Journal of the Serbian Chemical Society
JSCS@tmf.bg.ac.rs • www.shd.org.rs/JSCS
J. Serb. Chem. Soc. 83 (5) S201–S204 (2018) *Supplementary material*

SUPPLEMENTARY MATERIAL TO

Synthesis, fluorescent studies, antioxidative and α-amylase inhibitory activity evaluation of some lanthanide(III) complexes

SURYA PHILIP, PREETHY SOOSAN THOMAS and K. MOHANAN*

Department of Chemistry, University of Kerala, Trivandrum, Kerala-695581, India

J. Serb. Chem. Soc. 83 (5) (2018) 561–574

TABLE S-I. Analytical data and other details of the ligand and the metal complexes; calculated values are given in brackets

Complex	Yield %	Analytical data					Molar conductance in DMSO, Ω^{-1} cm^2 mol^{-1}
		M	H	N	C	Cl	
ACAP	80	–	4.98(5.09)	10.97(11.26)	70.00(70.20)	–	–
[La(ACAP)$(H_2O)_3Cl_3$]	75	20.43(20.55)	2.75(2.83)	6.00 (6.25)	39.00(39.33)	15.30(15.86)	9.7
[Pr(ACAP)$(H_2O)_3Cl_3$]	70	20.12(20.89)	2.65(2.82)	6.13(6.23)	39.04(39.14)	15.45(15.79)	6.4
[Sm(ACAP)$(H_2O)_3Cl_3$]	77	20.98(21.95)	2.67(2.78)	6.02(6.14)	38.12(38.62)	15.56(15.58)	12.9
[Gd(ACAP)$(H_2O)_3Cl_3$]	72	22.62(22.73)	2.44(2.75)	6.01(6.08)	38.11(38.23)	15.24(15.42)	13.1
[Dy(ACAP)$(H_2O)_3Cl_3$]	78	22.90(23.30)	2.65(2.73)	5.98(6.04)	37.68(37.95)	15.24(15.31)	7.6

TABLE S-II. Infrared spectra of ligand and metal complexes

Compound	ν(C=N) cm^{-1}	ν(C=O) cm^{-1}	ν(M–O) cm^{-1}	ν(M–N) cm^{-1}	ν(M–Cl) cm^{-1}
ACAP	1590	1654	–	–	–
[La(ACAP)$(H_2O)_3Cl_3$]	1559	1630	432	420	354
[Pr(ACAP)$(H_2O)_3Cl_3$]	1557	1637	436	425	343
[Sm(ACAP)$(H_2O)_3Cl_3$]	1554	1639	441	422	338
[Gd(ACAP)$(H_2O)_3Cl_3$]	1560	1639	438	426	340
[Dy(ACAP)$(H_2O)_3Cl_3$]	1550	1637	440	427	347

* Corresponding author. E-mail: drkmohanan@rediffmail.com

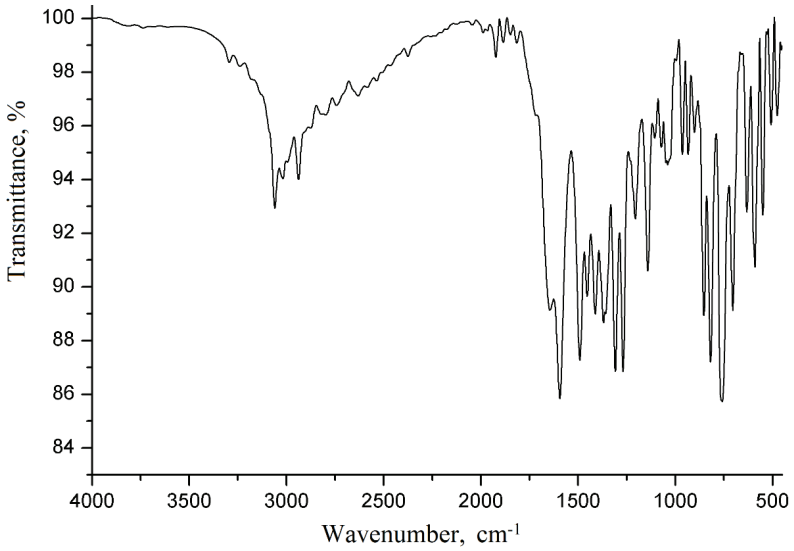

Fig. S-1. IR spectrum of the ligand.

