

Figure S1. Crystal structure of $(\text{Cp}^*_2\text{Cr}^+)[\text{Mn}(\text{CO})_5]^-[\text{In}^{\text{III}}(\text{Pc}^{\bullet 3-})]\cdot 2\text{C}_6\text{H}_4\text{Cl}_2$ (2)

Table S1. IR spectra of starting compounds and complexes **1** and **2**

Components	InClPc	[Co(CO) ₄] ₂	{[Co(CO) ₄] ⁻ [In ^{III} (Pc ²⁻)]} (1)	[Mn(CO) ₅] ₂	Cp* ₂ Cr	(Cp* ₂ Cr ⁺) {[Mn(CO) ₅] ⁻ [In ^{III} (Pc ³⁻)]} 2C ₆ H ₄ Cl ₂ (2)
InClPc	437w		430w*		-	438w
	497w		-			489w
	570m		570w			569w*
	634w		-			-
	663w		-			667m*
	724s		724s			714w
	749m		749m			746m*
	771m		773m			762w
	780m		-			-
	802w		-			-
	836w		-			827w
	885m		887m			886w
	959w		-			-
	1003w		-			-
	1059s		1063m			1061w*
	1083s		1081s			1089m
	1118s		1117s			1112s*
	1160m		1162w			1165m
	1284s		1285w			1284w
	1332s		1332s			1331w
Transition metal fragment	1408m		1409w			-
	1473s		1476m			1459s*
	1608w		1597w			-
	1645w		-			-
	3047w		-			-
	-	416s	430w*	449m	-	-
		477s	-	467m		-
		503s	-	547w		-
		524s	519w	577w		569w*
		543s	551m	591w		-
Cp* ₂ Cr	CO	CO	639s	665m		667m*
	1843s	1843s	1975s	665m		CO
	1896s	1896s	2010s			1974s
	2003s	2003s	2080s	CO		-
				1997s		2077s
				2020s		
				-		
Solvent	-	-	-	-	587w	-
					800w	-
					1019m	-
					1067w	1061w*
					1262w	-
					1375m	-

* - bands are coincided; w – weak, m –middle and s – strong intensity

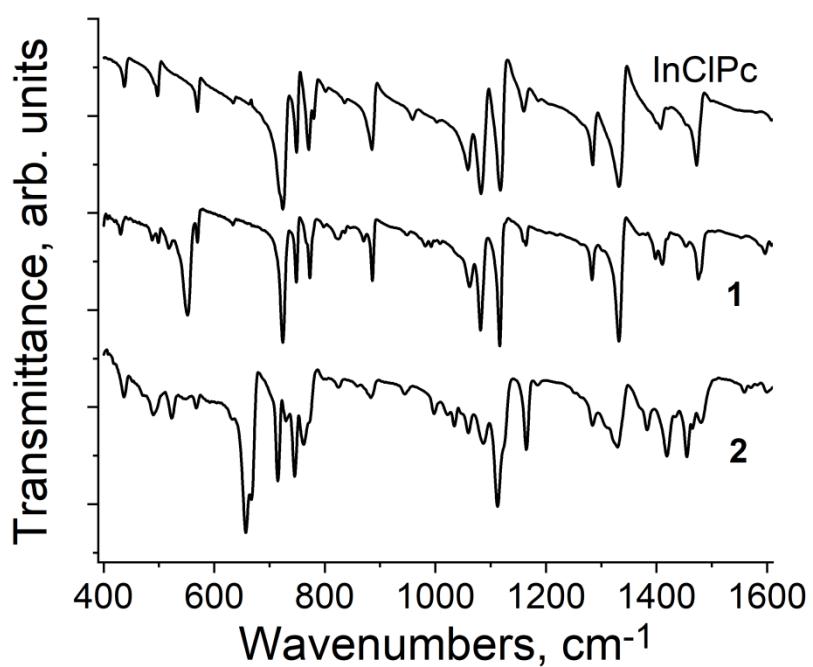


Figure S2. IR spectra of starting neutral InClPc and salts **1** and **2** in KBr pellets prepared in anaerobic condition.

