

Utilization of Ligand Containing 2,2'-Bipyridyl and Tetrazolate Groups to Construct of a 2D Co(II) Coordination Polymer: Spin Canting and Metamagnetism

Jia-Dong Tsai and Chen-I Yang*

Department of Chemistry, Tunghai University, Taichung 407, Taiwan

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Table 1S. Selected bond distances (Å) and angles (°) for compound **1**.

1			
Co(1)-N(7)	2.089(2)	Co(1)-N(2)	2.122(2)
Co(1)-N(3)	2.105(2)	Co(1)-N(9)#1	2.141(3)
Co(1)-N(1)	2.111(2)	Co(1)-N(6)#2	2.165(2)
N(6)-Co(1)#3	2.165(2)	N(1)-Co(1)-N(2)	73.50(9)
N(9)-Co(1)#4	2.141(3)	N(2)-Co(1)-N(9)#1	94.05(9)
N(7)-Co(1)-N(3)	133.85(10)	N(7)-Co(1)-N(6)#2	86.87(10)
N(7)-Co(1)-N(1)	149.82(9)	N(3)-Co(1)-N(6)#2	91.98(9)
N(3)-Co(1)-N(1)	76.28(9)	N(1)-Co(1)-N(6)#2	90.87(9)
N(7)-Co(1)-N(2)	76.34(10)	N(2)-Co(1)-N(6)#2	87.67(8)
N(3)-Co(1)-N(2)	149.77(10)	N(9)#1-Co(1)-N(6)#2	173.47(9)

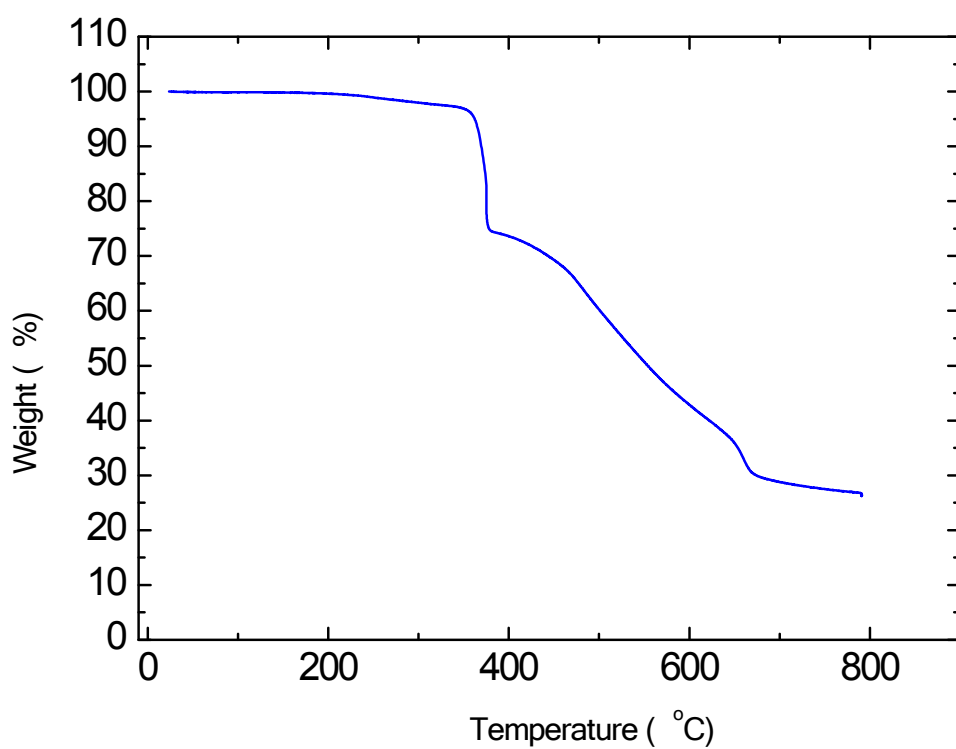


Fig. 1S. Thermogravimetric (TG) analysis diagram of compound **1**.

