

## Supplementary Information

**Cyano and end-to-end azido bridged 3D copper(II)-copper(I) mixed-valence coordination polymer and its transformation to copper nitride nanoparticles.**

**Manoj Trivedi,<sup>a\*</sup> Gurmeet Singh,<sup>a</sup> Abhinav Kumar<sup>b</sup> and Nigam P. Rath<sup>c\*</sup>**

E-mail address: manojtri@gmail.com (M.T.); rathn@umsl.edu(NPR).

Corresponding author. Tel.: + 91 9811730475 (MT); (314) 516-5333 (NPR).

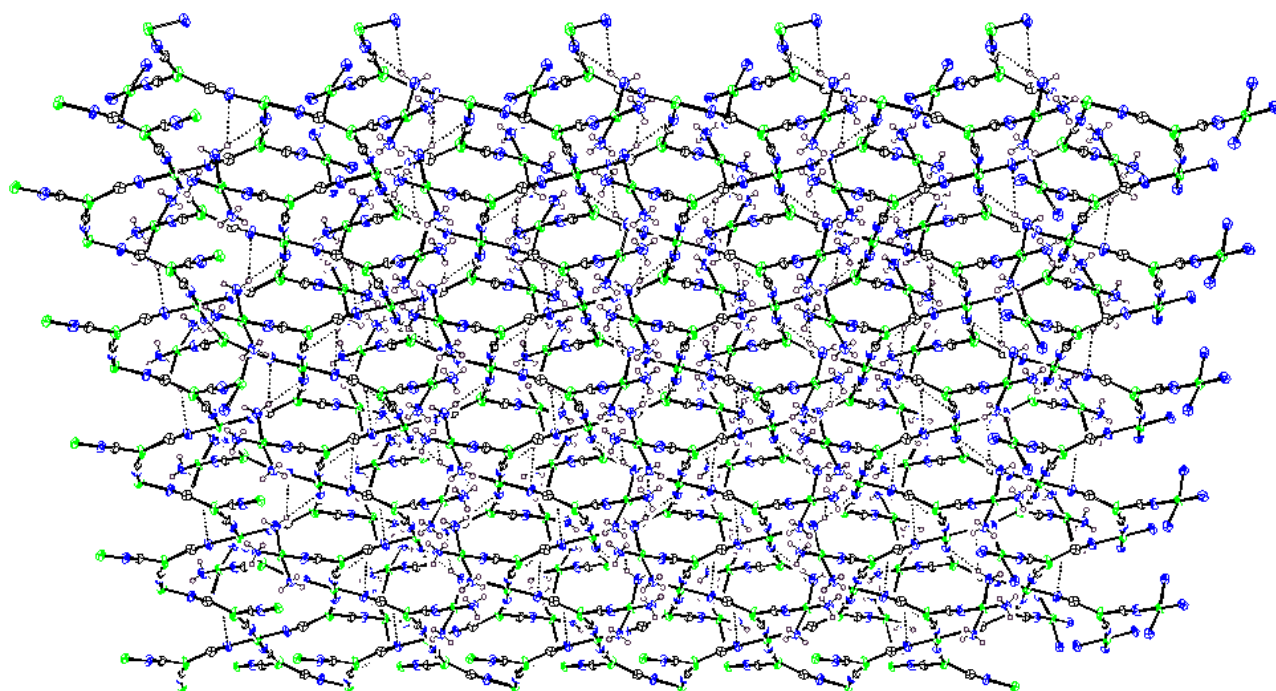


Fig. S1. H-bonding plot of **1** showing N-H...N hydrogen bond interactions in the crystal lattice.