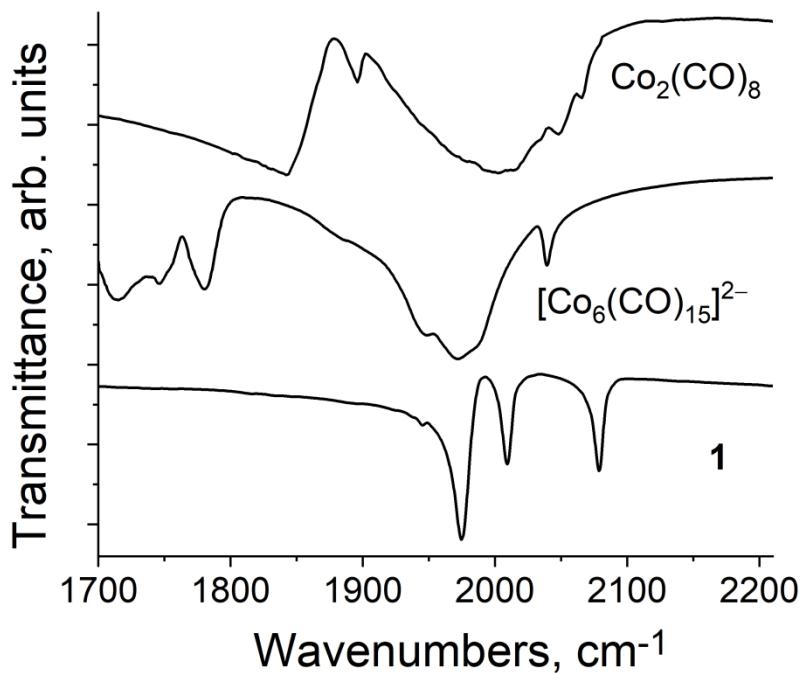


Figure S3. IR spectra of starting transition metal [Co(CO)₄]₂, anionic metal carbonyl cluster in {DB-18-crown-6(Na⁺)}₂[Co₆(CO)₁₅]²⁻·2C₆H₄Cl₂ [**1**] and complex **1** in 1700 – 2200 cm⁻¹ range in KBr pellets prepared in anaerobic conditions

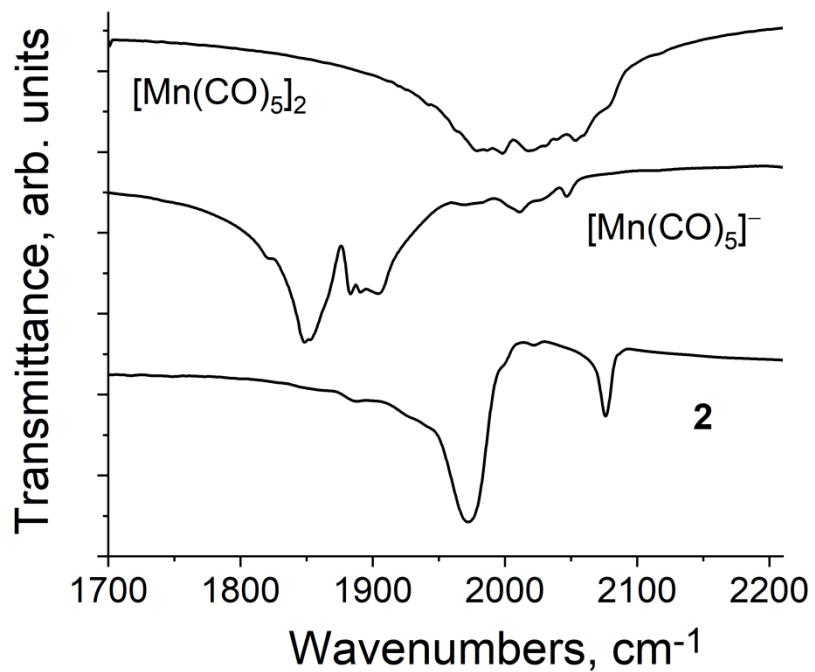


Figure S4. IR spectra of starting transition metal $[\text{Mn}(\text{CO})_5]_2$ carbonyl, anionic metal carbonyl in $(\text{Cp}^*_2\text{Cr}^+)[\text{Mn}(\text{CO})_5]^-$ [1] and complex **2** in $1700 - 2200 \text{ cm}^{-1}$ range in KBr pellets prepared in anaerobic conditions.