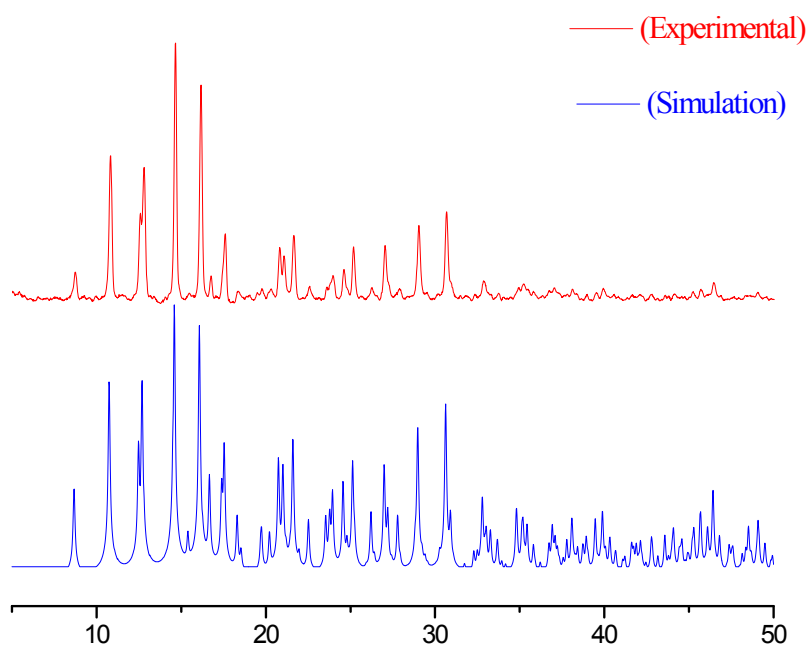


Fig. 2S. Simulated PXRD pattern (red) and experimental PXRD pattern of compound **1**.

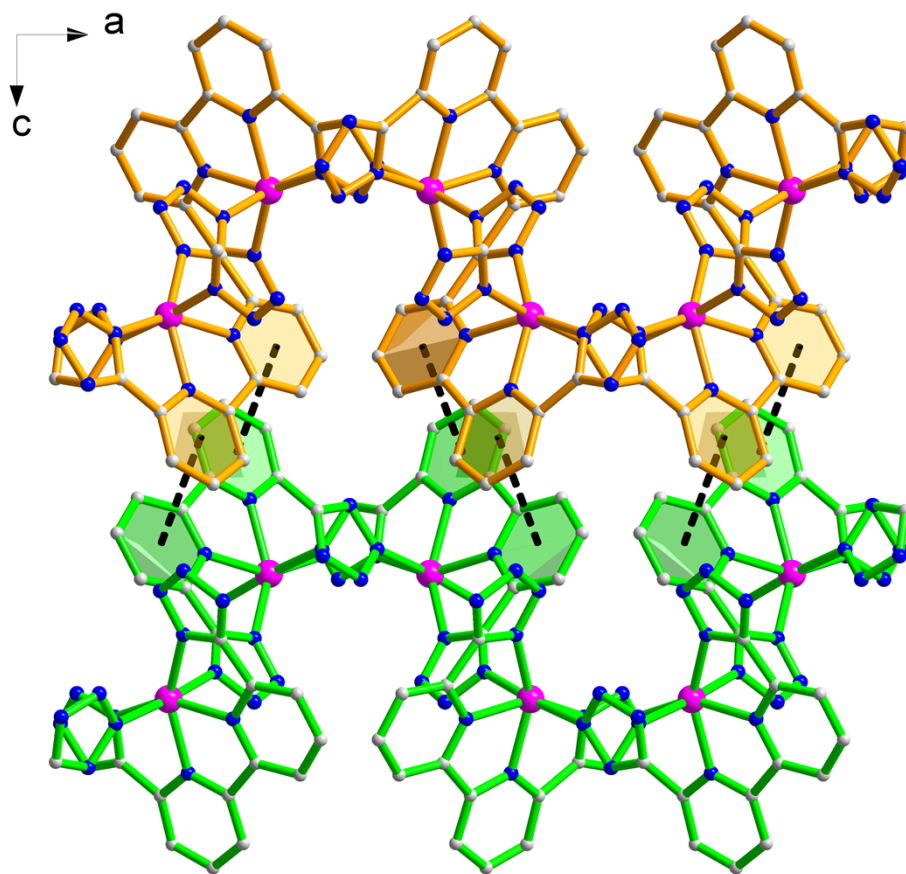


Fig. 3S. Perspective view of interlayer π - π interactions in **1** (dashed line).