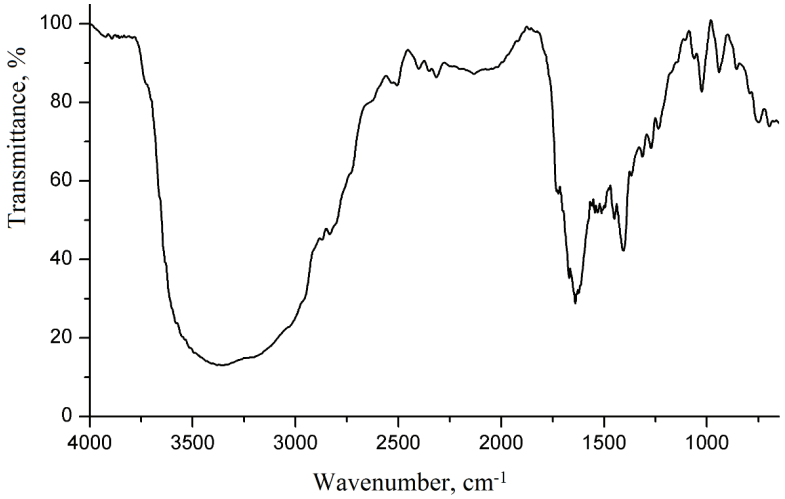

Fig. S-2. IR spectrum of the gadolinium(III) complex.

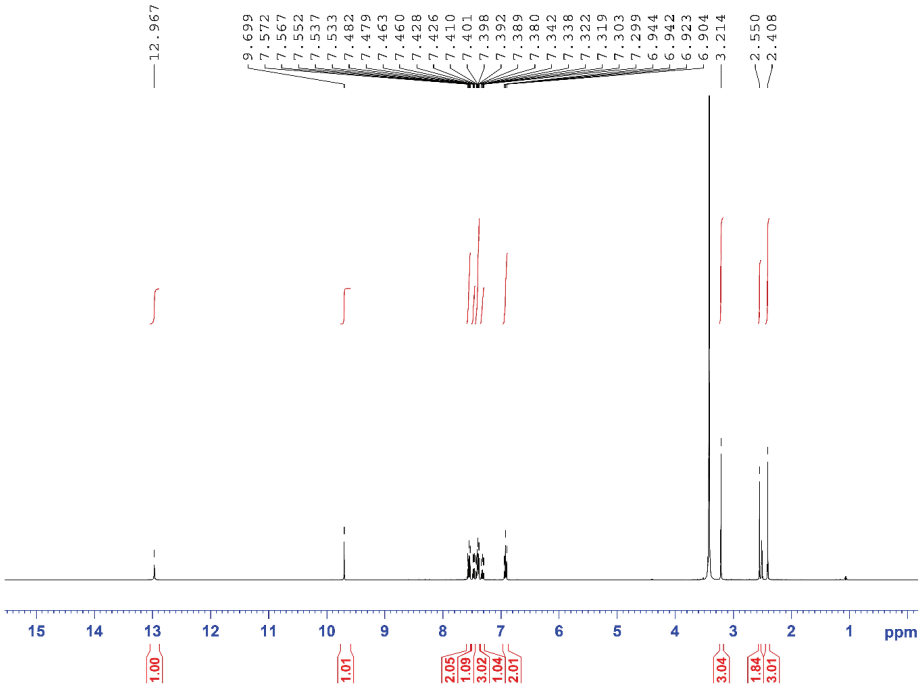

Fig. S-3. ^{1}H-NMR of the ligand.