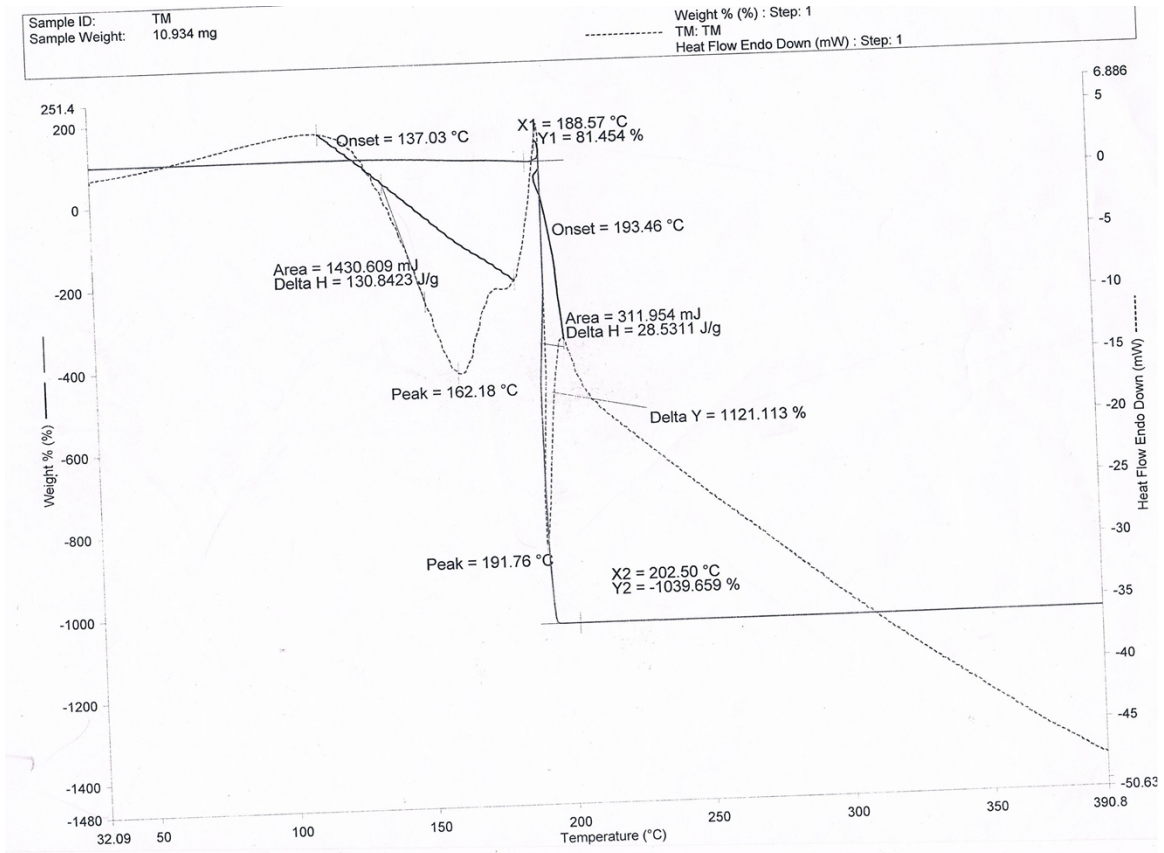


Fig. S2. TGA curve for the complex 2.

