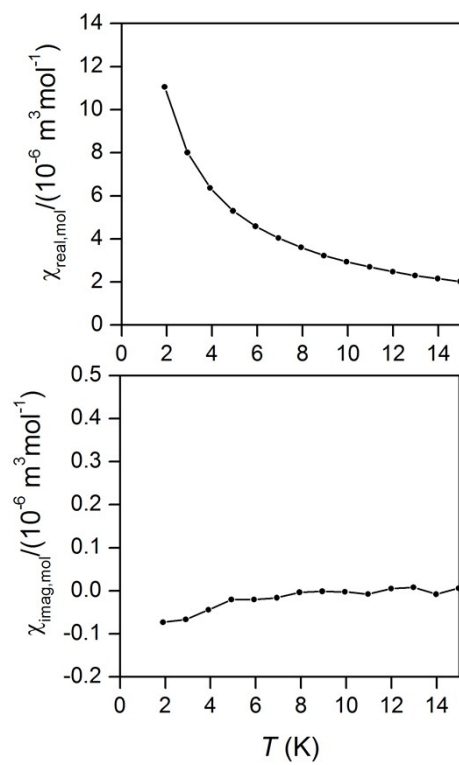
Electronic Supplementary Information (ESI)

Field-induced slow relaxation of magnetization in dinuclear and trinuclear Co^{III}...Mn^{III} complexes

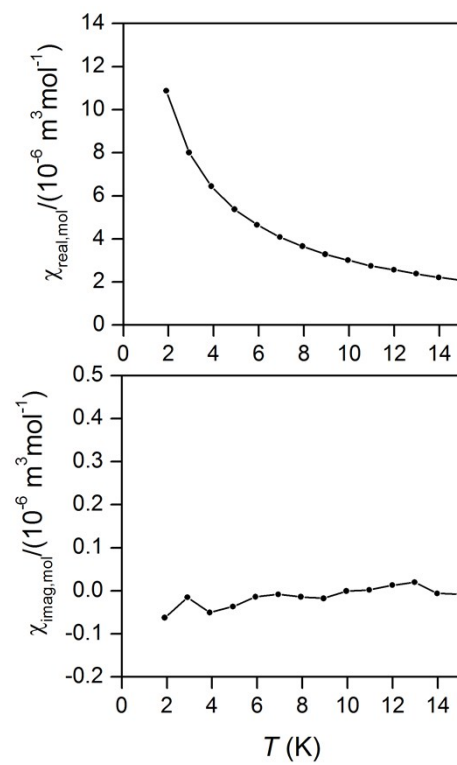
Ivan Nemec,^a Radovan Herchel,^a Zdeněk Trávníček*^a, and Tomáš Šilha ^a

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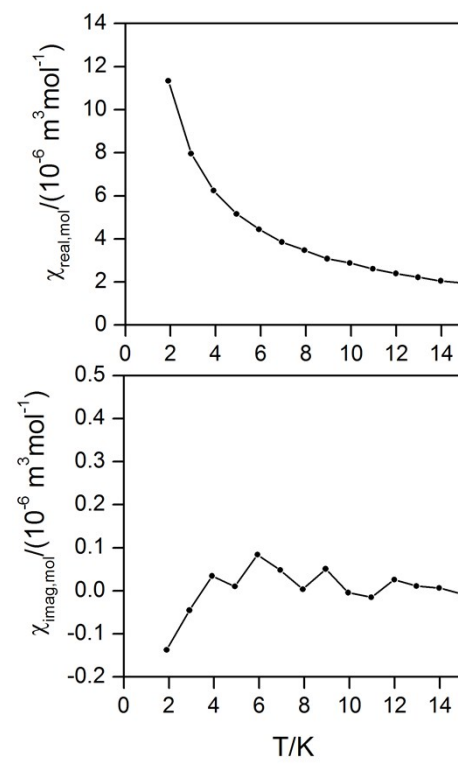
Fig. S1 AC susceptibility data for 1 – 3 measured in zero static magnetic field ($B_{DC} = 0$ T) and with AC frequency equal to 1000 Hz.	2
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(1)

