Experimental Section

Syntheses and physical measurements. Due to the air-sensitive nature of $[Mo^{III}(CN)_7]^{4-}$ anion, the syntheses and manipulations in this work were carried out under a nitrogen atmosphere using standard Schlenk-line and glovebox techniques. Deoxygened solvents were prepared by bubbling with nitrogen for 1 hour or distilling under nitrogen. C, H, N elemental analyses were carried out using a Perkin-Elmer analyzer model 240C. The IR spectra were recorded as KBr pellets on a Bruker Tensor 27 FTIR spectrophotometer in the 4000-400 cm^{-1} regions. The magnetic data were recorded on a Quantum Design MPMS-7 SQUID magnetometer on powder samples for all three compounds. The Variable-temperature magnetic susceptibilities were measured in applied magnetic field of 1000 Oe. The temperature dependent AC magnetic susceptibility data were collected using a 5 Oe AC field. Diamagnetic corrections were made with Pascal's constants for all the constituent atoms (P. W. Elwood, Magnetochemistry, Interscienc; New York, 1956; p 78).

Synthesis of complex 1. All experiments were performed under a N_2 atmosphere and in the dark. Dark block crystals of **1** were obtained after a week by diffusion in a sealed straight glass tube of solutions of $Mn(dpop)Cl_2{\cdot}4H_2O$ (18 mg in 1 mL CH_3OH on the top), 2 mL CH_3OH: H_2O = 1:1 as a buffer (in the middle) and $K_4[Mo(CN)_7]{\cdot}2H_2O$ (9 mg in 1 mL H_2O at the bottom). Anal. calcd. For $C_{37}H_{63}Mn_2MoN_{17}O_{8.50}$: C 40.9, H 5.8, N 21.9%; found C 40.1, H 6.1, N 21.2%. IR (KBr): 3420s cm^{-1} for ν(O-H), 2039s and 2081s cm^{-1} for ν(C≡N) and 1650s $cm^{-1}$for ν(C=N).

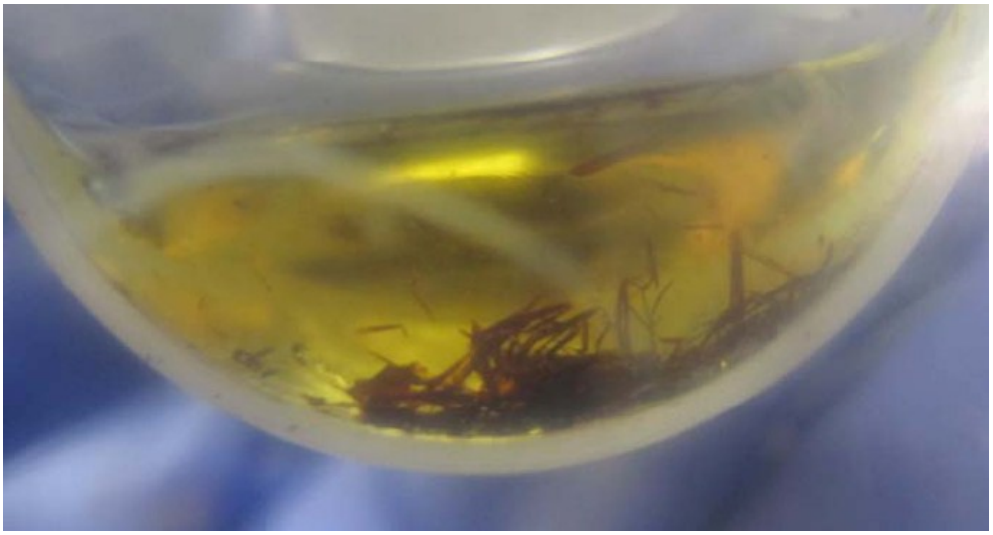
Cubic blocks of complex **1**

Synthesis of complex 2. All experiments were performed under a N_2 atmosphere and in the dark. Dark cubic crystals of **2** were obtained after several weeks by diffusion in an H-Tube. Solutions of $Mn(dpop)Cl_2{\cdot}4H_2O$ (94 mg in 8 mL H_2O) and $K_4[Mo(CN)_7]{\cdot}2H_2O$ (45 mg in 8 mL H_2O) were put on

two sides of the H-tube. 6 mL CH_3OH: H_2O = 1:1 was used as the buffer on the top. Anal. calcd. For $C_{37}H_{66}Mn_2MoN_{17}O_{10}$: C 39.9, H 6.0, N 21.4%; found C 40.3, H 6.4, N 20.9%. IR (KBr): 3358s cm^{-1} for ν(O-H), 2076s and 2061s cm^{-1} for ν(C≡N). 1649s $cm^{-1}$for ν(C=N) and 1583m cm^{-1} for ν(C=C).

Big blocks of complex **2**

Synthesis of complex 3. All experiments were performed under a N_2 atmosphere and in the dark. Brown thin plates of **3** were obtained after several days by diffusion in a U-tube. Solutions of $Mn(dpop)Cl_2 \cdot 4H_2O$ (62.5 mg in 3 mL mixed solution of CH_3OH: H_2O = 2:1), $K_4[Mo(CN)_7] \cdot 2H_2O$ (30 mg in 3 mL mixed solution of CH_3OH: H_2O = 1:2) were put on the two sides of the U-tube, 4 mL H_2O was used as the buffer in the bottom. Anal. calcd. For $C_{74}H_{142}Mn_4Mo_2N_{34}O_{25}$: C 38.3, H 6.2, N 20.5%; found C 37.8, H 6.6, N 20.0%. IR (KBr): 3320s cm^{-1} for ν(O-H), 2088s and 2042s cm^{-1} for ν(C≡N). 1666s $cm^{-1}$for ν(C=N) and 1603m cm^{-1} for ν(C=C).



Thin plates of complex **3**

CCDC 1477207-1477209 for **1-3** contain the supplementary crystallographic data for this paper. These data can be obtained free of charge from The Cambridge Crystallographic Data Centre via www.ccdc.cam.ac.uk/data_request/cif.

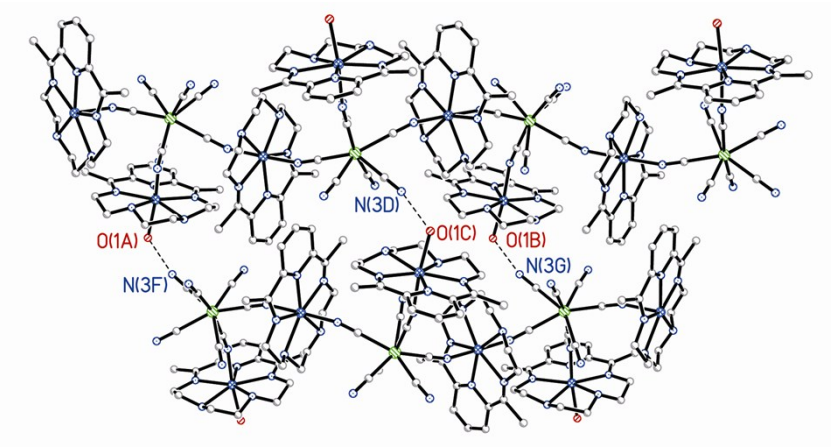


Fig. S1. Hydrogen bonds between chains of complex **1**.

