

Supplementary Materials

Biological and spectroscopic investigations of new tenoxicam and 1.10-phenthroline metal complexes

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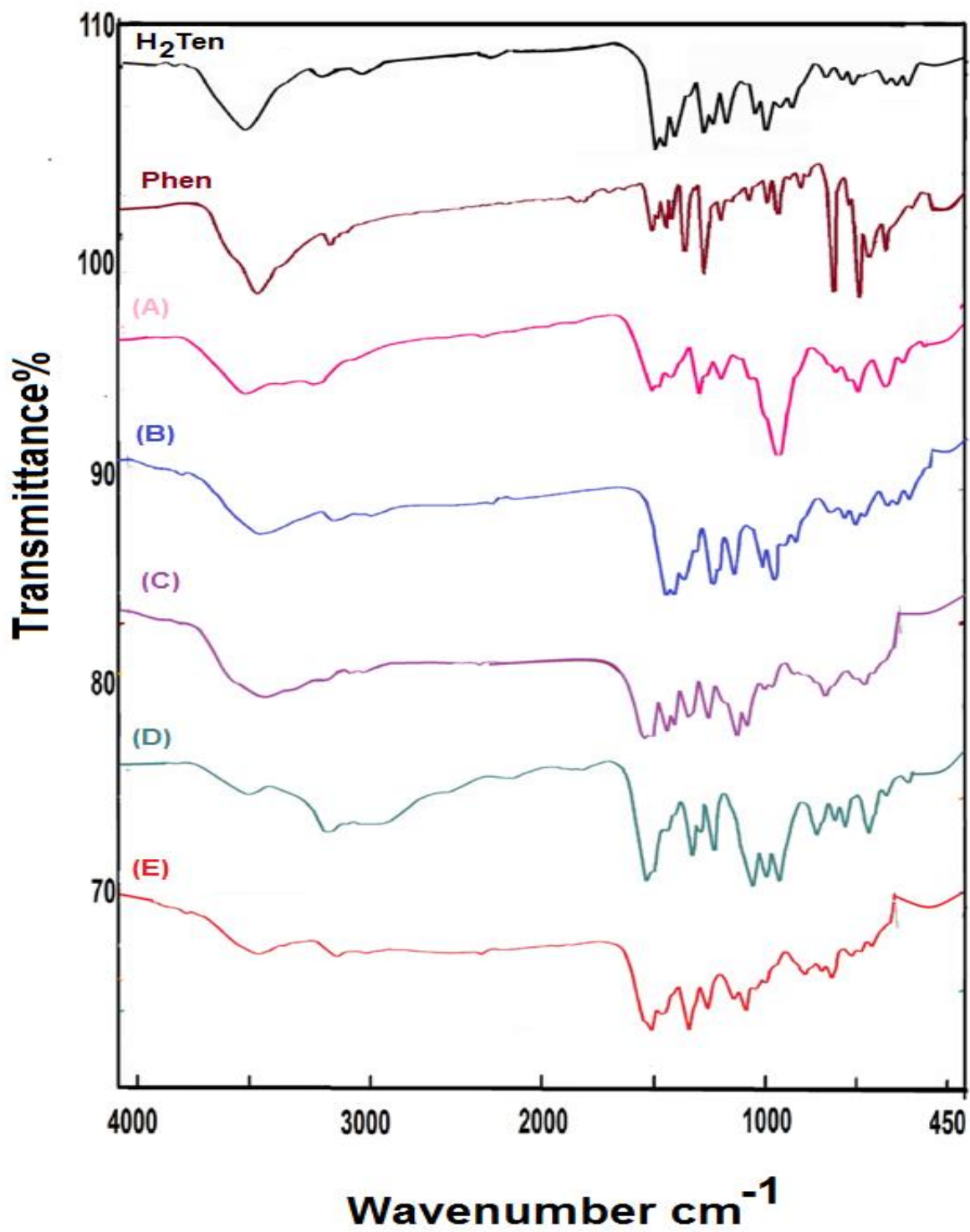


Fig. S1: Infrared spectra for H₂Ten, Phen and their complexes.