Magnetic data for **2**.

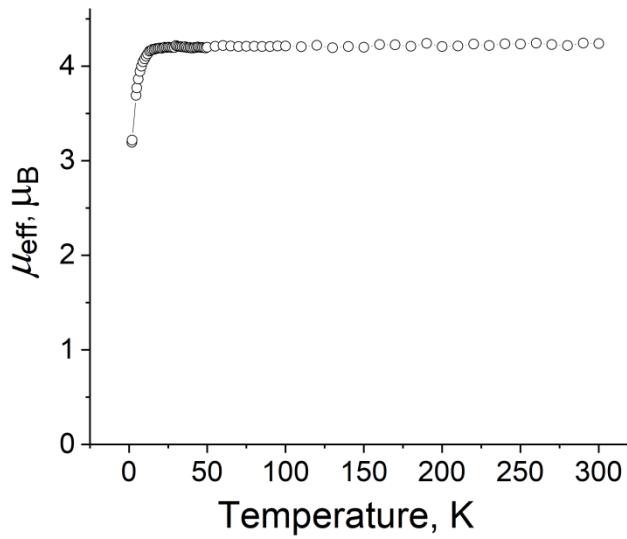


Figure S5. Temperature dependence of an effective magnetic moment of polycrystalline **2** measured in anaerobic conditions

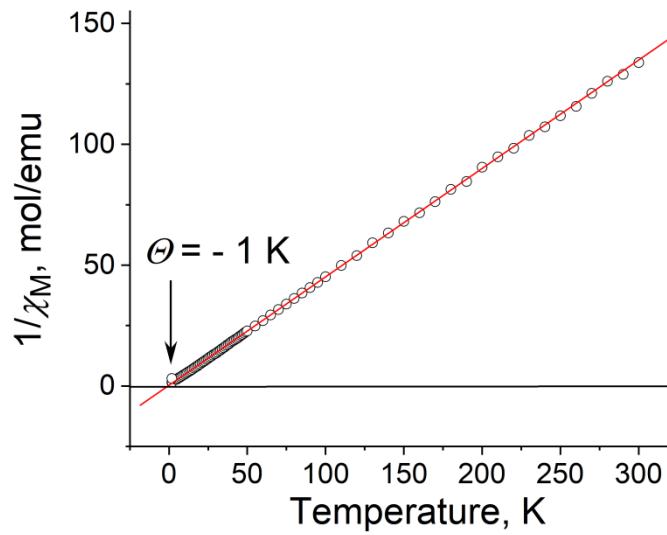


Figure S6. Temperature dependence of the reciprocal molar magnetic susceptibility of polycrystalline **2** measured in anaerobic conditions. Approximation of data by the Curie-Weiss law is shown by red line.