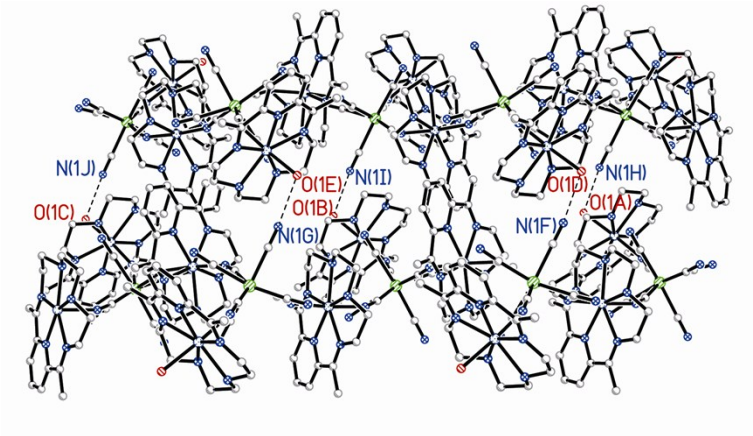


Fig. S2. Hydrongen bonds between the chains of complex **2**.

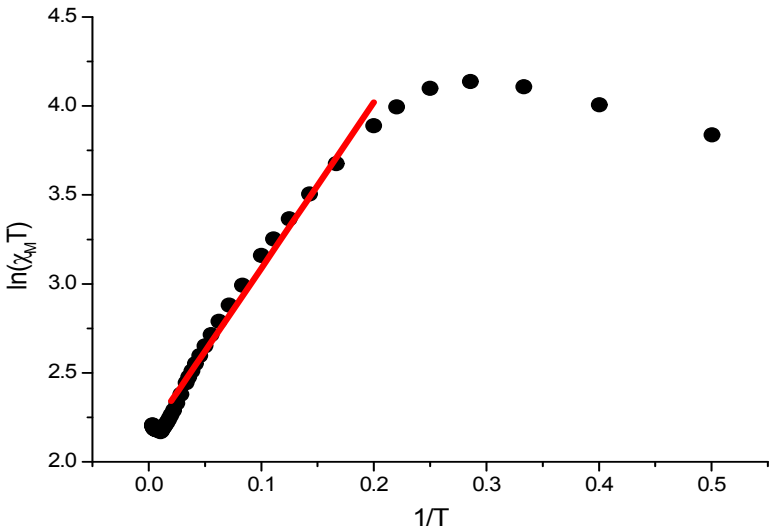


Fig. S3. Plots of ln ($\chi_M T$) versus 1/T from 300K to 2K in a 1000Oe dc field for complex **1**. The solid red lines represent the best exponential fits.

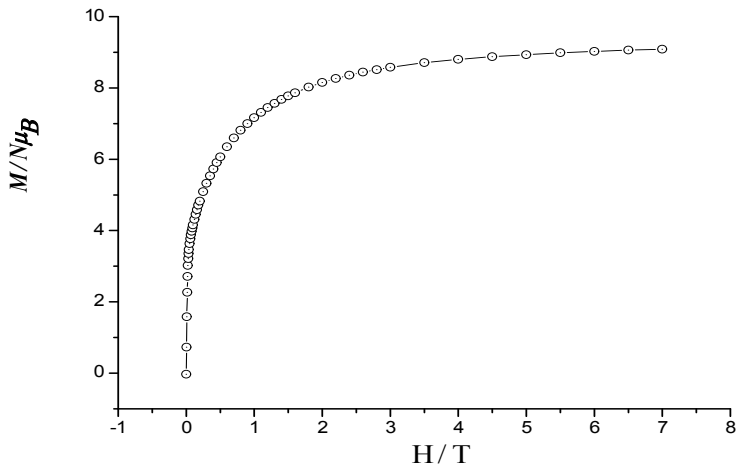


Fig. S4. Field dependence of the magnetization performed at 2 K for complex **1**.

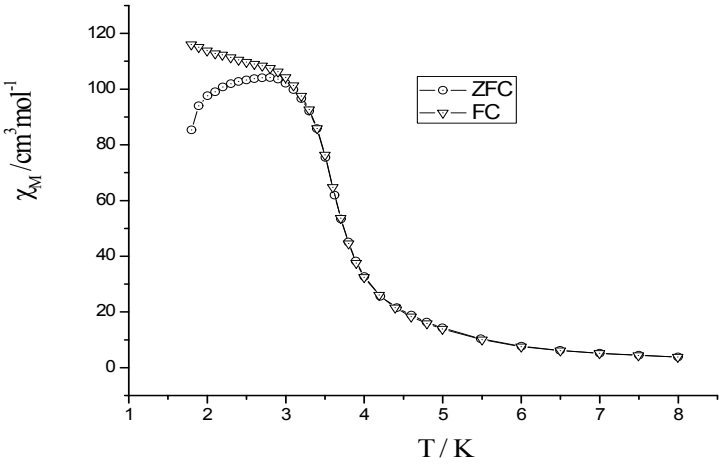


Fig. S5. Zero-field-cooled (ZFC; O) magnetization and field-cooled (FC;∇) magnetization curves for complex **1** in a dc field of 10 Oe.

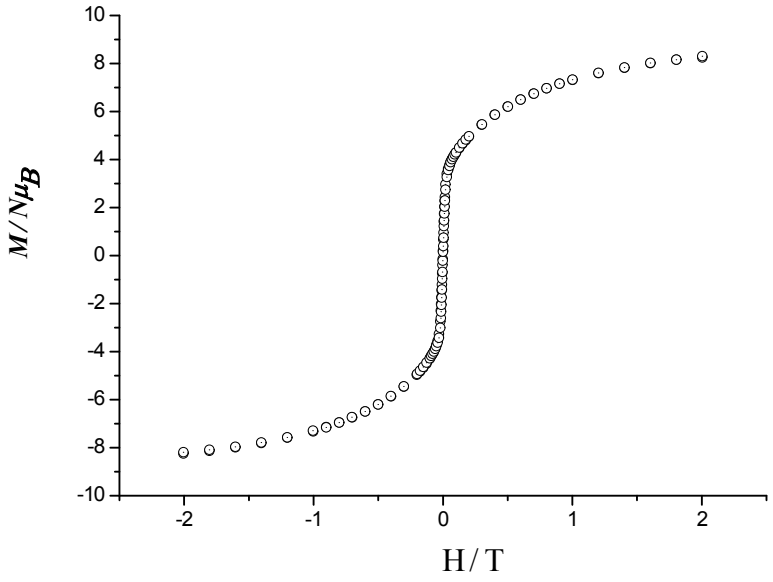


Fig. S6. Magnetic hysteresis loop for complex **1** at 1.8K.

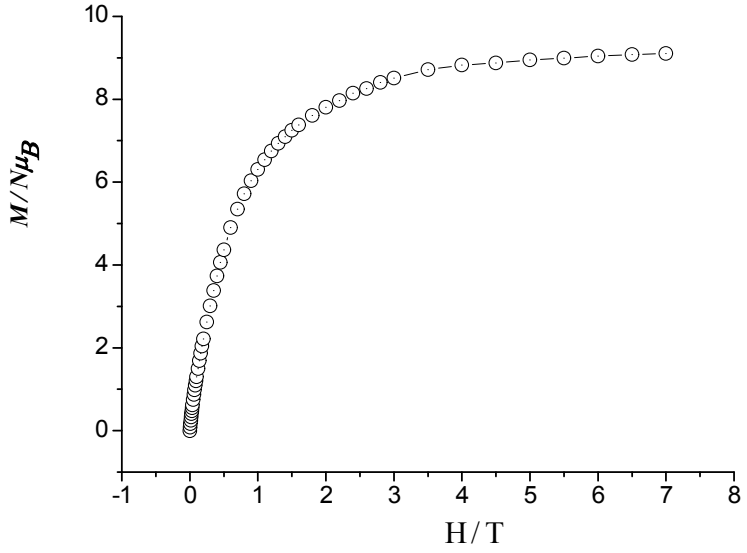


Fig. S7. Field dependence of the magnetization performed at 2 K for complex **2**.