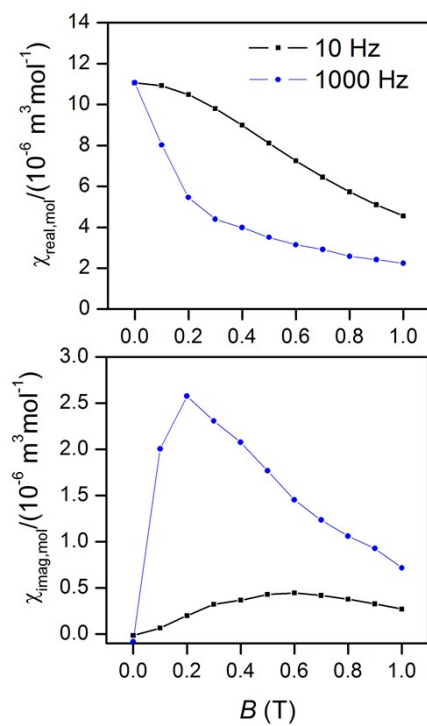


(2)

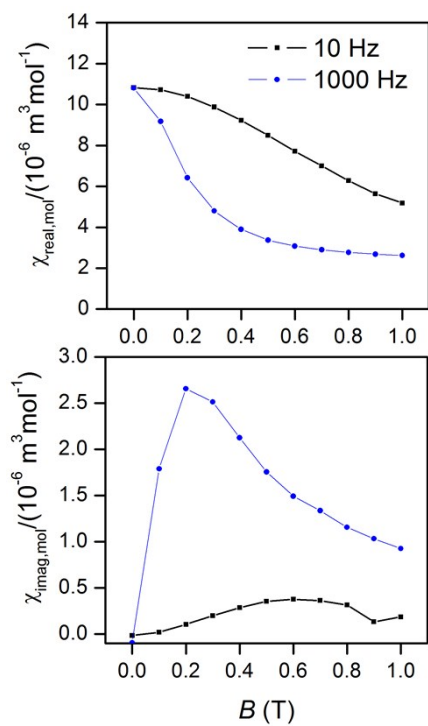


(3)

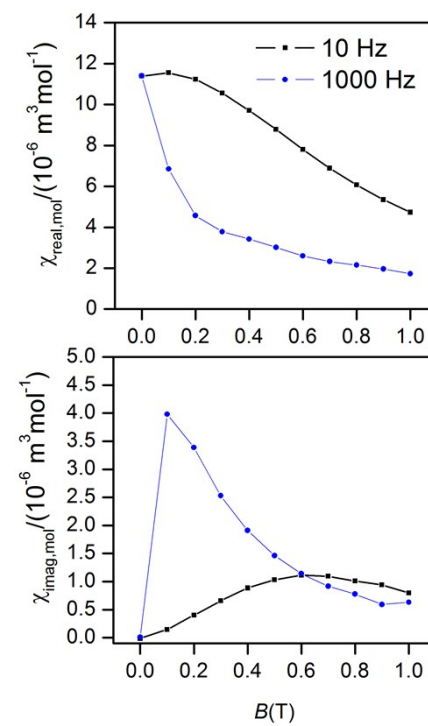
Fig. S1 AC susceptibility data for **1** – **3** measured in zero static magnetic field ($B_{\text{DC}} = 0$ T) and with AC frequency equal to 1000 Hz.



(1)



(2)



(3)

Fig. S2 AC susceptibility data for **1** – **3** measured in non-zero static magnetic field ($B_{\text{DC}} = 0 - 1 \text{ T}$) at $T = 1.9 \text{ K}$ and with AC frequency equal to 10 and 1000 Hz.