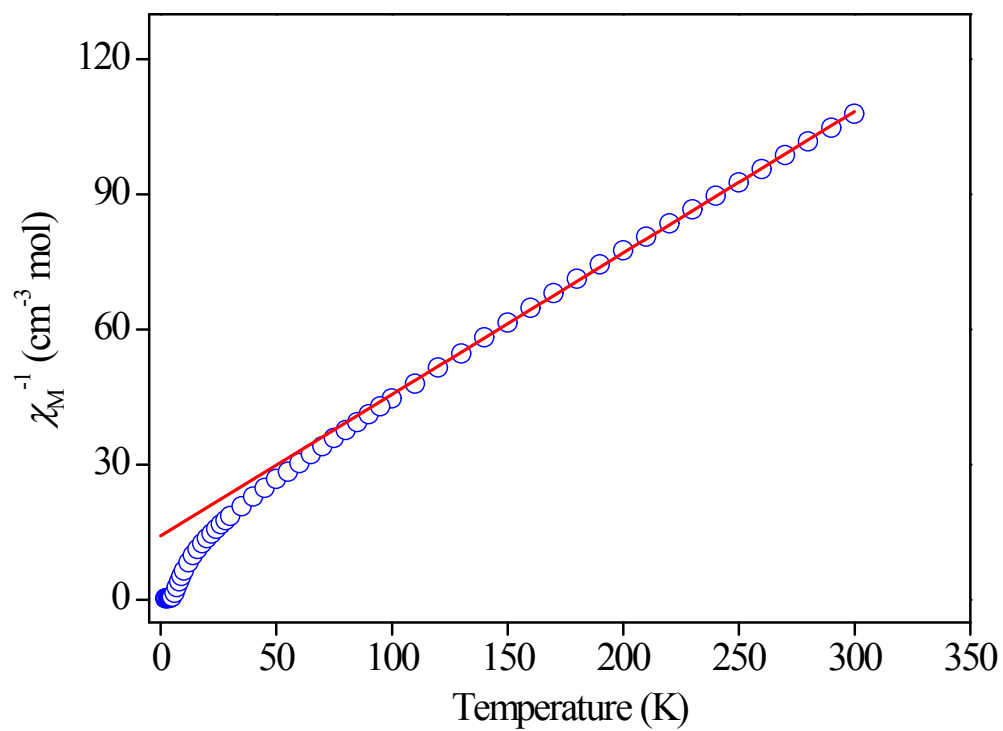


Fig. 4S. Plot of χ_M^{-1} (\circ) vs. temperature for a microcrystalline sample of compound **1**. The solid line represents the best fit χ_M^{-1} above 100 K with a Curie–Weiss law.

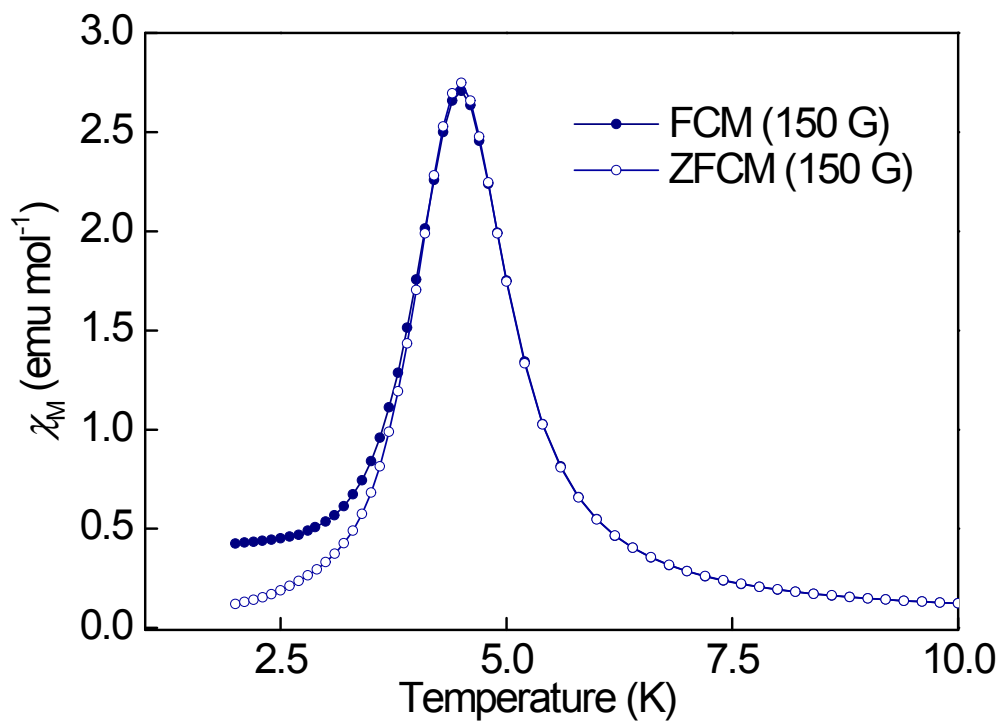


Fig. 5S. FC and ZFC magnetization plots of compound **1** at the field of 150 G.

