

Electronic Supporting Information (ESI)

Microwave-Assisted Synthesis, Crystal Structure and Properties of a disc-like heptanuclear cobalt (II) cluster $[\text{Co}_7(\text{immp})_6(\text{CH}_3\text{O})_6] \cdot 2\text{ClO}_4$ and a tetranuclear Heterometallic cubanic Cluster
 $[\text{NaCo}_3(\text{L})_3(\text{CH}_3\text{CN})_3(\text{OH})]_2 \cdot \text{CH}_3\text{CN}$

Shu-Hua Zhang,^{†,‡} You Song[†], Hong Liang,^{*,†,‡} Ming-Hua Zheng[‡]

[†] State Key Laboratory of Coordination Chemistry, Nanjing University, Nanjing 210093 People's Republic of China

[‡] Department of Chemistry and Chemical Engineering, Guangxi Normal University, Guilin 541004 People's Republic of China

*Corresponding authors. E-mail: hongliangby1@yahoo.com.cn. Fax: Int. code +86 773 5896-672

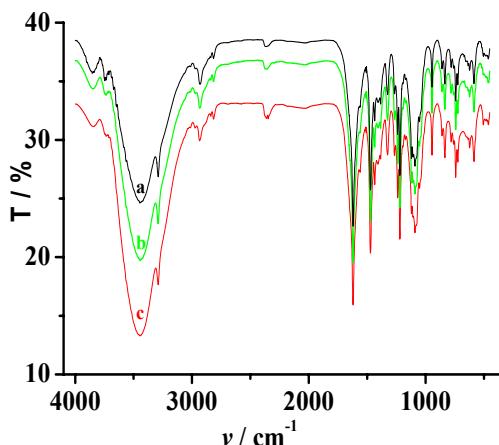
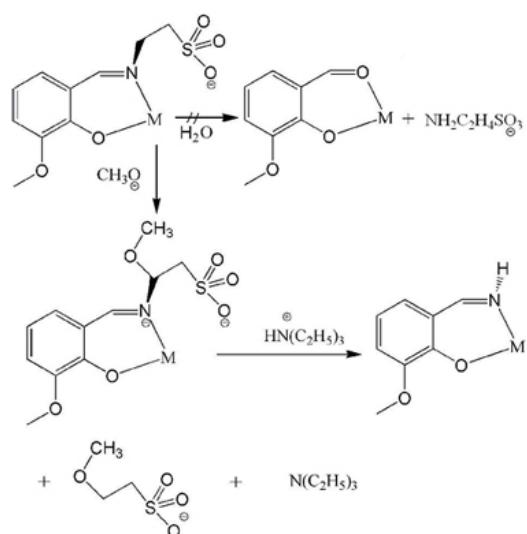


Fig. S1 IR spectrum of different methods synthesis **1**. a: method A; b: method B; c: method C.



Scheme S1. The probable mechanism of the formation for ligand immp.

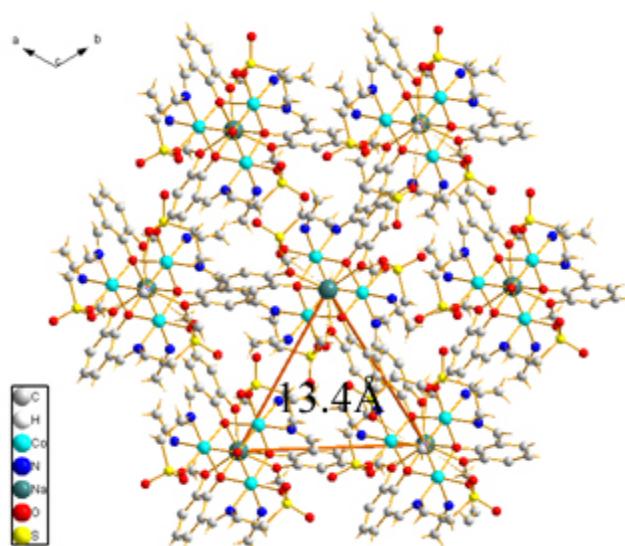


Fig. S2 Packing diagram of structure 2.

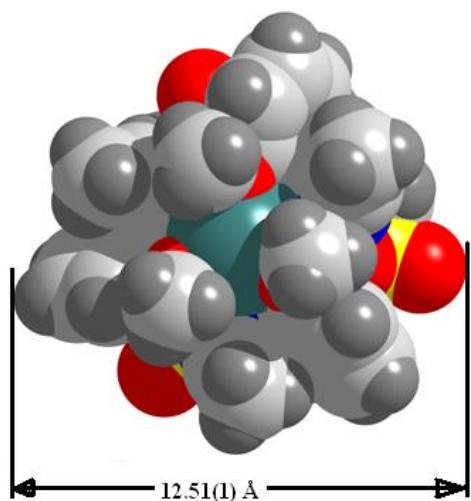


Fig. S3 Space-filling plot of **2**.