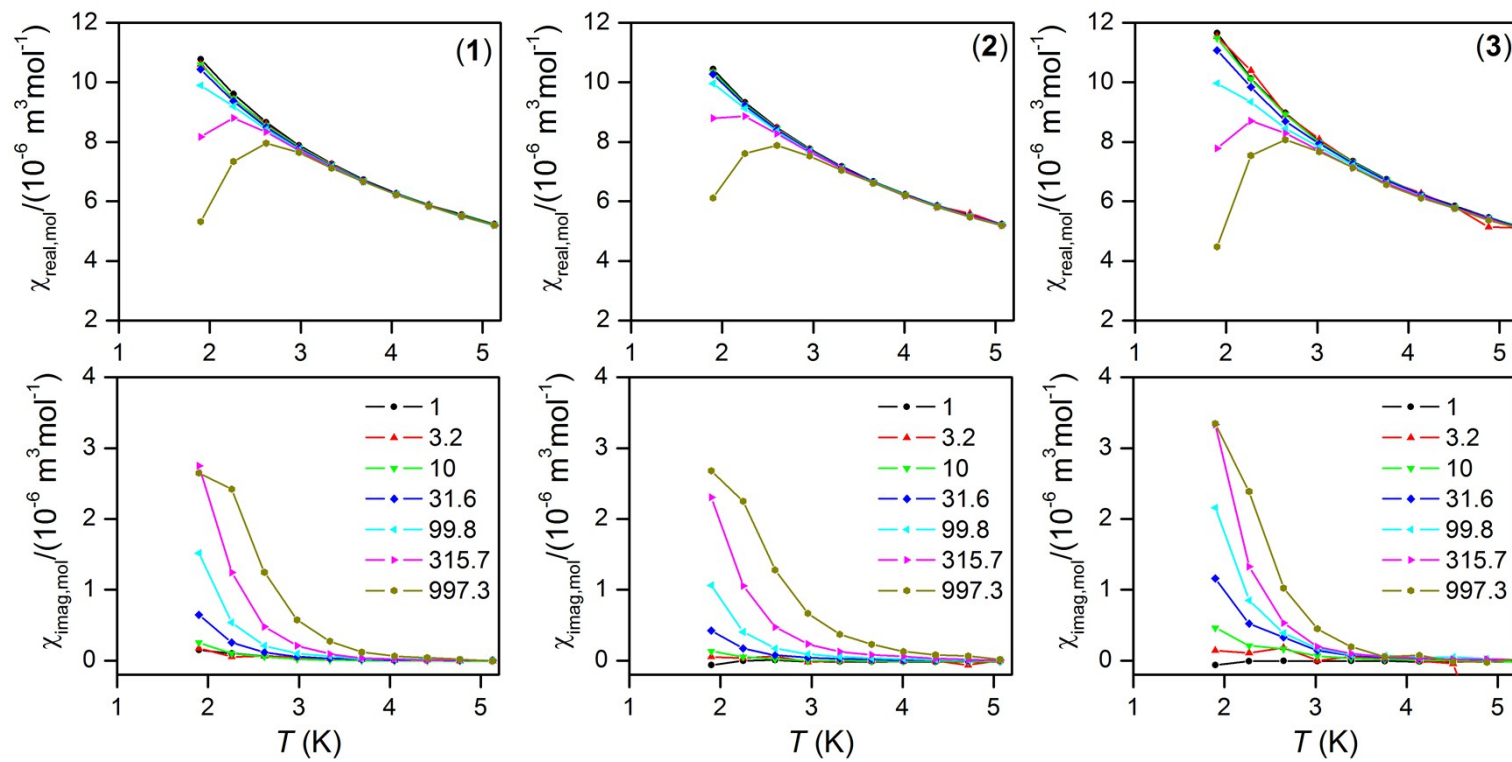


Fig. S3 AC susceptibility data for **1 – 3** measured in non-zero static magnetic field ($B_{DC} = 0.2$ T).