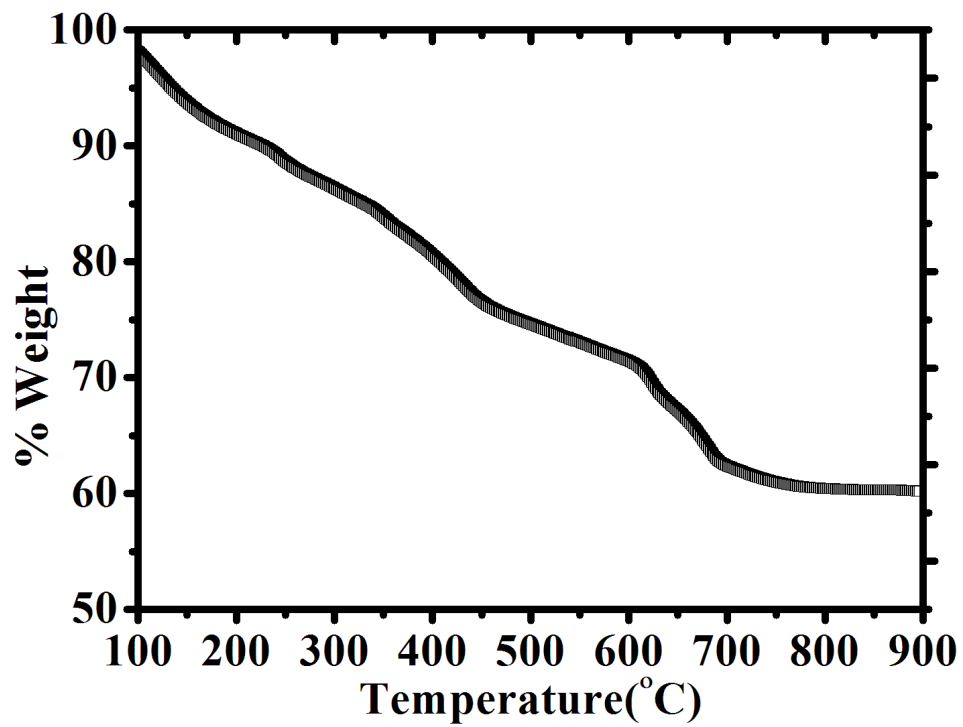


Fig. S3. TGA curve for the complex 3.