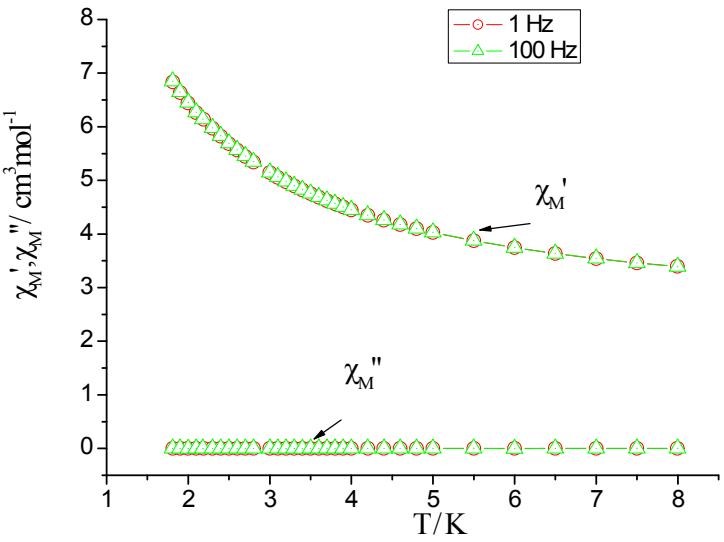


Fig. S8. Zero-field ac in-phase and out-of-phasesusceptibility versus temperature at various frequencies for complex **2**.

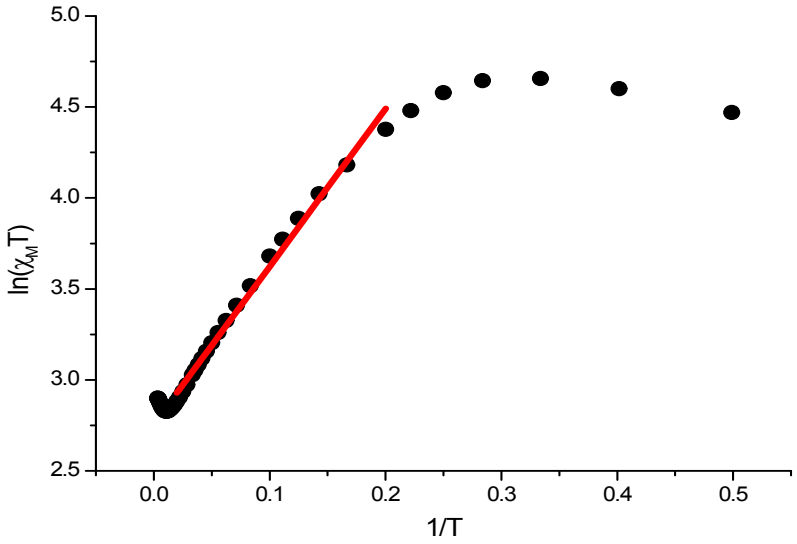


Fig. S9. Plots of ln ($\chi_M T$) versus 1/T from 300K to 2K in a 1000Oe dc field for complex **3**. The solid red lines represent the best exponential fits.

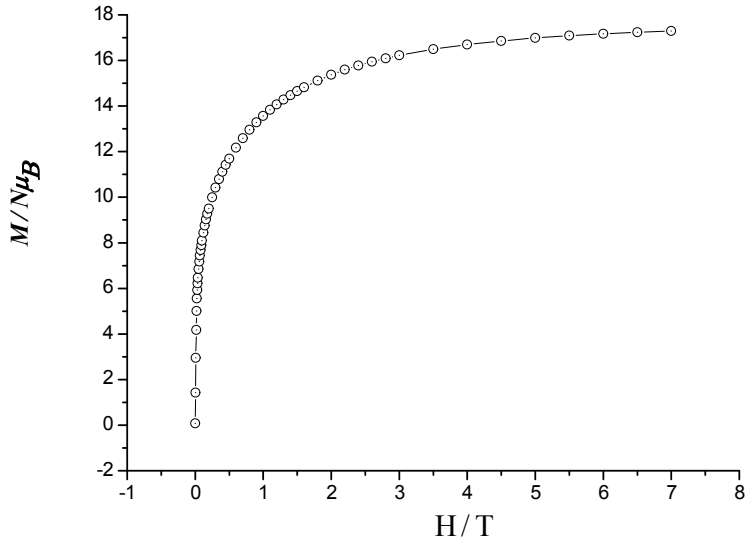


Fig. S10. Field dependence of the magnetization performed at 2 K for complex **3**.

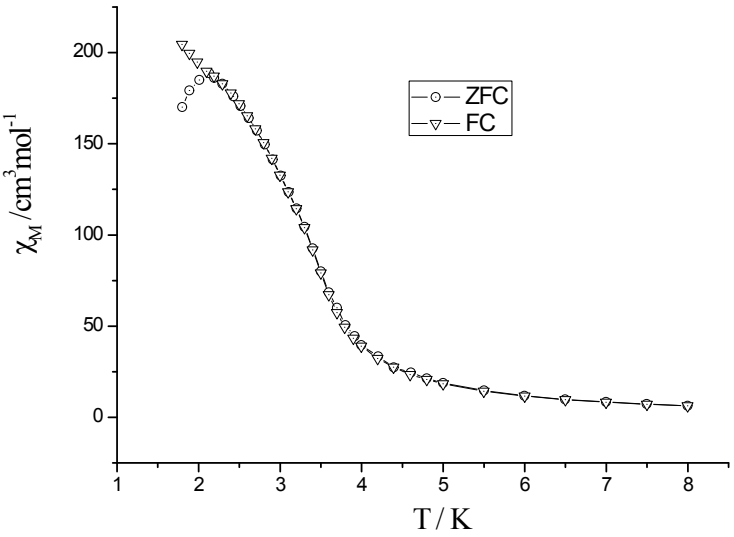


Fig. S11. Zero-field-cooled (ZFC; ○) magnetization and field-cooled (FC;▽) magnetization curves for **3** in a dc field of 10 Oe.