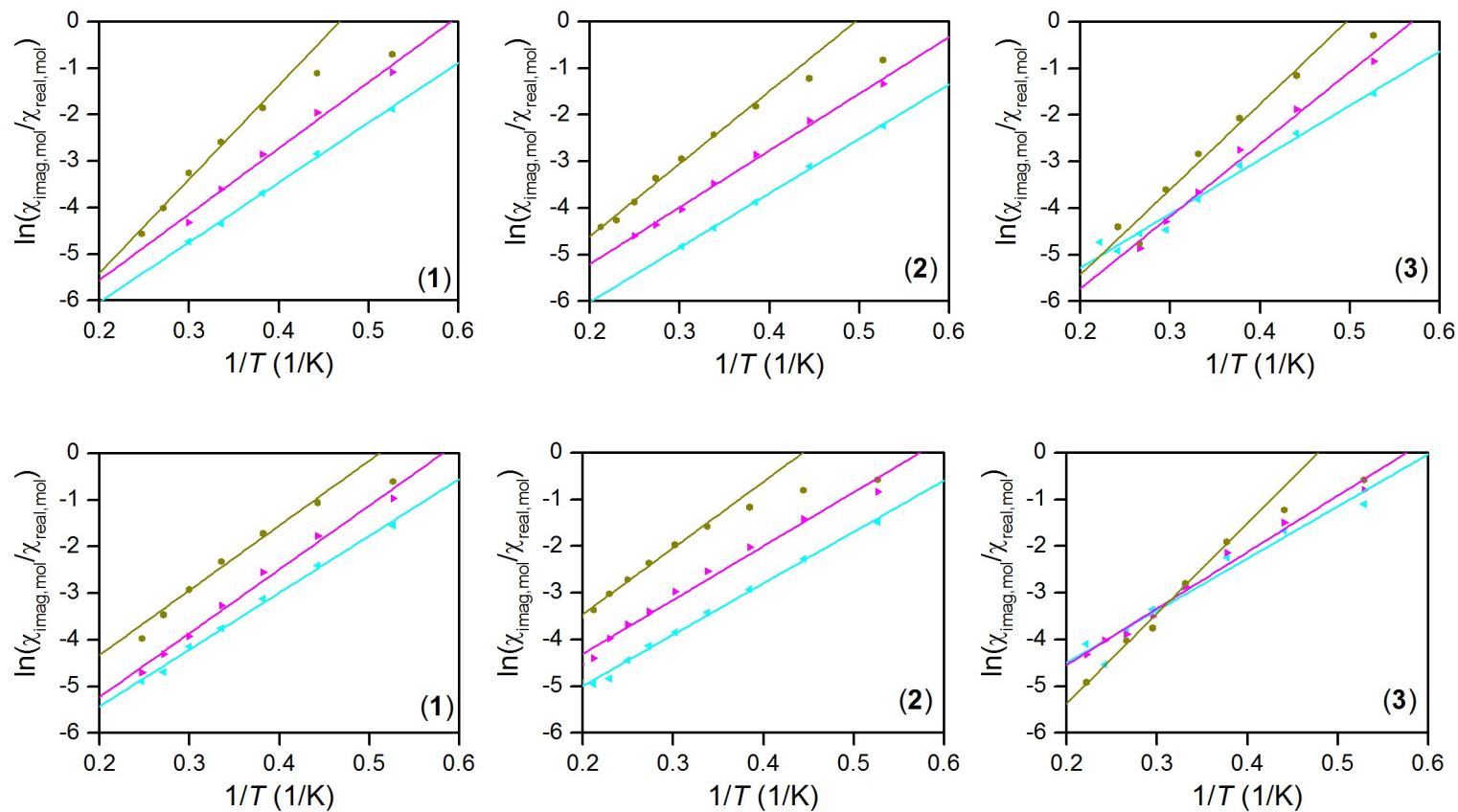


Fig. S4 The analysis of AC susceptibility data for **1** – **3** measured in two different non-zero static magnetic fields ($B_{DC} = 0.2$ T, up, $B_{DC} = 0.4$ T, down). Note: only data fulfilling $\ln(\chi_{imag}/\chi_{real}) > -5$ relationship were included in linear fit, because the data with lower ratio can be affected by large experimental error.

Table S1. Parameters of τ_0 and U for **1** – **3** derived according to eq.4 in the main text.

Compound	B_{DC}/T	f/Hz	$\tau_0/10^{-7}s$	U/K
1	0.2	99.8	2.92	12.9
		315.7	1.14	14.2
		997.3	0.125	20.2
	0.4	99.8	6.14	12.2
		315.7	1.75	13.7
		997.3	1.31	13.9
2	0.2	99.8	3.77	11.7
		315.7	2.43	12.2
		997.3	0.711	15.6
	0.4	99.8	12.0	11.0
		315.7	6.75	11.5
		997.3	2.94	14.2
3	0.2	99.8	7.96	11.6
		315.7	0.743	15.5
		997.3	0.180	18.3
	0.4	99.8	19.2	11.1
		315.7	4.79	12.1
		997.3	0.156	19.3

Table S2 Energy levels (cm⁻¹) of ligand field multiplets in zero magnetic field derived from CASSCF/NEVPT2 calculations for **1 – 2** and truncated molecular fragments **1'–3'**.

	1	2	1'	2'	3'
0:	0.0000	0.0000	0.0000	0.0000	0.0000
1:	0.0402	0.0313	0.0415	0.0328	0.0553
2:	9.4073	8.8765	9.7989	9.3079	10.3016
3:	10.1063	9.3220	10.5098	9.7872	11.2522
4:	13.0120	12.1307	13.5418	12.7287	14.3769
5:	11659.3251	11443.0967	11146.7462	11005.4377	10749.1728
6:	11679.5611	11462.7317	11168.0515	11026.0082	10771.4487
7:	11684.6829	11466.5911	11175.5887	11031.5624	10784.4090
8:	13206.7113	13086.8579	12507.4583	12493.2510	11612.7598
9:	13213.0561	13091.3130	12518.5701	12501.2114	11629.4229
10:	13237.2199	13113.7979	12545.1472	12525.4379	11646.7911
11:	14084.8469	14159.8030	13332.0803	13456.6547	13442.0162
12:	14098.0025	14168.6254	13349.9114	13470.7835	13455.8135
13:	14098.8736	14170.1722	13356.8125	13472.5452	13460.5814
14:	15413.8199	15883.1003	14148.6002	14620.0981	14585.2417
15:	15413.9560	15883.1736	14148.9151	14620.2686	14585.3092
16:	15454.8164	15913.6612	14216.0049	14668.3133	14633.4474
17:	15456.5367	15914.0642	14220.3650	14670.9158	14635.1191
18:	15468.9969	15923.8366	14239.1383	14685.1983	14649.7733
19:	20928.0110	20829.6617	20974.1253	20876.2700	20700.3041
20:	20943.5378	20848.1721	21002.4237	20909.5607	21142.6034
21:	20957.0891	20860.3190	21017.2427	20921.8734	21164.9436
22:	21980.8618	21981.6825	21751.5253	21608.2080	21233.7821
23:	22041.6969	22094.2753	21943.4659	21991.5030	22050.2255
24:	22119.5571	22205.4274	22061.0024	22126.6506	22176.9899
25:	22387.0101	22249.0592	22089.5913	22159.0065	22189.9461
26:	22594.6431	22627.9828	22511.3107	22552.8172	22463.1093
27:	22716.2200	22736.2744	22647.3005	22641.5983	22702.0565
28:	22735.8550	22749.4687	22683.7893	22695.1456	22932.9170
29:	23320.1368	23380.7080	23030.8870	23013.5641	22945.5948
30:	23372.4041	23394.3842	23196.0275	23256.5763	23116.8205