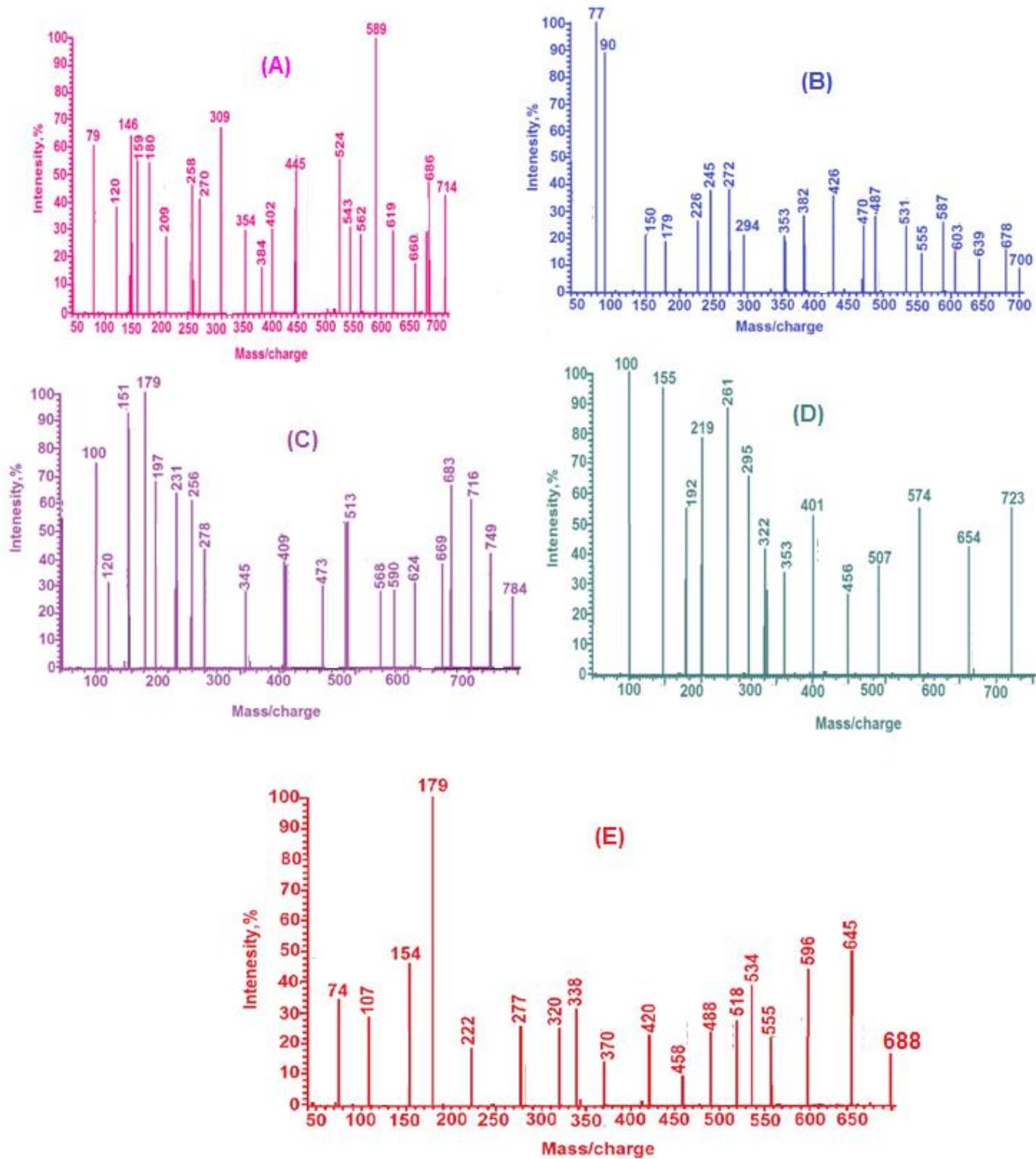
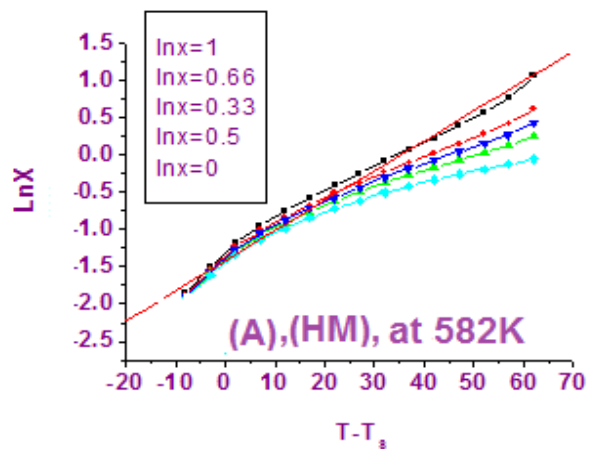
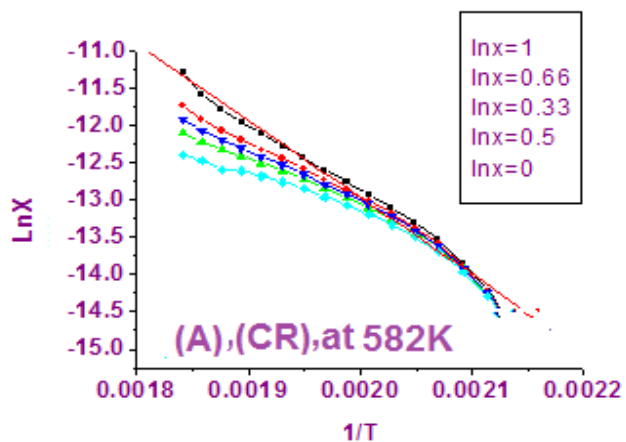