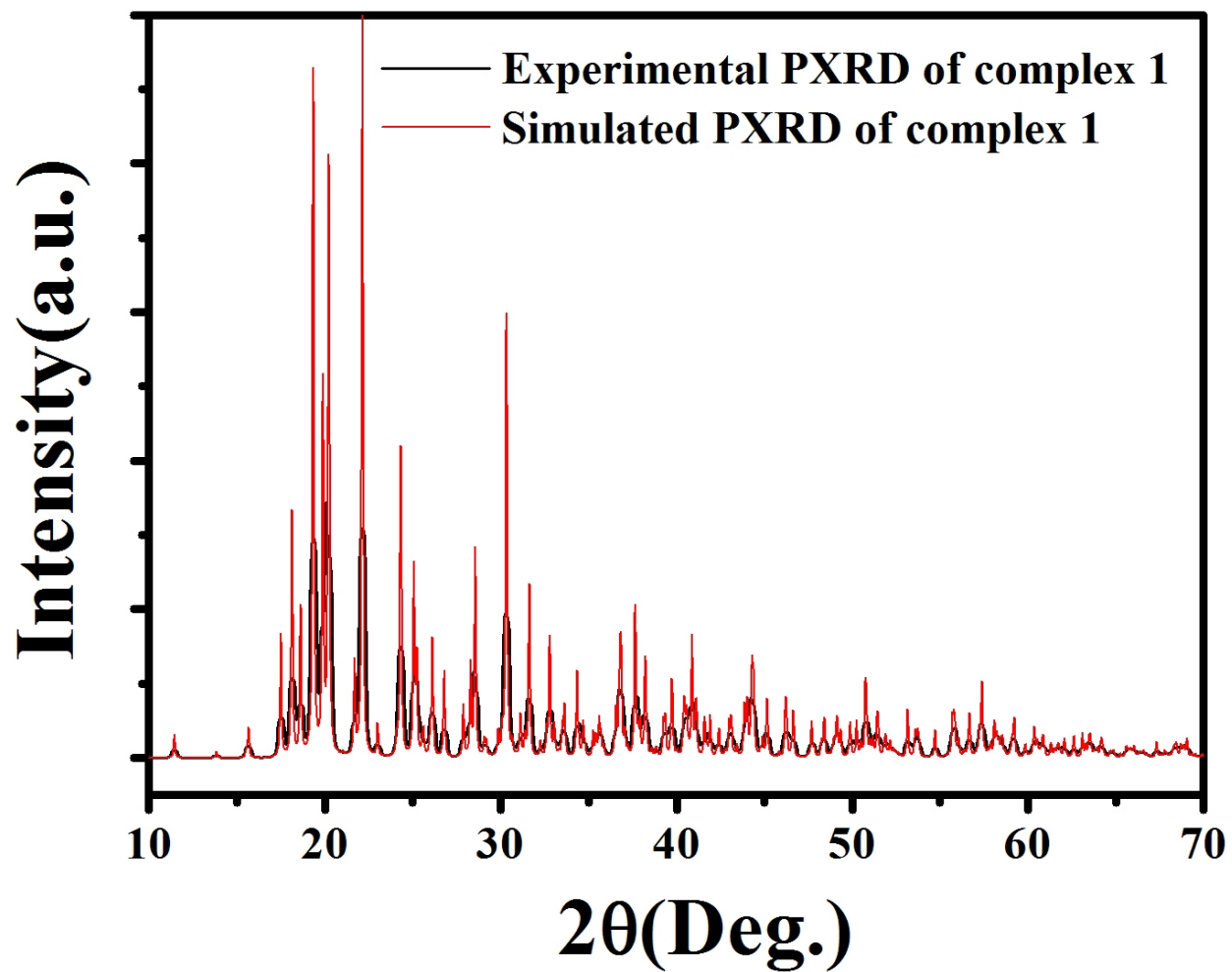


Fig. S4. Experimental and simulated powder X-ray diffractogram of complex 1.