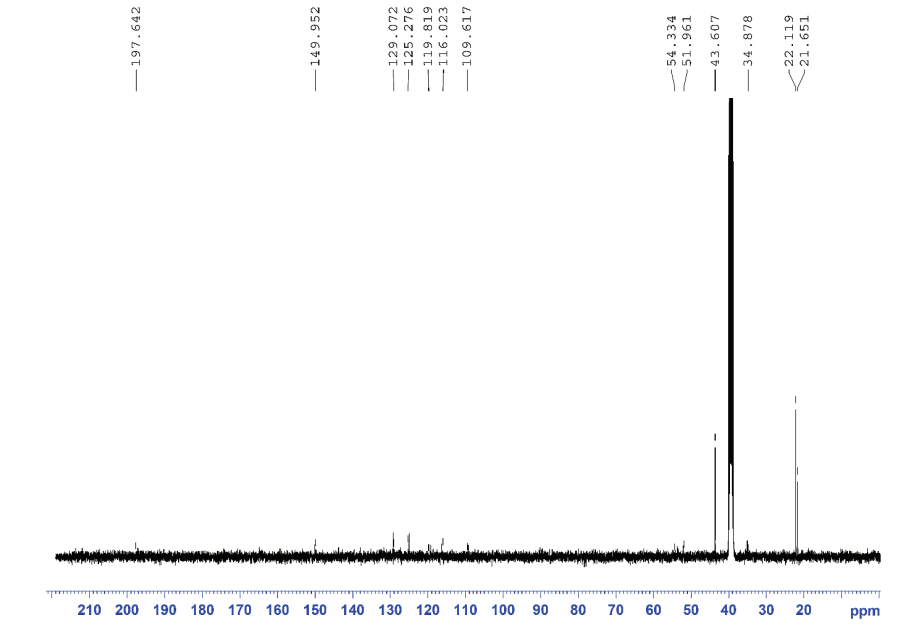

Fig. S-4. ^{13}C-NMR of the ligand.

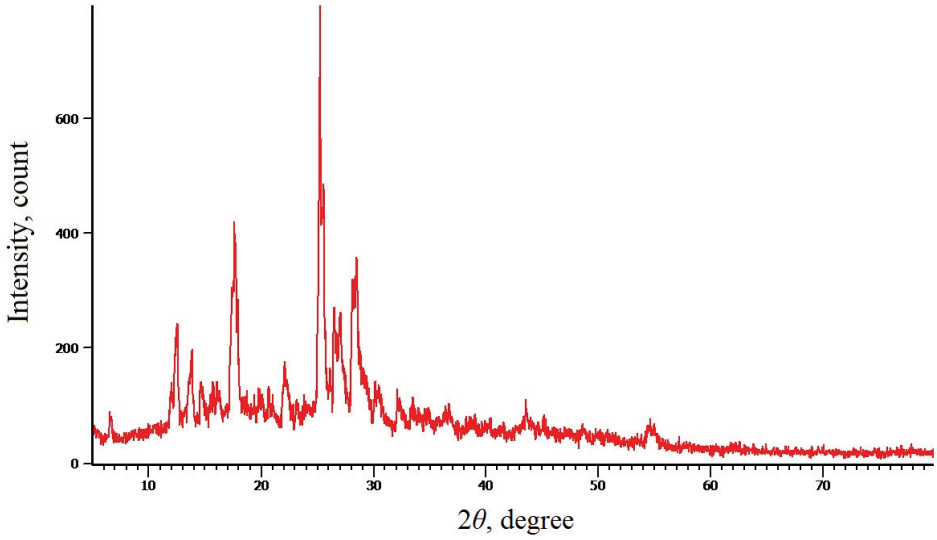

Fig. S-5. XRD spectrum of the ligand.

TABLE S-III. X-Ray diffraction data of the ligand

Position, 2θ	Height, cts	FWHM[a] Left, °2θ	d-spacing, Å	Relative intensity, %
6.5918	31.74	0.2007	13.40930	4.21
12.5018	193.97	0.3011	7.08047	25.71
13.8603	146.73	0.1004	6.38936	19.45
14.6777	84.35	0.2007	6.03533	11.18
16.1904	78.56	0.8029	5.47469	10.41
17.6736	336.73	0.1673	5.01846	44.64
20.6472	81.18	0.1004	4.30192	10.76
22.0253	110.87	0.3346	4.03577	14.70
23.1856	60.92	0.2007	3.83638	8.08
25.1860	754.40	0.0836	3.53602	100.00
25.5258	431.35	0.1338	3.48971	57.18
26.4798	219.37	0.1338	3.36611	29.08
27.0251	204.74	0.2007	3.29942	27.14
28.0630	241.07	0.1338	3.17971	31.96
28.4829	304.67	0.1004	3.13379	40.39
30.3330	77.39	0.5353	2.94673	10.26
32.1389	72.14	0.3346	2.78515	9.56
36.7059	47.66	0.6691	2.44843	6.32
43.6109	63.34	0.2007	2.07545	8.40
54.5215	34.69	0.5353	1.68312	4.60

[a]Full width half maximum