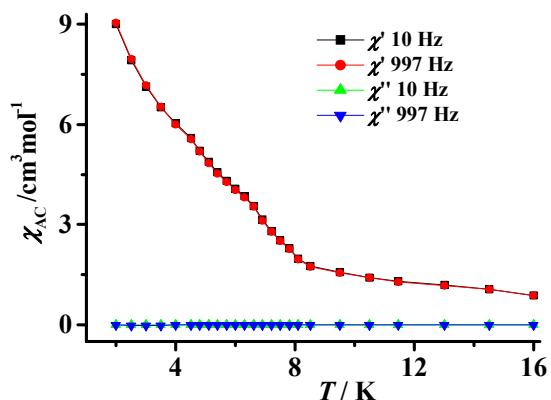


Fig. S4 Plot of ac susceptibility shown as χ' vs T and χ'' vs T for **1**.

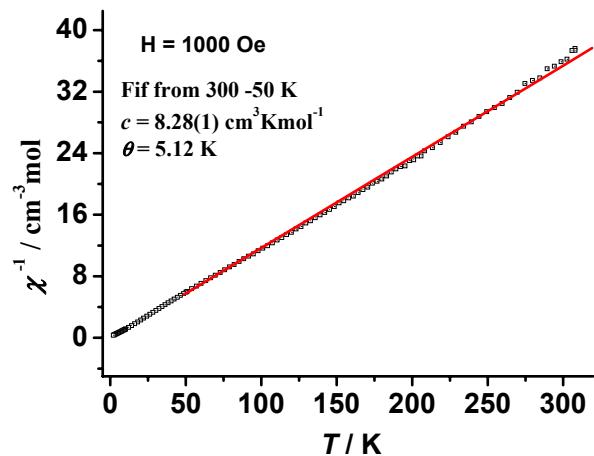


Fig. S5 Plot of χ^{-1} vs T for **2**.

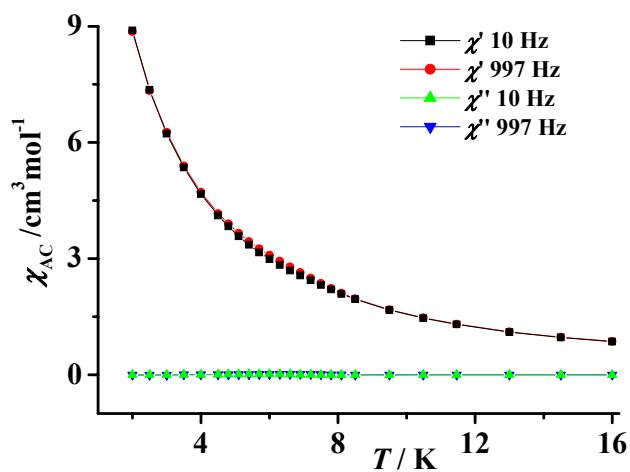


Fig. S6 Plot of ac susceptibility shown as χ vs T and χ'' vs T for **2**.

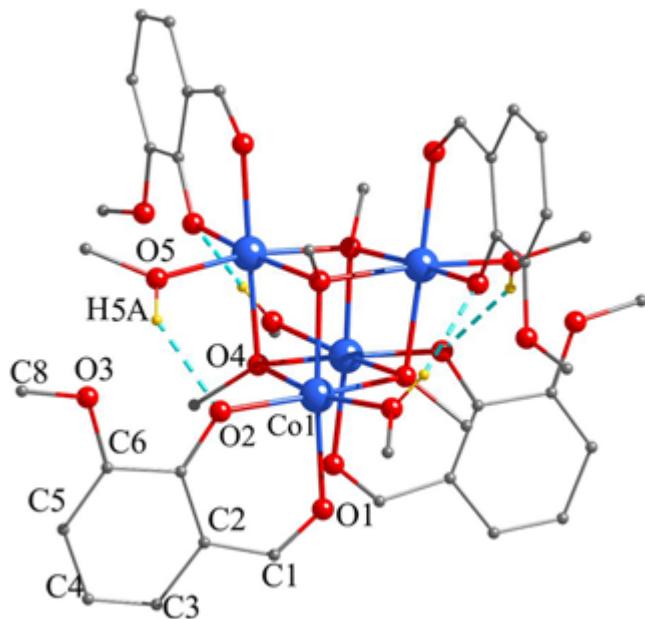


Fig. S7 The structure of cluster **a**, non-hydrogen bonds hydrogen atoms omitted.