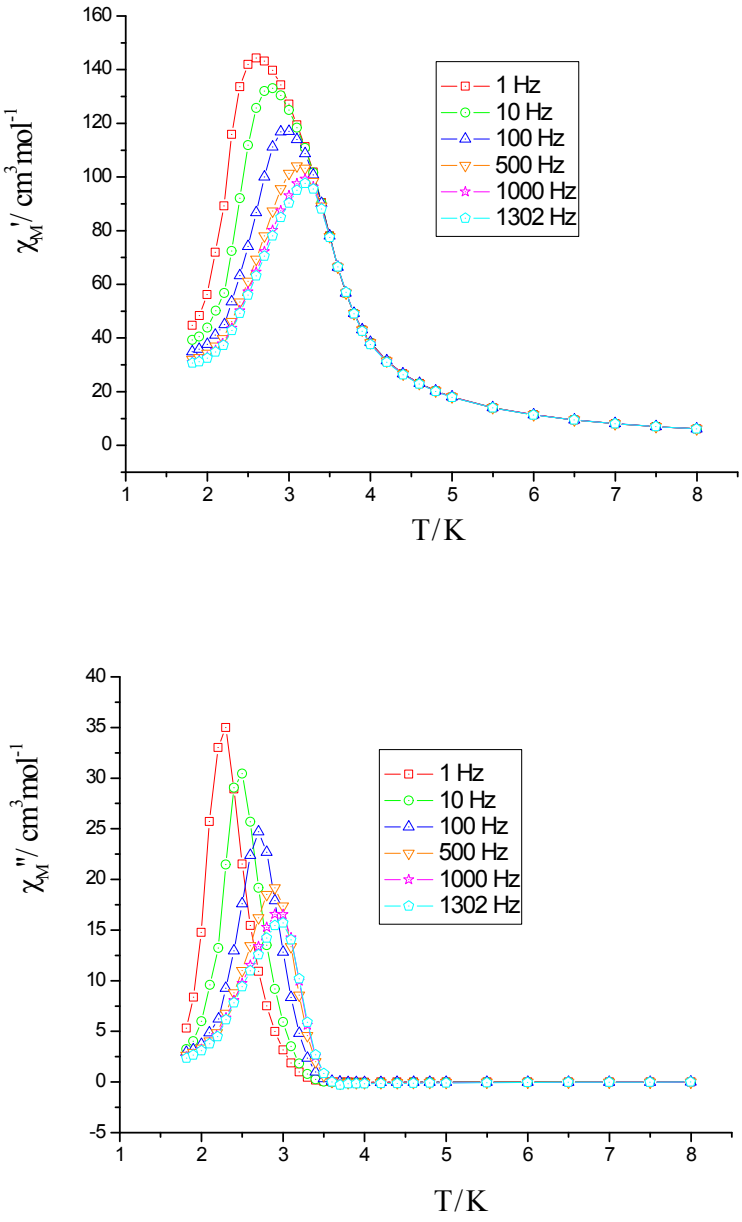


Fig. S12. Zero-field ac in-phase (top) and out-of-phase (bottom) susceptibility versus temperature at various frequencies for **3**.

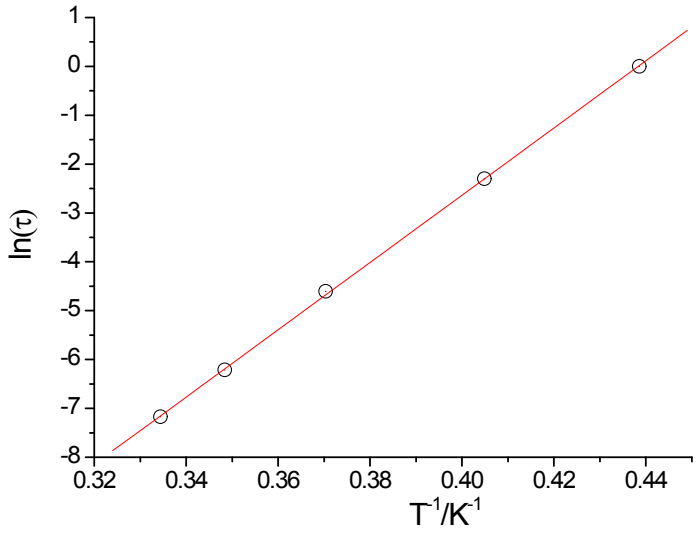


Fig. S13. Magnetization relaxation time, ln(τ) versus T^{-1} plots for **3**.The red lines are fitted with the Arrhenius law.

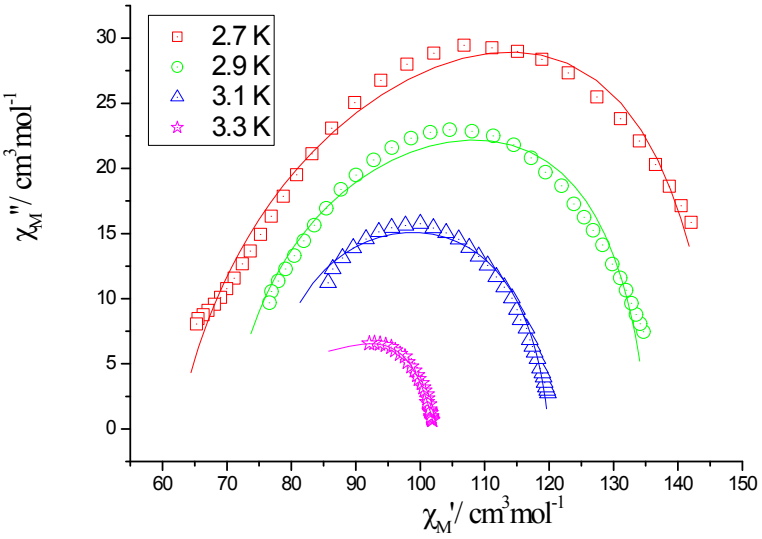


Fig. S14. Cole-Cole plots for **3** from 2.7 to 3.3K. The solid lines are the best fit to the experimental data according to the generalized Debye model.

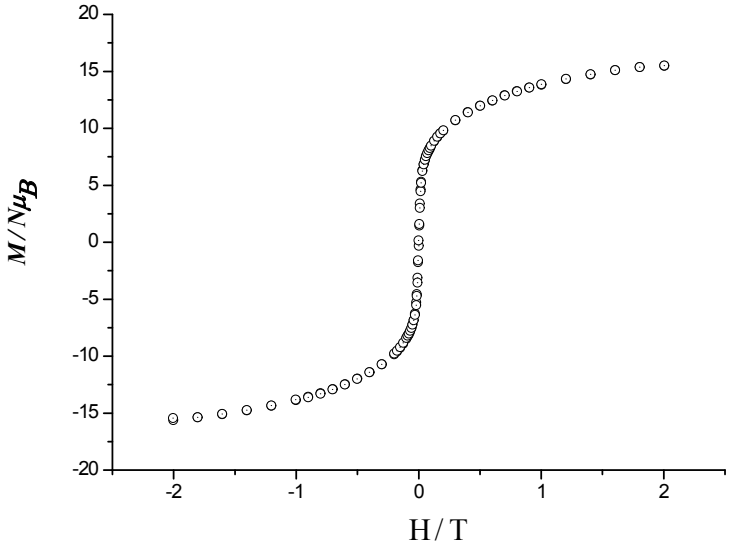


Fig. S15. Magnetic hysteresis loop for **3** at 1.8K.