31:	23425.9860	23424.5547	23312.6559	23406.9346	23374.2233
32:	23443.3103	23484.4871	23352.0467	23435.7741	23446.2262
33:	23509.7400	23527.3032	23359.1900	23460.5046	23485.3874
34:	23534.3924	23581.7756	23552.9773	23465.9100	23713.7052
35:	23578.9315	23699.2172	23567.9762	23503.6929	23729.1437
36:	24164.1491	23861.0837	23570.5693	23519.5925	23730.7522
37:	24173.9697	24543.9758	23755.9410	24106.7122	23978.0361
38:	24177.6747	24565.1415	23762.6288	24117.2166	23985.5552
39:	24212.5746	24573.7036	23770.2195	24119.2928	23989.3633
40:	24214.9870	24620.6488	23795.6486	24153.2493	24019.2244
41:	24261.0568	24627.1408	23797.0104	24154.0563	24020.8835
42:	24642.6717	24627.3218	24470.4450	24397.3618	24277.3183
43:	25329.5876	25682.1086	24832.6741	25270.2336	25415.8388
44:	25339.9039	25701.2696	24835.2055	25276.3711	25895.6581
45:	25364.2061	25713.8084	24868.0101	25303.3404	25915.3493
46:	25415.0591	25956.6695	24883.9134	25350.4540	25924.2659
47:	25416.3905	25959.8820	24890.6371	25352.1465	26262.9207
48:	25904.8127	26034.5588	25374.3197	25476.6013	26265.4276
49:	25936.4748	26094.2488	25914.5618	25910.0192	26376.8345
50:	25966.8658	26118.1715	25923.5318	25918.5552	26410.6362
51:	26016.1551	26141.8946	25942.5523	25946.3973	26429.2309
52:	27378.5860	28081.7046	26707.4504	27340.0431	27483.2445
53:	27388.5047	28090.8821	26719.8349	27350.9610	27496.5578
54:	27394.0486	28095.1507	26726.5185	27354.3575	27498.6242
55:	27428.6274	28126.6420	26768.9137	27390.2146	27540.0901
56:	27429.0810	28126.6931	26770.2300	27390.5393	27540.7092
57:	30045.3104	30430.1497	29921.5667	30402.3596	29904.5168
58:	30585.1685	30690.8709	30331.9364	30435.7622	30569.6123
59:	30713.3684	30824.7879	30355.3176	30501.5129	30587.3939
60:	30720.0124	30874.9448	30361.7684	30529.7937	30600.8225
61:	30877.9741	30990.2885	30880.1396	30656.4488	31315.0137
62:	31490.7284	31085.5088	31230.8281	31064.6477	31517.1566
63:	32139.0659	32239.3128	32080.9886	32299.2638	32531.1303
64:	32161.6297	32267.4273	32095.9000	32314.5042	32549.1394
65:	32200.3183	32281.5547	32137.5914	32336.9384	32591.9798