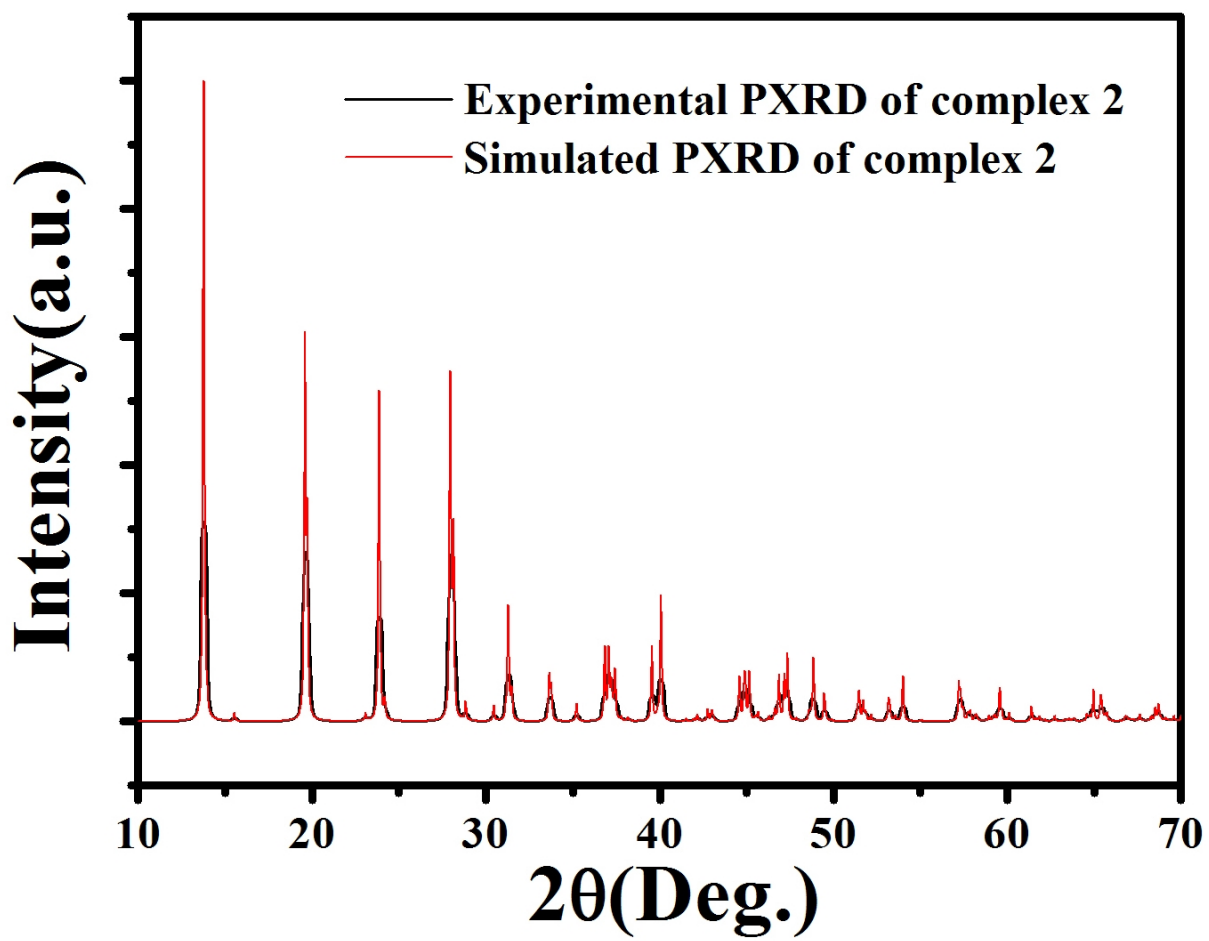


Fig. S5. Experimental and simulated powder X-ray diffractogram of complex 2.