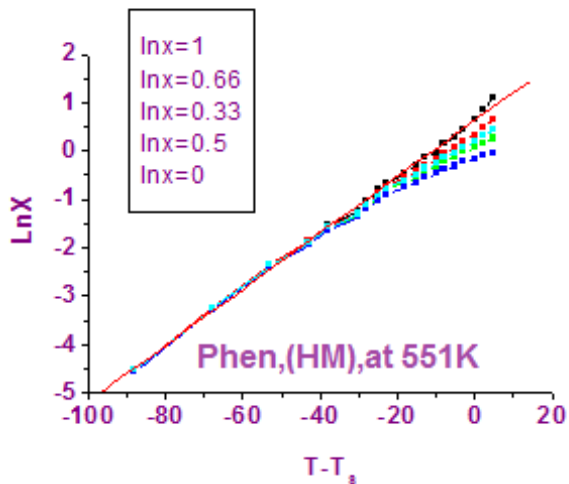
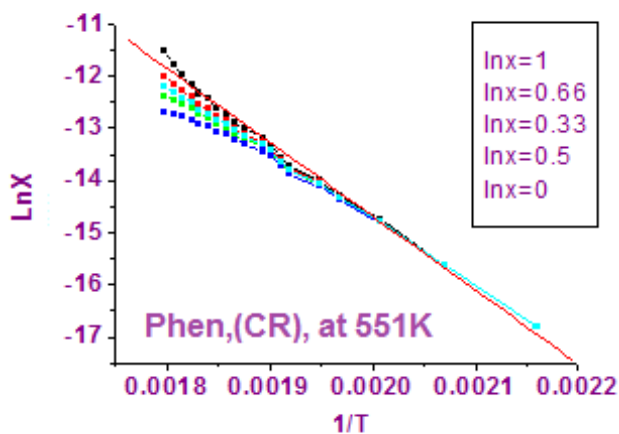
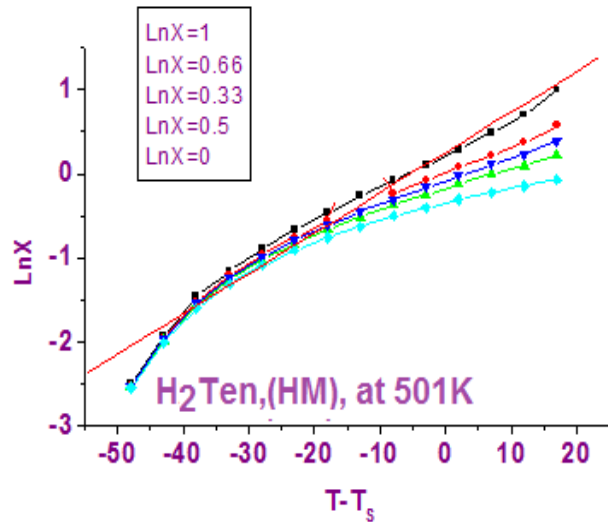
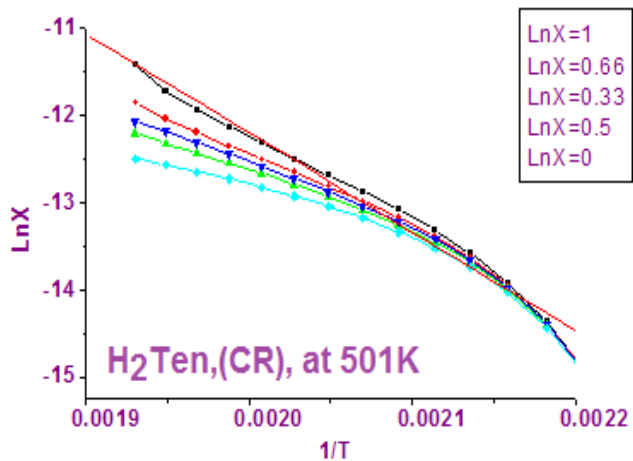