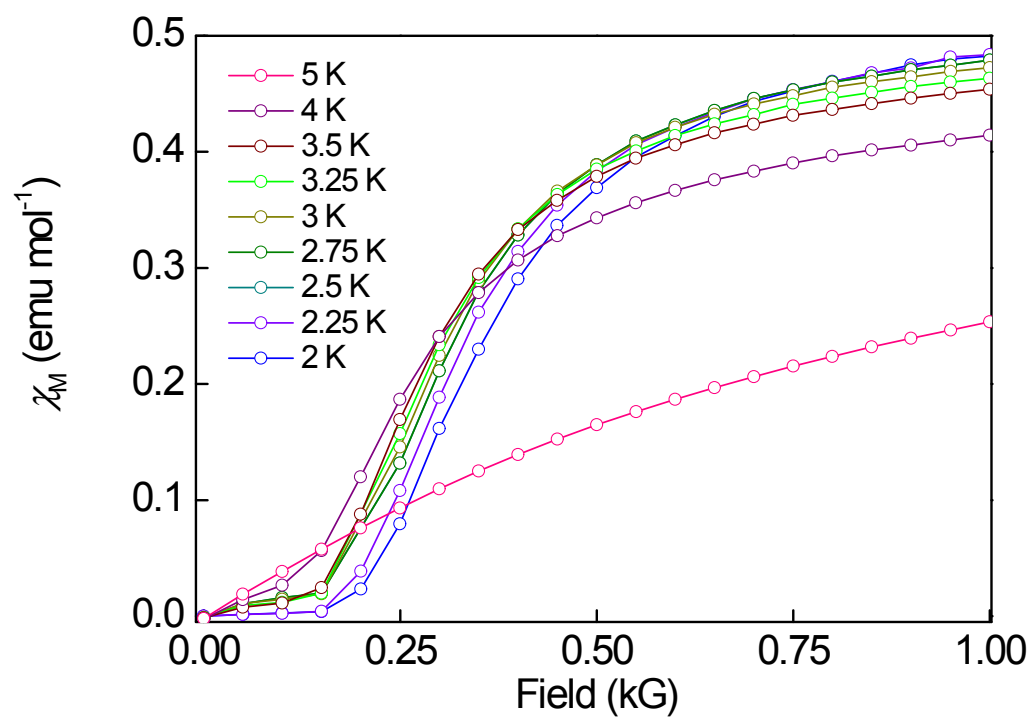


Fig. 6S. Isothermal magnetization of compound 1 at the indicated temperatures.

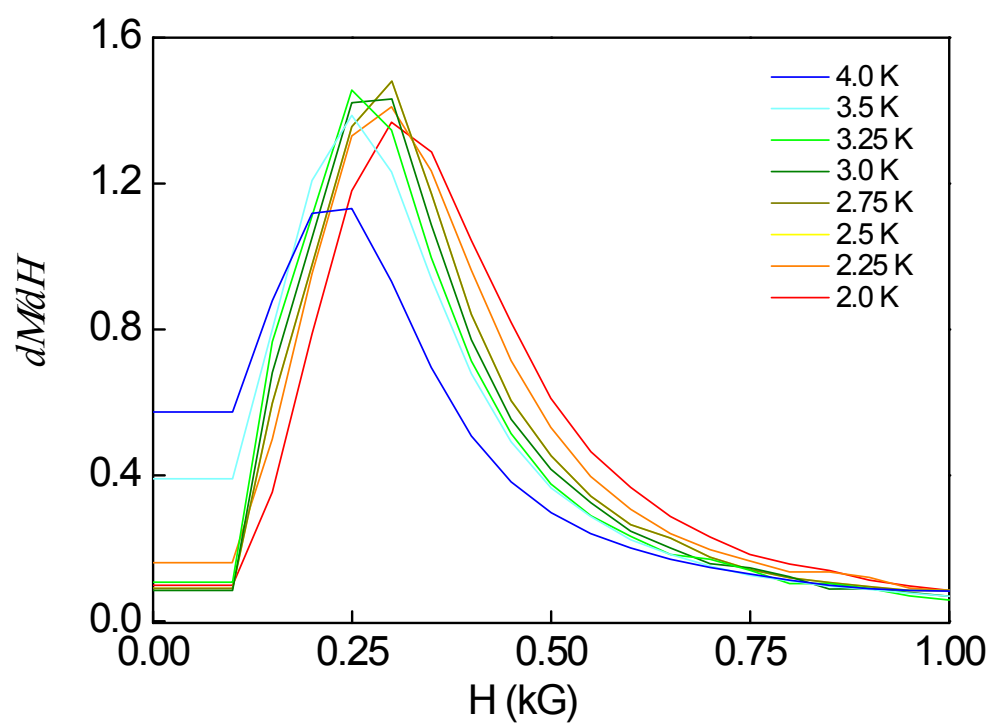


Fig. 7S. dM/dH vs. H plots for the virgin magnetization of compound 1.