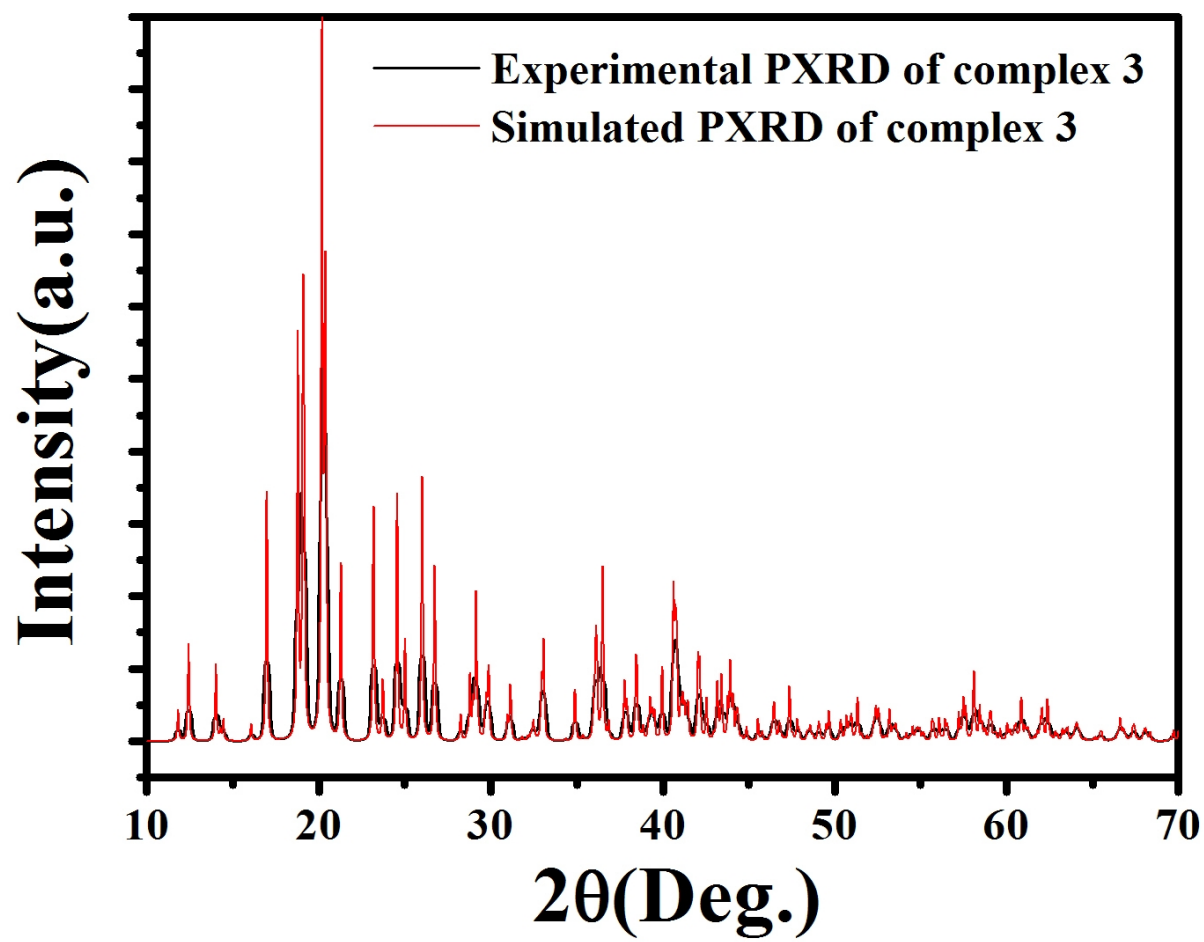


Fig. S6. Experimental and simulated powder X-ray diffractogram of complex 3.

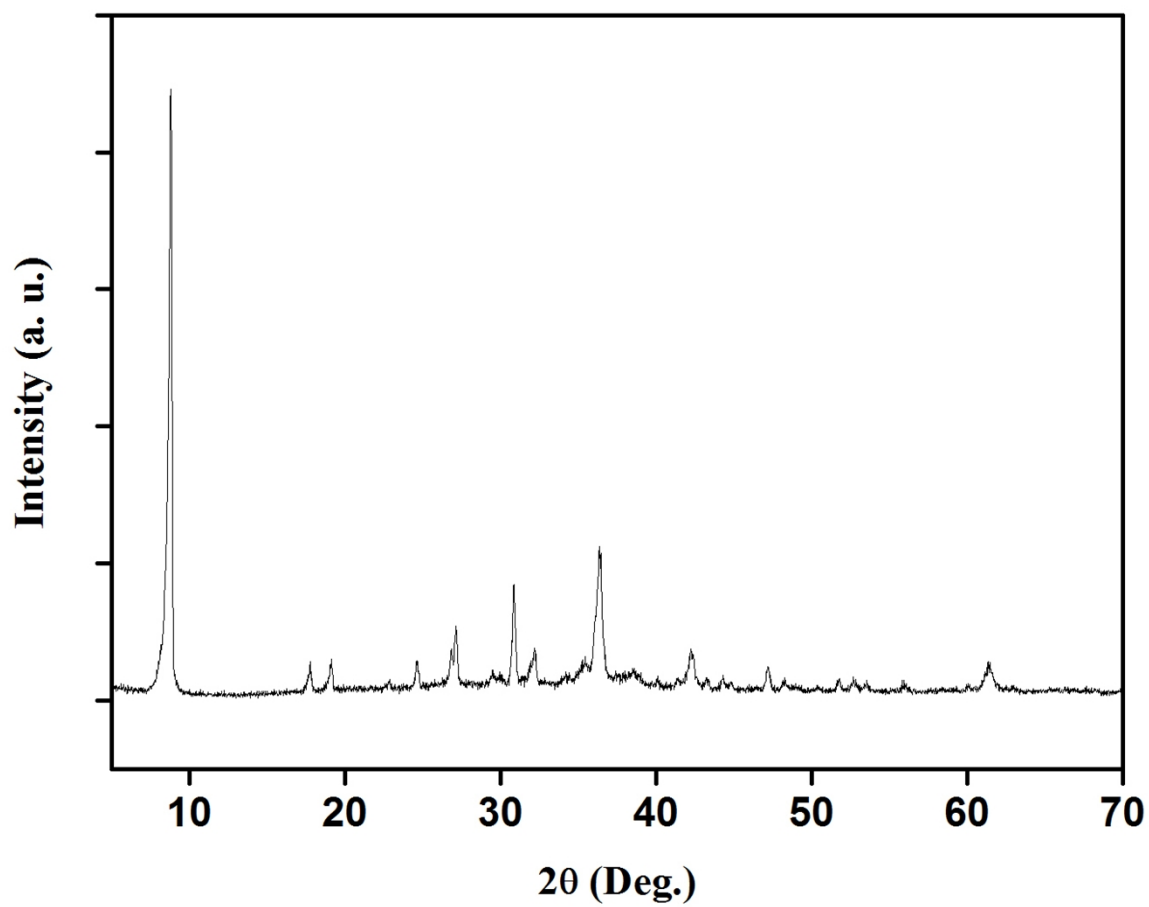


Fig. S7. Powder X-ray diffractogram of decomposition product from complex **1** at 250°C for 10h in air.



