Table S1. Selected bond distances (in Å) in Ni (1,2-bis(4-pyridyl)ethylene)$[Ni(CN)_4]$ · ½L. DMSO · $2H_2O$

Atoms	Distances	Atoms	Distances	Atoms	Distances	Atoms	Distances
	Main Components			Disordered ligand components			
Ni1-N1	2.060(2)	Ni2-N2	2.055(2)	Ni1-Ni1A	2.118(7)		
Ni1-N4	2.066(2)	Ni2-N3	2.063(2)				
Ni1-N11	2.099(2)	Ni2-N21	2.1070(13)				
Ni3-C1	1.856(2)	Ni4-C2	1.859(2)				
Ni3-C3	1.865(2)	Ni4-C4	1.860(2)				
C1-N1	1.150(3)	C2-N2	1.154(3)				
C3-N3	1.151(3)	C4-N4	1.158(3)				
N11-C11	1.342(3)	N21-C21	1.339(2)	N11A-C11A	1.337(6)		
N11-C15	1.343(3)	N21-C25	1.339(2)	N11A-C15A	1.337(6)		
C11-C12	1.382(3)	C21-C22	1.380(2)	C11A-C12A	1.387(6)		
C12-C13	1.389(4)	C22-C23	1.392(3)	C12A-C13A	1.388(6)		
C13-C14	1.389(4)	C23-C24	1.395(3)	C13A-C14A	1.385(6)		
C14-C15	1.381(3)	C24-C25	1.382(2)	C13A-C16A	1.483(6)		
C16-C16	1.297(6)	C26-C26	1.319(5)	C14A-C15A	1.394(6)		
		C23-C26	1.474(2)	C16A-C16A	1.325(14)		
N31-C31	1.342(6)	N41-C41	1.337(5)	N31A-C31A	1.337(6)	N41A-C41A	1.339(6)
N31-C35	1.327(6)	N41-C45	1.343(6)	N31A-C35A	1.335(6)	N41A-C45A	1.323(6)
C31-C32	1.394(6)	C41-C42	1.401(6)	C31A-C32A	1.385(6)	C41A-C42A	1.392(6
C32-C33	1.395(6)	C42-C43	1.386(6)	C32A-C33A	1.391(6)	C42A-C43A	1.391(6
C33-C34	1.384(5)	C43-C44	1.392(6)	C33A-C34A	1.396(6)	C43A-C44A	1.388(6)
C33-C36	1.479(6)	C43-C46	1.475(6)	C34A-C35A	1.396(6)	C43A-C46A	1.474(6)
C34-C35	1.402(6)	C44-C45	1.393(6)	C36A-C46A	1.290(9)	C44A-C45A	1.398(6)
C36-C46	1.332(8)						
Disordered DMSO							
S1-O1S	1.837(4)	S2-O2S	1.858(4)				
S1-C1S	1.827(4)	S2-C3S	1.507(3)				
S1-C2S	1.761(5)	S2-C4S	1.734(5)				

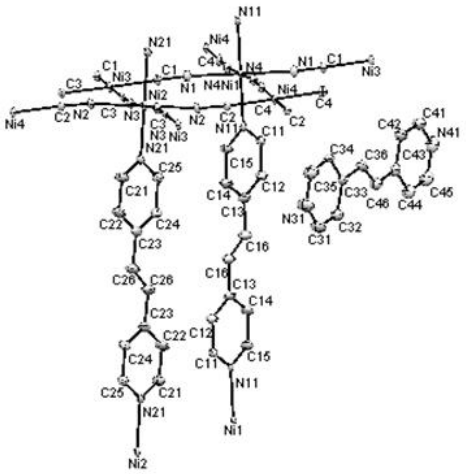

Fig S1. Labeling scheme for the Ni(bpene)[Ni(CN)$_4$] molecule

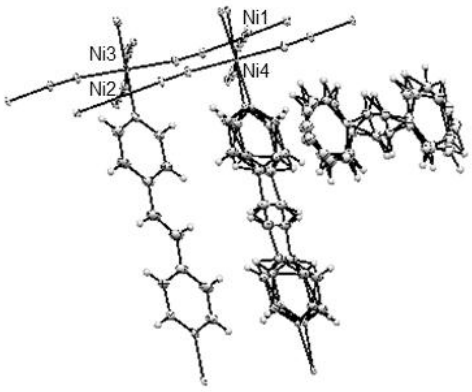

Fig S2. Partial structure of Ni(bpene)[Ni(CN)$_4$ showing the overlapping disordered ligands ('Short bond appearance' is a result of short distances between disordered atoms).

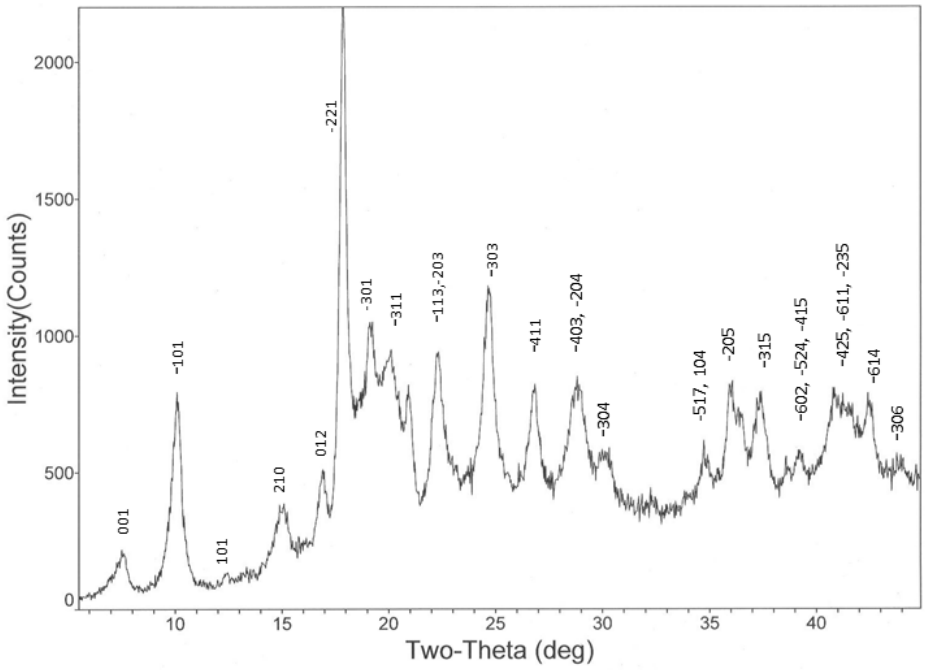

Fig S3. Powder X-ray diffraction pattern of Ni(bpene)[Ni(CN)$_4$] and selected *hkl* indexes.