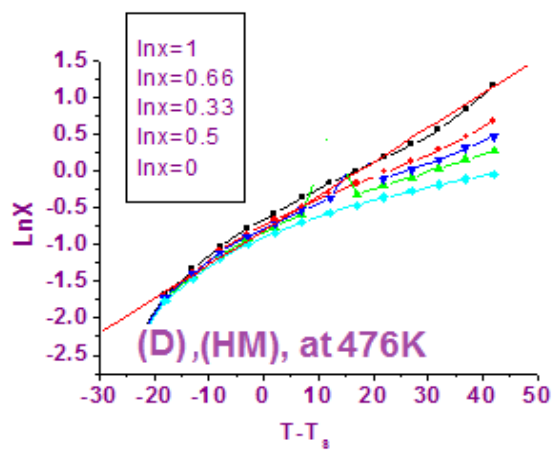
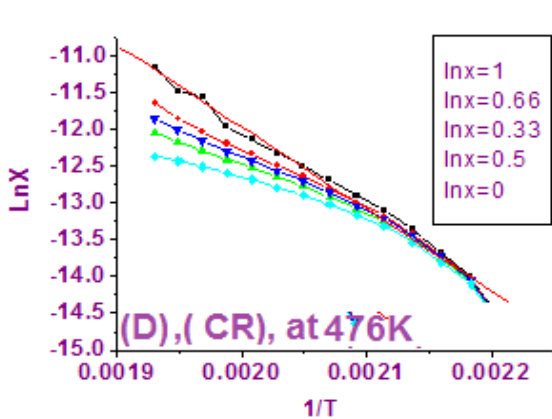
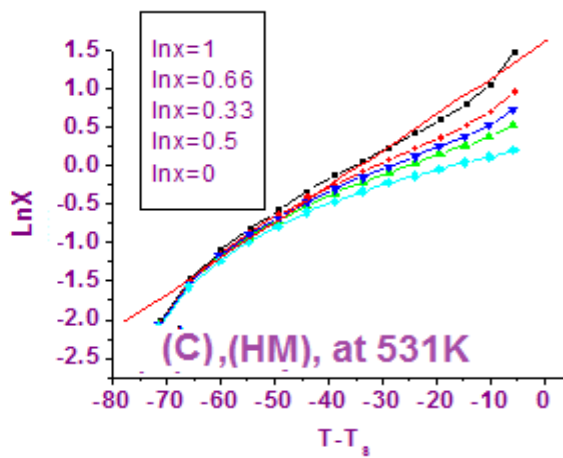