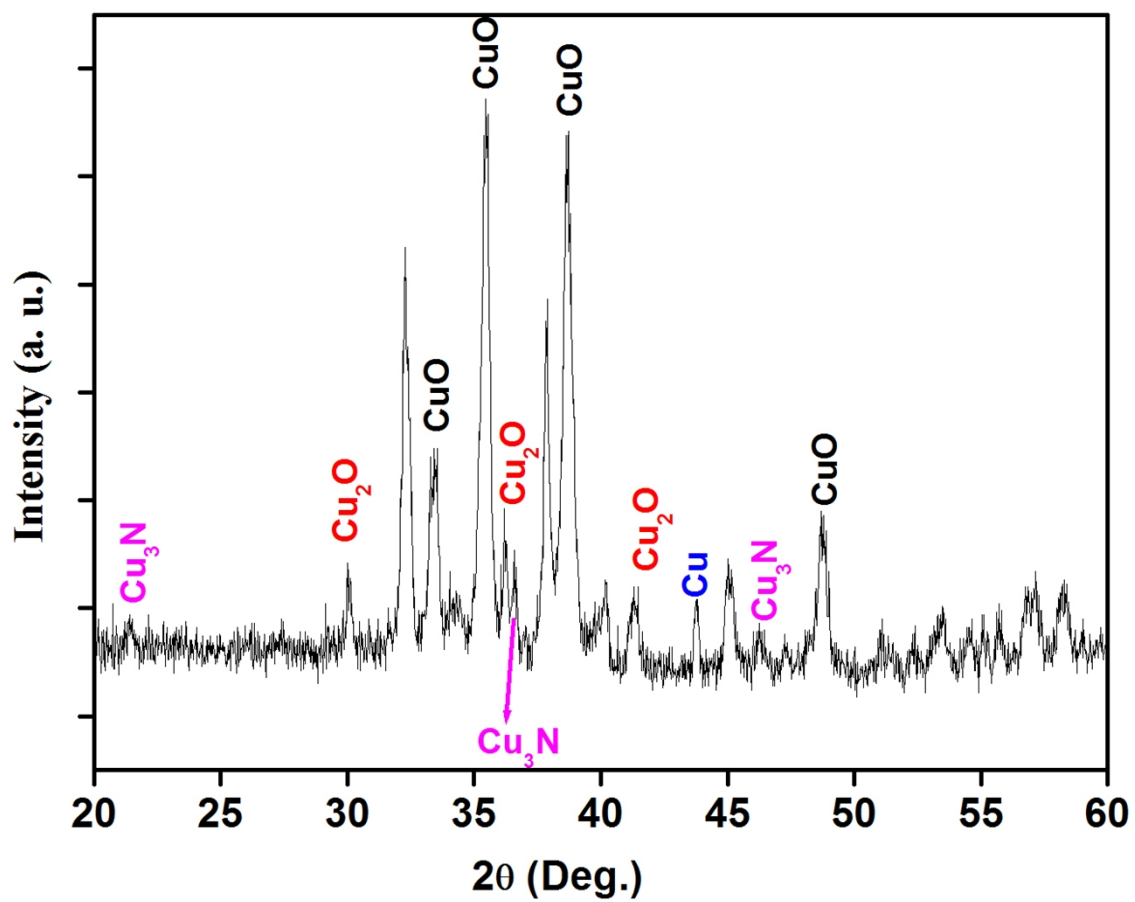


Fig. S8. Powder X-ray diffractogram of decomposition product from complex **1** at 450°C for 10h in air.