66:	32840.6226	32558.4329	32563.5515	32403.5631	32806.4003
67:	32856.8381	32570.9531	32574.6755	32417.2976	32809.3867
68:	32890.5986	32641.4770	32607.6047	32470.2417	32847.1832
69:	33611.5400	33515.9469	33594.1767	33506.5947	33890.1794
70:	34615.5104	34717.6922	34541.9957	34604.6191	34980.8441
71:	34660.2928	34765.6407	34606.3921	34652.9745	35032.7980
72:	34669.0644	34773.8389	34637.5099	34658.6141	35035.4417
73:	35686.7556	35738.7420	34716.1615	35105.4501	35427.3454
74:	35860.9340	36456.1510	34764.0594	35122.1021	35452.5131
75:	35882.8158	36486.9994	34775.0380	35144.0556	35484.5194
76:	35989.3398	36499.6924	35751.7239	35733.5144	35973.5775
77:	36959.2172	37007.5599	36834.4923	37018.2856	37338.4135
78:	36987.3727	37045.7396	36855.2739	37039.0753	37355.5820
79:	37035.9097	37082.5461	36912.8610	37087.0576	37409.4955
80:	38679.9073	39047.9493	37692.7114	38056.3185	38121.3650
81:	38699.7682	39066.1869	37707.5185	38073.3679	38130.1792
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83:	39304.2994	39468.3869	38915.8805	39106.3324	39461.1797
84:	39321.3532	39523.4965	38922.3700	39112.8219	39477.7215
85:	39333.1126	39532.4091	38959.5032	39126.4703	39531.5628
86:	39455.9800	39577.5009	39364.9090	39376.6449	39655.4494
87:	40606.5454	40662.6586	39640.5555	40143.7480	39897.3983
88:	40632.3209	40679.2554	39687.4698	40163.3307	39976.9588
89:	40645.2167	40686.9967	39709.6051	40208.4530	39983.8797
90:	40885.4853	41169.1373	40321.8894	40425.9028	40500.5209
91:	41029.1671	41376.9808	40339.2499	40450.8910	40528.4539
92:	41061.6122	41467.1353	40341.8696	40461.9097	40548.2740
93:	41101.0548	41557.5538	40719.5772	41062.5595	41167.7340
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98:	42528.2671	42787.0057	42278.3634	42485.0166	42978.8399
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101:	42890.0112	43040.2986	42645.5719	42764.8732	43283.6707
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104:	45202.1637	45738.4940	44661.8304	45132.7448	45782.2914
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106:	46034.5914	46414.7745	45229.5478	45600.0613	45877.7422
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115:	47993.9196	48134.0113	47630.5066	47838.9485	48447.8710
116:	48231.0142	48445.1506	47924.6236	48038.1737	48625.5098
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131:	49924.3765	50325.9662	49439.0159	49894.6612	50399.7813
132:	49944.4527	50359.5762	49572.9916	50158.0229	50435.8643
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135:	50081.1177	50990.5569	49787.1284	50455.4850	50753.1091

136:	50511.0013	51136.7830	50001.7256	50635.2694	51129.9002
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143:	53502.9988	52638.9735	52313.2985	51700.0240	53052.5594
144:	53964.9404	53930.7088	53784.7918	53710.1241	54583.0676
145:	53978.9176	54122.5369	53787.7780	53931.4157	54616.9421
146:	54552.7216	54884.3654	54291.8574	54581.7422	54651.6842
147:	54559.0926	54902.5142	54330.2144	54617.6635	55330.9984
148:	54570.8399	54906.2772	54344.5510	54624.9796	55462.9869
149:	55116.0708	55363.4263	54643.6417	54937.4920	55499.8346
150:	55222.2551	55925.5832	55018.1365	55615.8245	55603.8110
151:	56005.8796	56447.2280	55727.6373	56120.7444	56662.7719
152:	56065.9916	56529.5795	55762.6948	56162.4331	56685.2381
153:	56093.8983	56551.2561	55788.1368	56186.0712	56712.7360
154:	56559.1497	56955.1399	56479.5911	56952.5430	57253.6942
155:	56604.3845	57730.3787	56598.5720	57184.2800	57810.4125
156:	57867.3847	57930.1254	57730.6011	57859.5242	58812.4796
157:	59440.8562	59996.1629	58241.7907	58258.9636	59763.3721
158:	60972.9390	61393.8834	60697.3915	60806.2339	60478.2533
159:	61264.1416	61502.9989	60824.7131	61326.8493	62065.8379
160:	61935.3056	62133.7976	61730.3531	61832.2628	62621.2315
161:	62089.0105	62579.2177	61771.3740	62689.0672	62796.2511
162:	64455.4800	64770.3695	64090.0585	64321.0810	65231.2147
163:	64458.9307	64773.0352	64094.9913	64324.5203	65233.5267
164:	64470.8197	64785.0620	64103.8264	64333.4160	65242.6088
165:	66116.8123	66498.4527	65465.0192	65815.6840	66736.3999
166:	66129.2204	66509.8776	65477.9105	65828.0095	66747.0117
167:	66159.2859	66535.6895	65514.5417	65858.3653	66772.5615
168:	66384.6849	66797.5223	65924.9214	66298.2098	67181.7579
169:	67113.8815	67604.8119	66271.0422	66745.5156	67798.6630
170:	67140.5012	67626.2409	66305.7111	66772.8756	67826.1294