Table S1. Crystallographic data and structural refinement for complexes **1-3**

Complex	**1**	**2**	**3**
Empirical formula	C_{37} H_{43} Mn_2Mo N_{17} $O_{8.50}$	C_{37} H_{47} Mn_2Mo N_{17} $O_{9.25}$	$C_{74}H_{90}Mn_4Mo_2$ N_{34} O_{25}
Formula weight	1067.70	1083.74	2267.44
Temperature	293(2) K	293(2) K	293(2) K
Crystal system	Monoclinic	Monoclinic	Monoclinic
Space group	*C2/c*	*C2/c*	*$P2_1/c$*
a/Å	32.482(7)	36.627(7)	28.968(6)
b/Å	18.934(4)	14.165(3)	19.020(4)
c/Å	20.601(4)	21.290(4)	20.323(4)
α/°	90	90	90
β/°	113.67(3)	97.18(3)	97.67(3)
γ/°	90	90	90
V/Å^3	11604(4)	10959(4)	11097(4)
Z	8	8	4
D_{calc}/g cm^3	1.222	1.314	1.357
μ/mm^{-1}	0.696	0.739	0.738
F(000)	4352	4430	4624
θ range for data collection /°	1.84 to 25.09	1.54 to 25.01	1.47 to 25.02
Reflections collected/ unique	34681 / 5726	29868 / 4780	75531/13516
R_{int}	0.0389	0.0705	0.0901
Completeness	98.9 %	99.5 %	98.8 %
Data / restraints / parameters	5726 / 19 / 609	4780 / 1 / 635	13516/66/1325
Goodness of fit on F^2	1.123	1.084	1.107
Final *R* indices [$I>2\sigma(I)$]	*R1* = 0.0884, wR2 = 0.2674	*R1* = 0.0795, *wR2* = 0.2368	*R1* = 0.1017, *wR2* = 0.2652
R indices (all data)	*R1* = 0.1033, *wR2* = 0.2859	*R1* = 0.0974, *wR2* = 0.2541	*R1* = 0.1252, *wR2* = 0.2881

Table S2. Selected bond lengths (Å) and angles (°) for complex **1-3**

{[Mn(dpop)][Mn(dpop)(H_2O)][$Mo^{III}(CN)_7$] • 7.5H_2O}n (**1**)					
Bond distances(Å)					
Mo(1)-C(4)	2.085(12)	Mn(2)-N(2)#1	2.231(9)	Mn(1)-N(8)	2.261(8)
Mo(1)-C(7)	2.111(15)	Mn(2)-N(13)	2.243(12)	Mn(1)-O(1)	2.284(8)
Mo(1)-C(3)	2.130(14)	Mn(2)-N(16)	2.327(9)	Mn(1)-N(11)	2.319(10)
Mo(1)-C(5)	2.133(12)	Mn(2)-N(17)	2.334(11)	Mn(1)-N(10)	2.341(11)
Mo(1)-C(1)	2.142(12)	Mn(2)-N(15)	2.335(14)	Mn(1)-N(9)	2.350(11)
Mo(1)-C(2)	2.173(11)	Mn(2)-N(14)	2.417(15)	N(2)-Mn(2)#2	2.231(9)
Mo(1)-C(6)	2.227(12)	Mn(1)-N(1)	2.232(10)		
Mn(2)-N(5)	2.218(10)	Mn(1)-N(12)	2.257(10)		
Bond angles(°)					
C(4)-Mo(1)-C(7)	105.2(5)	C(4)-Mo(1)-C(3)	81.6(6)	C(7)-Mo(1)-C(3)	69.6(6)
C(4)-Mo(1)-C(5)	81.8(4)	C(7)-Mo(1)-C(5)	75.8(4)	C(3)-Mo(1)-C(5)	135.8(4)
C(4)-Mo(1)-C(1)	168.3(4)	C(7)-Mo(1)-C(1)	86.3(5)	C(3)-Mo(1)-C(1)	100.2(5)
C(5)-Mo(1)-C(1)	104.1(4)	C(4)-Mo(1)-C(2)	86.5(4)	C(7)-Mo(1)-C(2)	136.9(4)
C(3)-Mo(1)-C(2)	71.5(5)	C(5)-Mo(1)-C(2)	147.2(3)	C(1)-Mo(1)-C(2)	83.1(3)
C(4)-Mo(1)-C(6)	89.8(4)	C(7)-Mo(1)-C(6)	142.2(5)	C(3)-Mo(1)-C(6)	148.0(6)
C(5)-Mo(1)-C(6)	72.2(3)	C(1)-Mo(1)-C(6)	82.5(4)	C(2)-Mo(1)-C(6)	77.3(3)
N(5)-Mn(2)-N(2)#1	175.5(4)	N(5)-Mn(2)-N(13)	92.5(4)	N(2)#1-Mn(2)-N(13)	90.9(3)
N(5)-Mn(2)-N(16)	82.1(3)	N(2)#1-Mn(2)-N(16)	97.1(3)	N(13)-Mn(2)-N(16)	141.7(6)
N(5)-Mn(2)-N(17)	93.4(4)	N(2)#1-Mn(2)-N(17)	90.6(3)	N(13)-Mn(2)-N(17)	69.8(6)
N(16)-Mn(2)-N(17)	72.7(4)	N(5)-Mn(2)-N(15)	90.9(4)	N(2)#1-Mn(2)-N(15)	84.6(4)
N(13)-Mn(2)-N(15)	143.5(7)	N(16)-Mn(2)-N(15)	74.7(5)	N(17)-Mn(2)-N(15)	146.1(5)
N(5)-Mn(2)-N(14)	89.1(4)	N(2)#1-Mn(2)-N(14)	89.0(3)	N(13)-Mn(2)-N(14)	73.9(6)
N(16)-Mn(2)-N(14)	143.4(5)	N(17)-Mn(2)-N(14)	143.6(5)	N(15)-Mn(2)-N(14)	69.9(6)
N(1)-Mn(1)-N(12)	90.2(4)	N(1)-Mn(1)-N(8)	92.8(3)	N(12)-Mn(1)-N(8)	70.0(3)
N(1)-Mn(1)-O(1)	173.9(5)	N(12)-Mn(1)-O(1)	84.5(4)	N(8)-Mn(1)-O(1)	88.2(3)
N(1)-Mn(1)-N(11)	83.0(4)	N(12)-Mn(1)-N(11)	74.2(4)	N(8)-Mn(1)-N(11)	144.0(4)
O(1)-Mn(1)-N(11)	92.6(4)	N(1)-Mn(1)-N(10)	96.1(4)	N(12)-Mn(1)-N(10)	148.3(4)
N(8)-Mn(1)-N(10)	140.2(4)	O(1)-Mn(1)-N(10)	86.9(4)	N(11)-Mn(1)-N(10)	75.8(5)
N(1)-Mn(1)-N(9)	92.2(4)	N(12)-Mn(1)-N(9)	138.0(4)	N(8)-Mn(1)-N(9)	68.0(3)
O(1)-Mn(1)-N(9)	93.8(5)	N(11)-Mn(1)-N(9)	147.6(4)	N(10)-Mn(1)-N(9)	72.9(4)
N(6)-C(6)-Mo(1)	179.3(11)	C(19)-N(8)-Mn(1)	119.0(7)	C(8)-N(8)-Mn(1)	120.5(7)
C(32)-N(17)-Mn(2)	119.0(11)	C(31)-N(17)-Mn(2)	113.9(8)	C(30)-N(16)-Mn(2)	108.2(6)
C(29)-N(16)-Mn(2)	107.5(9)	C(1)-N(1)-Mn(1)	157.2(8)	C(9)-N(9)-Mn(1)	119.5(8)
C(11)-N(9)-Mn(1)	114.0(9)	N(5)-C(5)-Mo(1)	178.2(8)	C(24)-N(14)-Mn(2)	109.8(15)
C(26)-N(14)-Mn(2)	109.2(11)	C(17)-N(12)-Mn(1)	121.4(8)	C(16)-N(12)-Mn(1)	116.9(9)
C(13)-N(10)-Mn(1)	107.6(10)	C(12)-N(10)-Mn(1)	107.9(7)	C(5)-N(5)-Mn(2)	162.6(7)
C(34)-N(13)-Mn(2)	122.3(13)	C(23)-N(13)-Mn(2)	110.7(11)	N(7)-C(7)-Mo(1)	173.7(15)
N(1)-C(1)-Mo(1)	177.6(8)	N(4)-C(4)-Mo(1)	176.4(11)	C(15)-N(11)-Mn(1)	109.1(8)