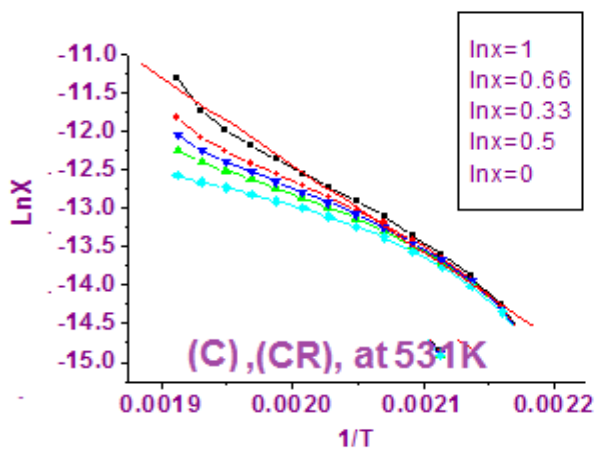
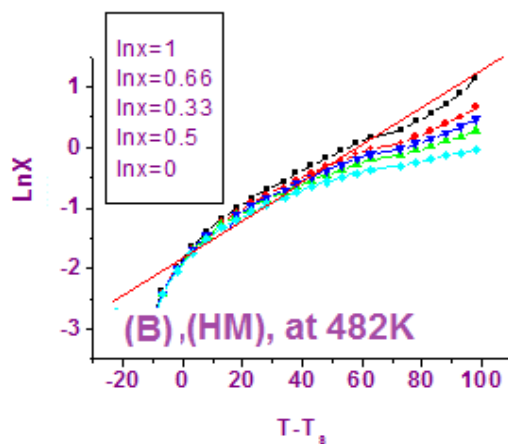
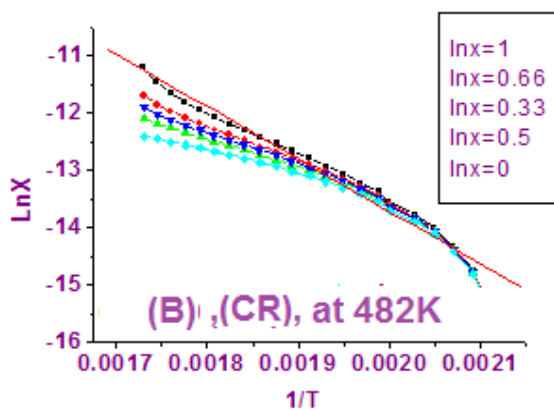


