Electronic Supplementary Information

A New Family of 3d-4f Heterometallic Coordination Polymers Assembled with 1H-1,2,3-Triazole-4,5-Dicarboxylic Acid: Syntheses, Structures and Magnetic Properties


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1. **Power X-Ray Diffraction**

![Power X-Ray Diffraction](image)

**Fig. S1.** Comparisons of the experimental PXRD patterns of as-synthesized Cu-Ln with that simulated from their single crystal data.

2. **Infrared Spectra**

![Infrared Spectra](image)

**Fig. S2.** Infrared spectra of Cu-Ln.
3. Scanning Electron Microscopy

![SEM images](image)

**Fig. S3.** Optional SEM images of the as-synthesized Cu-Dy (up) and Cu-Tb (bottom).

4. Thermogravimetric Analysis

![TGA graph](image)

**Fig. S4.** The thermal gravimetric analysis (TGA) data of Cu-Ln.
5. Magnetism Measurements

Fig. S5. Temperature dependence of the in-phase ($\chi'$) and out-of-phase ($\chi''$) components of ac susceptibilities for Cu-Gd under the indicated frequencies.

Fig. S6. Temperature dependence of the in-phase ($\chi'$) and out-of-phase ($\chi''$) components of ac susceptibilities for Cu-Tb under the indicated frequencies.
Fig. S7. Temperature dependence of the in-phase ($\chi'$) and out-of-phase ($\chi''$) components of ac susceptibilities for Cu-Dy under the indicated frequencies.

Fig. S8. Temperature dependence of the in-phase ($\chi'$) and out-of-phase ($\chi''$) components of ac susceptibilities for Cu-Ho under the indicated frequencies.
Fig. S9. Temperature dependence of the in-phase ($\chi'$) and out-of-phase ($\chi''$) components of ac susceptibilities for Cu-Er under the indicated frequencies.