C(14)-N(11)-Mn(1)	111.5(10)	N(3)-C(3)-Mo(1)	179(2)	C(28)-N(15)-Mn(2)	108.5(12)
C(27)-N(15)-Mn(2)	110.5(14)	N(2)-C(2)-Mo(1)	178.5(9)	C(2)-N(2)-Mn(2)#2	146.6(8)
Symmetry transformations used to generate equivalent atoms: #1 -x+1/2,y-1/2,-z+1/2 #2 -x+1/2,y+1/2,-z+1/2					
$\{[Mn(dpop)][Mn(dpop)(H_2O)][Mo^{III}(CN)_7]\cdot 9H_2O\}_n$ **(2)**					
Bond distances(Å)					
C(1)-Mo(1)	2.169(16)	Mn(1)-N(7)#1	2.245(12)	Mn(2)-N(8)	2.278(11)
C(2)-Mo(1)	2.159(16)	Mn(1)-N(16)	2.270(10)	Mn(2)-N(12)	2.289(14)
C(3)-Mo(1)	2.102(15)	Mn(1)-N(14)	2.273(11)	Mn(2)-N(9)	2.293(14)
C(4)-Mo(1)	2.146(16)	Mn(1)-N(15)	2.274(11)	Mn(2)-N(10)	2.310(13)
C(5)-Mo(1)	2.165(17)	Mn(1)-N(13)	2.288(10)	Mn(2)-O(1)	2.351(8)
C(6)-Mo(1)	2.152(15)	Mn(1)-N(17)	2.323(11)	N(7)-Mn(1)#2	2.245(12)
C(7)-Mo(1)	2.138(15)	Mn(2)-N(11)	2.250(13)		
Mn(1)-N(6)	2.242(12)	Mn(2)-N(3)	2.254(14)		
Bond angles(°)					
N(1)-C(1)-Mo(1)	179.5(13)	N(2)-C(2)-Mo(1)	176.4(14)	N(3)-C(3)-Mo(1)	173.2(11)
N(4)-C(4)-Mo(1)	177.5(11)	N(5)-C(5)-Mo(1)	175.2(11)	N(6)-C(6)-Mo(1)	172.5(10)
N(7)-C(7)-Mo(1)	175.9(10)	N(6)-Mn(1)-N(7)#1	175.6(4)	N(6)-Mn(1)-N(16)	90.1(4)
N(7)#1-Mn(1)-N(16)	93.6(4)	N(6)-Mn(1)-N(14)	90.4(4)	N(7)#1-Mn(1)-N(14)	88.5(4)
N(16)-Mn(1)-N(14)	139.3(4)	N(6)-Mn(1)-N(15)	91.8(4)	N(7)#1-Mn(1)-N(15)	91.9(4)
N(16)-Mn(1)-N(15)	69.8(4)	N(14)-Mn(1)-N(15)	69.5(4)	N(6)-Mn(1)-N(13)	84.6(4)
N(7)#1-Mn(1)-N(13)	91.0(4)	N(16)-Mn(1)-N(13)	147.1(4)	N(14)-Mn(1)-N(13)	73.4(4)
N(15)-Mn(1)-N(13)	142.6(5)	N(6)-Mn(1)-N(17)	94.9(4)	N(7)#1-Mn(1)-N(17)	83.8(4)
N(16)-Mn(1)-N(17)	72.3(4)	N(14)-Mn(1)-N(17)	148.1(4)	N(15)-Mn(1)-N(17)	141.5(4)
N(13)-Mn(1)-N(17)	75.8(4)	N(11)-Mn(2)-N(3)	95.7(4)	N(11)-Mn(2)-N(8)	144.9(5)
N(3)-Mn(2)-N(8)	82.3(4)	N(11)-Mn(2)-N(12)	70.9(5)	N(3)-Mn(2)-N(12)	92.0(4)
N(8)-Mn(2)-N(12)	74.1(5)	N(11)-Mn(2)-N(9)	139.0(5)	N(3)-Mn(2)-N(9)	95.5(4)
N(8)-Mn(2)-N(9)	75.8(5)	N(12)-Mn(2)-N(9)	147.6(5)	N(11)-Mn(2)-N(10)	69.6(6)
N(3)-Mn(2)-N(10)	95.8(4)	N(8)-Mn(2)-N(10)	145.5(6)	N(12)-Mn(2)-N(10)	140.4(6)
N(9)-Mn(2)-N(10)	70.1(5)	N(11)-Mn(2)-O(1)	86.1(3)	N(3)-Mn(2)-O(1)	173.1(4)
N(8)-Mn(2)-O(1)	92.4(3)	N(12)-Mn(2)-O(1)	82.2(4)	N(9)-Mn(2)-O(1)	87.4(4)
N(10)-Mn(2)-O(1)	91.1(4)	C(3)-Mo(1)-C(7)	135.4(5)	C(3)-Mo(1)-C(4)	80.8(5)
C(7)-Mo(1)-C(4)	81.9(4)	C(3)-Mo(1)-C(6)	143.1(5)	C(7)-Mo(1)-C(6)	73.0(5)
C(4)-Mo(1)-C(6)	81.8(4)	C(3)-Mo(1)-C(2)	74.6(6)	C(7)-Mo(1)-C(2)	148.0(5)
C(4)-Mo(1)-C(2)	95.6(5)	C(6)-Mo(1)-C(2)	75.1(5)	C(3)-Mo(1)-C(5)	74.1(5)
C(7)-Mo(1)-C(5)	72.0(5)	C(4)-Mo(1)-C(5)	106.6(4)	C(6)-Mo(1)-C(5)	142.4(5)
C(2)-Mo(1)-C(5)	137.8(5)	C(3)-Mo(1)-C(1)	106.3(5)	C(7)-Mo(1)-C(1)	94.9(5)
C(4)-Mo(1)-C(1)	172.0(5)	C(6)-Mo(1)-C(1)	90.3(4)	C(2)-Mo(1)-C(1)	83.2(5)
C(5)-Mo(1)-C(1)	79.1(5)	C(3)-N(3)-Mn(2)	150.4(10)	C(6)-N(6)-Mn(1)	151.9(10)
C(7)-N(7)-Mn(1)#2	155.4(10)	C(17)-N(8)-Mn(2)	110.8(9)	C(28)-N(8)-Mn(2)	109.7(9)
C(25)-N(9)-Mn(2)	111.4(10)	C(15)-N(9)-Mn(2)	108.5(10)	C(29)-N(10)-Mn(2)	117.8(13)
C(24)-N(10)-Mn(2)	121.5(13)	C(31)-N(11)-Mn(2)	120.2(14)	C(22)-N(11)-Mn(2)	116.9(11)
C(38)-N(12)-Mn(2)	119.1(11)	C(30)-N(12)-Mn(2)	113.9(11)	C(27)-N(13)-Mn(1)	107.8(9)
C(23)-N(13)-Mn(1)	108.9(8)	C(16)-N(14)-Mn(1)	119.5(9)	C(12)-N(14)-Mn(1)	115.3(9)