171:	67156.0286	67642.5557	66323.3838	66793.2787	67841.5486
172:	67661.4734	68032.0894	67322.2016	67659.4344	68275.1561
173:	69392.3053	70149.1911	68466.3231	69127.0118	69648.6014
174:	69401.2644	70166.7559	68475.9131	69129.2739	69661.0876
175:	69409.6748	70177.7946	68481.7142	69140.6523	69665.4057
176:	70540.7064	70768.9332	69927.5253	70215.3164	71066.4854
177:	71231.9836	71649.2695	70707.1620	71077.8531	71693.4866
178:	71241.4508	71657.8494	70717.4940	71087.9719	71699.5806
179:	71246.5824	71658.3788	70719.9970	71088.2706	71703.2292
180:	71460.2012	72084.9643	71027.4868	71513.9191	72674.2947
181:	71469.5328	72088.7460	71032.6669	71517.2218	72675.3669
182:	71475.1743	72093.9848	71038.1873	71522.7512	72680.8723
183:	73355.7872	73749.5007	72926.6233	73211.4740	74205.9954
184:	74209.1290	74710.0888	73467.0760	73949.7581	74803.6085
185:	74315.7128	74722.2534	74134.3996	74310.2549	75667.2895
186:	74476.2586	74900.9864	74199.0995	74538.8827	75674.6807
187:	74485.8863	74910.0470	74207.8600	74549.3838	75700.7460
188:	74510.6635	74931.7726	74228.5922	74566.2282	75747.4720
189:	75150.4609	75934.3280	74321.9377	75113.9078	75964.2732
190:	79467.7725	79372.6157	78450.0746	79037.0330	79660.5387
191:	79686.1569	80332.9023	78461.1545	79059.3762	80114.4815
192:	79727.1379	80415.7890	78465.4539	79072.4047	80126.4654
193:	79735.9582	80429.0561	79249.5854	79172.5057	80138.4083
194:	79848.7895	80510.2086	79730.4067	80011.1627	81076.6308
195:	81622.6953	82694.1247	80841.0321	81808.6490	82580.6253
196:	81633.8811	82703.1528	80850.8186	81817.5815	82592.6588
197:	81639.7585	82708.4041	80855.8586	81821.6400	82595.3642
198:	83795.5585	84233.4991	82811.8195	83584.8672	84292.1252
199:	84191.9369	85013.1562	82813.2295	83585.9994	84293.2958
200:	84193.2475	85014.3104	82819.2345	83588.6154	84298.7469
201:	84208.5494	85022.4378	83472.4751	84012.6189	85902.7803
202:	87692.8567	88271.2872	87193.3621	87679.1618	88898.5534
203:	89125.8535	89649.1510	88633.5095	89099.6867	90330.6733
204:	92527.1941	92703.4151	92292.8161	92411.5695	93327.2818
205:	95499.9036	96268.5858	94344.5363	95006.4015	95679.3852

206:	95865.0393	96535.5028	94959.9159	95437.4928	96587.8232
207:	96199.7256	96543.5346	95074.7237	95897.0762	96938.4859
208:	96258.5012	96932.8598	95736.9095	95983.2086	97233.1290
209:	118867.7017	119508.4813	117738.9985	118311.4571	119563.2482

Table S3. Individual contributions to *D*-tensor for molecular fragments of **1** – **2** and truncated molecular fragments **1'**– **3'**.