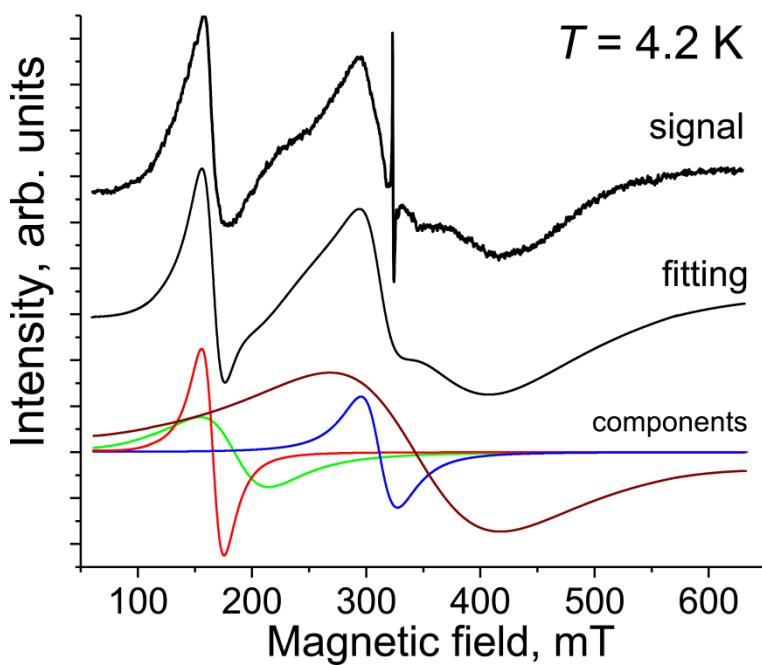


Figure S7. EPR spectrum of the polycrystalline sample of **2** at 4.2 K measured in an anaerobic conditions. Frequency 9.05870 GHz, microwave power 1 mW, amplitude 320, modulation width 0.2 mT.

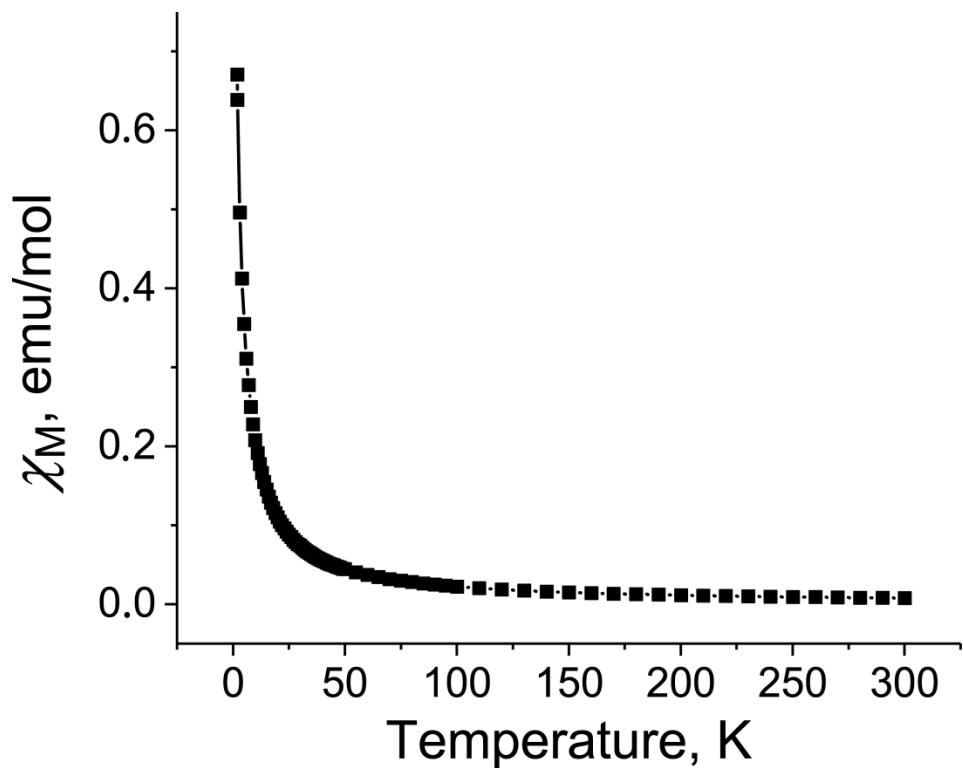


Figure S8. Temperature dependence of molar magnetic susceptibility of polycrystalline **2** measured in anaerobic conditions.

References

1. Konarev DV, Kuzmin AV, Galkin RS, Khasanov SS, Kurbanov RF, Otsuka A, et al. Salts of Anionic Metal Carbonyl Clusters with Cryptand[2.2.2](Na⁺), DB-18-crown-6(Na⁺), and Paramagnetic Cp*₂Cr⁺ Cations Obtained by Reduction: Salts of Anionic Metal Carbonyl Clusters with Cryptand[2.2.2](Na⁺), DB-18-crown-6(Na⁺), and Paramagnetic Cp*₂Cr⁺ Cations Obtained by Reduction. Z Anorg Allg Chem 2019; 645:472–83.
<https://doi.org/10.1002/zaac.201800463>