C(14)-N(15)-Mn(1)	120.1(10)	C(18)-N(15)-Mn(1)	117.8(9)	C(9)-N(16)-Mn(1)	122.0(10)
C(13)-N(16)-Mn(1)	116.6(8)	C(10)-N(17)-Mn(1)	107.2(9)	C(26)-N(17)-Mn(1)	109.1(8)
Symmetry transformations used to generate equivalent atoms: #1 -x+3/2,y+1/2,-z+3/2 #2 -x+3/2,y-1/2,-z+3/2					
{[Mn(dpop)][Mn(dpop)(H_2O)][$Mo^{III}(CN)_7$] • [Mn(dpop)][Mn(dpop)(H_2O)] [$Mo^{III}(CN)_7$] • 23H_2O}$_n$ **(3)**:					
Bond distances(Å)					
Mo(1)-C(1)	2.117(12)	Mn(2)-N(20)	2.248(9)	Mn(1)-N(15)	2.261(12)
Mo(1)-C(7)	2.134(11)	Mn(2)-N(3)	2.264(10)	Mn(1)-O(1)	2.266(9)
Mo(1)-C(4)	2.139(13)	Mn(2)-N(24)	2.279(9)	Mn(1)-N(18)	2.291(11)
Mo(1)-C(5)	2.156(14)	Mn(2)-N(21)	2.283(11)	Mn(1)-N(17)	2.303(12)
Mo(1)-C(6)	2.167(14)	Mn(2)-N(22)	2.287(9)	Mn(1)-N(16)	2.341(11)
Mo(1)-C(2)	2.169(13)	Mn(2)-N(23)	2.298(10)	Mn(4)-N(13)	2.171(11)
Mo(1)-C(3)	2.175(12)	Mn(3)-N(11)#2	2.211(10)	Mn(4)-N(30)	2.243(12)
Mo(2)-C(10)	2.087(13)	Mn(3)-N(8)	2.237(10)	Mn(4)-N(34)	2.264(11)
Mo(2)-C(13)	2.097(14)	Mn(3)-N(25)	2.239(9)	Mn(4)-O(2)	2.265(8)
Mo(2)-C(12)	2.105(13)	Mn(3)-N(29)	2.251(9)	Mn(4)-N(32)	2.299(11)
Mo(2)-C(11)	2.133(11)	Mn(3)-N(27)	2.315(9)	Mn(4)-N(33)	2.323(10)
Mo(2)-C(8)	2.147(14)	Mn(3)-N(26)	2.313(10)	Mn(4)-N(31)	2.342(12)
Mo(2)-C(14)	2.164(15)	Mn(3)-N(28)	2.316(10)	N(7)-Mn(2)#3	2.224(9)
Mo(2)-C(9)	2.189(12)	Mn(1)-N(19)	2.233(11)	N(11)-Mn(3)#4	2.211(9)
Mn(2)-N(7)#1	2.224(9)	Mn(1)-N(1)	2.238(9)		
Bond angles(°)					
C(1)-Mo(1)-C(7)	92.0(4)	C(1)-Mo(1)-C(4)	90.1(4)	C(7)-Mo(1)-C(4)	143.3(4)
C(1)-Mo(1)-C(5)	174.8(4)	C(7)-Mo(1)-C(5)	84.1(4)	C(4)-Mo(1)-C(5)	95.1(4)
C(1)-Mo(1)-C(6)	97.8(5)	C(7)-Mo(1)-C(6)	71.9(4)	C(4)-Mo(1)-C(6)	71.5(4)
C(5)-Mo(1)-C(6)	84.2(5)	C(1)-Mo(1)-C(2)	87.6(4)	C(7)-Mo(1)-C(2)	72.2(4)
C(4)-Mo(1)-C(2)	144.5(4)	C(5)-Mo(1)-C(2)	88.0(5)	C(6)-Mo(1)-C(2)	143.8(4)
C(1)-Mo(1)-C(3)	86.6(4)	C(7)-Mo(1)-C(3)	144.3(4)	C(4)-Mo(1)-C(3)	72.4(4)
C(5)-Mo(1)-C(3)	94.6(4)	C(6)-Mo(1)-C(3)	143.7(4)	C(2)-Mo(1)-C(3)	72.0(4)
C(10)-Mo(2)-C(13)	114.6(6)	C(10)-Mo(2)-C(12)	77.5(5)	C(13)-Mo(2)-C(12)	71.9(5)
C(10)-Mo(2)-C(11)	91.9(5)	C(13)-Mo(2)-C(11)	130.1(4)	C(12)-Mo(2)-C(11)	74.1(4)
C(10)-Mo(2)-C(8)	86.8(5)	C(13)-Mo(2)-C(8)	74.1(4)	C(12)-Mo(2)-C(8)	131.7(4)
C(11)-Mo(2)-C(8)	152.7(4)	C(10)-Mo(2)-C(14)	166.0(5)	C(13)-Mo(2)-C(14)	78.1(5)
C(12)-Mo(2)-C(14)	113.6(5)	C(11)-Mo(2)-C(14)	83.5(4)	C(8)-Mo(2)-C(14)	91.3(4)
C(10)-Mo(2)-C(9)	84.5(5)	C(13)-Mo(2)-C(9)	144.5(5)	C(12)-Mo(2)-C(9)	143.5(4)
C(11)-Mo(2)-C(9)	75.1(4)	C(8)-Mo(2)-C(9)	77.7(4)	C(14)-Mo(2)-C(9)	81.5(4)
N(7)#1-Mn(2)-N(20)	88.2(3)	N(7)#1-Mn(2)-N(3)	176.7(3)	N(20)-Mn(2)-N(3)	94.8(3)
N(7)#1-Mn(2)-N(24)	87.6(3)	N(20)-Mn(2)-N(24)	70.5(4)	N(3)-Mn(2)-N(24)	92.3(3)
N(7)#1-Mn(2)-N(21)	92.1(3)	N(20)-Mn(2)-N(21)	69.1(4)	N(3)-Mn(2)-N(21)	90.1(4)
N(24)-Mn(2)-N(21)	139.5(4)	N(7)#1-Mn(2)-N(22)	84.1(3)	N(20)-Mn(2)-N(22)	139.9(4)
N(3)-Mn(2)-N(22)	94.4(3)	N(24)-Mn(2)-N(22)	147.8(4)	N(21)-Mn(2)-N(22)	72.0(4)
N(7)#1-Mn(2)-N(23)	90.8(3)	N(20)-Mn(2)-N(23)	143.5(4)	N(3)-Mn(2)-N(23)	86.0(3)
N(24)-Mn(2)-N(23)	73.0(3)	N(21)-Mn(2)-N(23)	147.4(4)	N(22)-Mn(2)-N(23)	76.0(4)
N(11)#2-Mn(3)-N(8)	176.7(4)	N(11)#2-Mn(3)-N(25)	90.8(3)	N(8)-Mn(3)-N(25)	92.3(3)