Multiplicity	Root	1		2		1'		2'		3'	
		<i>D</i>	<i>E</i>	<i>D</i>	<i>E</i>	<i>D</i>	<i>E</i>	<i>D</i>	<i>E</i>	<i>D</i>	<i>E</i>
5	0	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
5	1	-0.030	-0.001	-0.032	-0.000	-0.027	-0.000	-0.028	-0.000	-0.020	0.000
5	2	-0.781	0.015	-0.825	0.024	-0.715	0.027	-0.779	0.036	-0.677	0.019
5	3	-0.190	0.073	-0.139	0.090	-0.282	0.072	-0.210	0.092	-0.303	0.023
5	4	0.117	-0.098	0.123	-0.111	0.126	-0.105	0.129	-0.121	0.126	-0.056
3	0	-0.870	-0.520	-0.826	-0.708	-0.949	-0.684	-0.903	-0.864	-1.074	-0.835
3	1	-0.623	0.273	-0.608	0.500	-0.549	0.310	-0.574	0.546	-0.637	0.491
3	2	-0.170	0.144	-0.126	0.116	-0.309	0.261	-0.227	0.216	-0.311	0.206
3	3	-0.001	-0.000	-0.001	0.000	-0.001	-0.000	-0.001	0.001	-0.004	0.002
3	4	-0.144	0.130	-0.096	0.089	-0.173	0.153	-0.144	0.136	-0.117	0.065
3	5	-0.062	0.050	-0.100	0.094	-0.029	0.019	-0.049	0.048	-0.068	0.015
3	6	-0.212	-0.174	-0.192	-0.177	-0.215	-0.177	-0.203	-0.192	-0.195	-0.080
3	7	0.014	-0.008	0.013	-0.012	0.020	-0.002	0.023	-0.001	0.018	-0.003
3	8	0.000	0.000	-0.000	0.000	0.000	0.000	-0.000	0.000	0.000	-0.000
3	9	0.507	0.010	0.531	0.001	0.494	0.003	0.512	-0.004	0.465	-0.008
3	10	-0.398	-0.247	-0.419	-0.029	-0.233	-0.097	-0.240	0.145	-0.157	-0.062
3	11	-0.327	0.196	-0.371	0.042	-0.217	-0.007	-0.281	-0.210	-0.168	-0.020
3	12	-0.242	0.142	-0.172	0.144	-0.407	0.273	-0.348	0.327	-0.004	-0.004
3	13	-0.003	-0.002	-0.167	-0.137	-0.003	0.007	0.000	-0.002	-0.477	0.270
3	14	-0.227	-0.109	-0.016	-0.014	-0.322	-0.185	-0.268	-0.247	-0.388	-0.193
3	15	-0.002	0.002	-0.002	0.002	-0.001	0.001	-0.001	0.001	-0.001	0.000
3	16	-0.013	-0.007	-0.014	-0.012	-0.013	-0.008	-0.011	-0.013	0.001	-0.000
3	17	0.051	0.003	0.011	0.006	0.089	0.000	0.091	0.000	0.004	0.001
3	18	0.053	-0.001	0.095	-0.000	-0.009	0.003	-0.006	0.008	0.040	-0.002
3	19	-0.002	0.002	-0.002	0.002	-0.002	0.002	-0.003	0.003	-0.001	0.000
3	20	0.043	-0.002	0.034	-0.002	0.083	-0.002	0.071	-0.002	0.112	-0.001
3	21	-0.020	-0.017	-0.021	-0.021	-0.019	-0.017	-0.020	-0.022	-0.013	0.006
3	22	-0.038	0.031	-0.037	0.033	-0.041	0.034	-0.040	0.037	-0.037	0.009
3	23	0.002	0.000	0.000	0.001	0.002	0.000	-0.000	0.001	-0.001	0.001
3	24	0.001	-0.001	0.002	-0.002	0.001	-0.001	0.004	-0.001	0.018	-0.000
3	25	0.003	0.002	-0.002	0.004	0.001	0.001	-0.003	0.003	0.000	-0.000
3	26	0.336	0.000	0.338	-0.000	0.318	-0.000	0.316	-0.001	0.203	-0.001
3	27	0.028	0.000	0.037	-0.000	0.057	-0.000	0.070	-0.000	0.112	-0.001
3	28	-0.000	-0.000	0.000	-0.000	-0.000	0.000	0.001	0.000	0.071	0.000
3	29	0.088	-0.001	0.084	-0.000	0.096	-0.001	0.088	-0.001	0.040	0.000

3	30	0.003	-0.003	-0.003	-0.004	-0.000	-0.004	-0.006	-0.005	-0.000	-0.002
3	31	-0.001	0.000	-0.002	0.001	-0.002	0.002	-0.001	0.001	0.001	0.003
3	32	-0.003	0.000	-0.001	-0.000	-0.004	-0.001	-0.001	0.001	0.008	-0.003
3	33	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
3	34	0.000	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	-0.000	0.000
3	35	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000
3	36	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
3	37	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	0.000
3	38	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	0.000
3	39	-0.001	-0.001	-0.001	-0.001	-0.002	-0.001	-0.001	-0.001	-0.002	-0.001
3	40	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000
3	41	-0.001	0.001	-0.001	0.001	-0.001	0.001	-0.001	0.001	-0.001	0.001
3	42	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000
3	43	-0.010	0.008	-0.009	0.008	-0.012	0.009	-0.010	0.010	-0.012	0.008
3	44	-0.009	-0.008	-0.008	-0.007	-0.010	-0.009	-0.009	-0.008	-0.010	-0.008
1	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