Fig. S2: Mass spectra diagrams for metal complexes





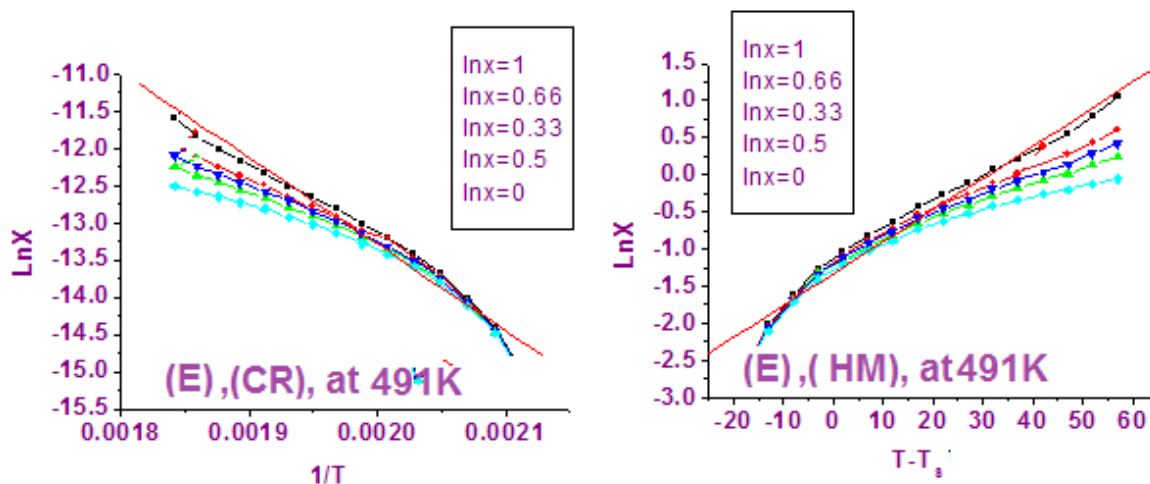


Fig. S3: The diagrams of kinetic parameters of H_2Ten , $Phen$ and their complexes using Coats-Redfern (CR) and Horowitz-Metzger (HM) equations.

Table S1: Elemental analysis and physico-analytical data for **H₂Ten**, Phen and their complexes

Compounds M.Wt. (M.F.)	Yield%	Mp/°C	Color	Found (Calcd.) (%)					μ_{eff} (B.M.)	Λ S cm ² mol ⁻¹
				C	H	N	M	Cl		
H ₂ Ten 337.368(C ₁₃ H ₁₁ N ₃ O ₄ S ₂)	-	211	Yellow	46.20 (46.24)	3.23 (3.26)	12.41 (12.44)	-	-	Diamagnetic	5.36
Phen 198.2 (C ₁₂ H ₁₀ N ₂ O)	-	100	White	72.72 (72.70)	5.09 (5.08)	14.13 (14.12)	-	-	Diamagnetic	5.20
(A) 715.508(MnC ₂₅ H ₂₇ N ₅ O ₈ S ₂ Cl ₂)	87.50	180	Pale orange	41.87 (41.92)	3.72 (3.77)	9.71 (9.78)	7.62 (7.67)	9.88 (9.92)	5.44	172.20
(B) 701.508(CoC ₂₅ H ₂₅ N ₅ O ₇ S ₂ Cl ₂)	89.00	230	Green	42.70 (42.76)	3.51 (3.56)	9.92 (9.97)	8.35 (8.40)	10.09 (10.12)	5.10	174.00
(C) 784.268 (NiC ₂₉ H ₃₅ N ₅ O ₁₃ S ₂)	88.65	220	Pale green	44.32 (44.37)	4.41 (4.46)	8.88 (8.92)	7.42 (7.48)		3.30	157.39
(D) 724.118 (CuC ₂₅ H ₂₇ N ₅ O ₈ S ₂ Cl ₂)	85.00	185	Dark green	41.37 (41.42)	3.68 (4.72)	9.61 (9.66)	8.72 (8.77)	9.72 (9.80)	1.70	171.42
(E) 689.958(ZnC ₂₅ H ₂₃ N ₅ O ₆ S ₂ Cl ₂)	84.20	220	Pale yellow	43.42 (43.48)	3.29 (3.33)	10.09 (10.14)	9.42 (9.47)	10.21 (10.29)	Diamagnetic	176.30

Table S2: ^1H NMR values (ppm) and tentative assignments for H_2Ten , Phen and their complexes

H_2Ten	Phen	(A)	(B)	(C)	(D)	(E)	Assignments
2.51	-	2.70	2.70	2.48	2.60	2.70	δH , $-\text{CH}_3$ methyl
-		4.37-4.46	3.42-3.82	3.09-3.72	3.42-3.43	3.43-4.46	δH , H_2O
7.29-8.03	7.26-8.81	7.03-8.36	7.27-8.10	6.82-8.40	7.90-8.02	7.24-8.88	δH , $-\text{CH}$ aromatic
8.34		8.74	8.31	8.68	8.05	8.90	δH , $-\text{NH}$ amine
13.80		13.77	13.62	13.60	13.56	13.58	δH , OH enolate