N(11)#2-Mn(3)-N(29)	90.2(3)	N(8)-Mn(3)-N(29)	89.8(3)	N(25)-Mn(3)-N(29)	70.6(3)
N(11)#2-Mn(3)-N(27)	80.3(3)	N(8)-Mn(3)-N(27)	98.0(3)	N(25)-Mn(3)-N(27)	140.1(4)
N(29)-Mn(3)-N(27)	147.2(4)	N(11)#2-Mn(3)-N(26)	89.6(3)	N(8)-Mn(3)-N(26)	92.5(3)
N(25)-Mn(3)-N(26)	69.0(3)	N(29)-Mn(3)-N(26)	139.6(3)	N(27)-Mn(3)-N(26)	72.2(3)
N(11)#2-Mn(3)-N(28)	92.5(4)	N(8)-Mn(3)-N(28)	84.4(4)	N(25)-Mn(3)-N(28)	143.8(4)
N(29)-Mn(3)-N(28)	73.3(3)	N(27)-Mn(3)-N(28)	75.8(4)	N(26)-Mn(3)-N(28)	147.1(3)
N(19)-Mn(1)-N(1)	95.9(4)	N(19)-Mn(1)-N(15)	71.0(4)	N(1)-Mn(1)-N(15)	96.3(3)
N(19)-Mn(1)-O(1)	93.1(4)	N(1)-Mn(1)-O(1)	170.8(4)	N(15)-Mn(1)-O(1)	84.3(4)
N(19)-Mn(1)-N(18)	75.3(5)	N(1)-Mn(1)-N(18)	97.3(4)	N(15)-Mn(1)-N(18)	144.7(5)
O(1)-Mn(1)-N(18)	87.3(4)	N(19)-Mn(1)-N(17)	149.5(4)	N(1)-Mn(1)-N(17)	81.6(4)
N(15)-Mn(1)-N(17)	139.5(5)	O(1)-Mn(1)-N(17)	91.9(4)	N(18)-Mn(1)-N(17)	74.8(5)
N(19)-Mn(1)-N(16)	137.9(4)	N(1)-Mn(1)-N(16)	89.7(4)	N(15)-Mn(1)-N(16)	66.9(4)
O(1)-Mn(1)-N(16)	82.1(4)	N(18)-Mn(1)-N(16)	145.3(5)	N(17)-Mn(1)-N(16)	72.7(4)
N(13)-Mn(4)-N(30)	92.7(4)	N(13)-Mn(4)-N(34)	93.5(4)	N(30)-Mn(4)-N(34)	72.3(5)
N(13)-Mn(4)-O(2)	175.6(4)	N(30)-Mn(4)-O(2)	83.4(4)	N(34)-Mn(4)-O(2)	83.3(3)
N(13)-Mn(4)-N(32)	95.3(4)	N(30)-Mn(4)-N(32)	138.8(5)	N(34)-Mn(4)-N(32)	146.9(4)
O(2)-Mn(4)-N(32)	89.0(3)	N(13)-Mn(4)-N(33)	87.9(4)	N(30)-Mn(4)-N(33)	144.7(5)
N(34)-Mn(4)-N(33)	72.4(4)	O(2)-Mn(4)-N(33)	94.0(4)	N(32)-Mn(4)-N(33)	76.1(4)
N(13)-Mn(4)-N(31)	91.3(4)	N(30)-Mn(4)-N(31)	68.9(5)	N(34)-Mn(4)-N(31)	141.1(5)
O(2)-Mn(4)-N(31)	89.3(3)	N(32)-Mn(4)-N(31)	70.6(5)	N(33)-Mn(4)-N(31)	146.4(4)
C(33)-N(22)-Mn(2)	106.9(7)	C(34)-N(22)-Mn(2)	107.8(7)	C(55)-N(25)-Mn(3)	120.5(7)
C(59)-N(25)-Mn(3)	118.0(7)	C(66)-N(33)-Mn(4)	109.2(8)	C(65)-N(33)-Mn(4)	107.2(8)
C(8)-N(8)-Mn(3)	143.2(9)	C(44)-N(20)-Mn(2)	120.2(8)	C(40)-N(20)-Mn(2)	118.3(9)
C(51)-N(27)-Mn(3)	108.6(7)	C(50)-N(27)-Mn(3)	107.6(7)	C(3)-N(3)-Mn(2)	160.6(9)
C(29)-N(15)-Mn(1)	124.7(10)	C(25)-N(15)-Mn(1)	117.5(9)	C(70)-N(30)-Mn(4)	116.5(11)
C(74)-N(30)-Mn(4)	119.1(11)	C(23)-N(19)-Mn(1)	119.9(10)	C(22)-N(19)-Mn(1)	115.1(9)
C(1)-N(1)-Mn(1)	137.0(8)	N(3)-C(3)-Mo(1)	176.1(9)	N(8)-C(8)-Mo(2)	176.9(10)
C(48)-N(28)-Mn(3)	106.5(7)	C(49)-N(28)-Mn(3)	108.3(8)	C(68)-N(34)-Mn(4)	116.6(11)
C(67)-N(34)-Mn(4)	118.2(8)	C(13)-N(13)-Mn(4)	151.6(10)	C(16)-N(16)-Mn(1)	120.8(9)
C(17)-N(16)-Mn(1)	113.5(9)	C(31)-N(21)-Mn(2)	120.8(9)	C(32)-N(21)-Mn(2)	116.4(8)
N(1)-C(1)-Mo(1)	176.2(9)	C(36)-N(23)-Mn(2)	106.9(7)	C(35)-N(23)-Mn(2)	107.7(8)
C(46)-N(29)-Mn(3)	120.1(8)	C(47)-N(29)-Mn(3)	116.8(7)	C(20)-N(18)-Mn(1)	108.2(10)
C(21)-N(18)-Mn(1)	106.6(8)	C(61)-N(31)-Mn(4)	119.0(12)	C(62)-N(31)-Mn(4)	116.6(11)
C(19)-N(17)-Mn(1)	109.8(9)	C(18)-N(17)-Mn(1)	111.3(9)	N(7)-C(7)-Mo(1)	174.9(9)
N(11)-C(11)-Mo(2)	177.0(9)	N(5)-C(5)-Mo(1)	173.1(10)	N(14)-C(14)-Mo(2)	176.1(12)
N(9)-C(9)-Mo(2)	176.4(10)	N(2)-C(2)-Mo(1)	179.1(12)	N(6)-C(6)-Mo(1)	175.3(13)
C(38)-N(24)-Mn(2)	119.1(9)	C(37)-N(24)-Mn(2)	116.0(7)	N(4)-C(4)-Mo(1)	176.0(11)
C(53)-N(26)-Mn(3)	118.2(8)	C(52)-N(26)-Mn(3)	116.2(8)	N(10)-C(10)-Mo(2)	178.2(12)
C(64)-N(32)-Mn(4)	107.9(8)	C(63)-N(32)-Mn(4)	108.6(9)	N(12)-C(12)-Mo(2)	176.6(11)
N(13)-C(13)-Mo(2)	175.3(13)	C(7)-N(7)-Mn(2)#3	150.8(8)	C(11)-N(11)-Mn(3)#4	162.7(9)

Symmetry transformations used to generate equivalent atoms:

#1 -x,y-1/2,-z+1/2 #2 -x+1,y+1/2,-z+3/2

#3 -x,y+1/2,-z+1/2 #4 -x+1,y-1/2,-z+3/2