

Electronic Supplementary Information (ESI)

for

Interconversion between ladder-type octanuclear and linear tetranuclear copper(I) complexes supported by tetrakisphosphine ligands

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Fig. S1. ORTEP for complex $[\text{Cu}_8(\mu\text{-I})_2(\mu_3\text{-I})_6(\mu\text{-dpmppm})_2]$ (**1c**).

Fig. S2 $^{31}\text{P}\{^1\text{H}\}$ NMR spectra of **1a**, **1b** and **2** in $\text{dms}\text{-}d_6$ and **7b** and **8c** in $\text{dmf}\text{-}d_7$.

Fig. S3. ORTEP for the complex cation of $[\text{Cu}_4(\mu\text{-I})_3(\mu\text{-dpmppm})_2(\text{py})_2]\text{I}$ (**5**).

Fig. S4. ORTEP for the complex cation of $[\text{Cu}_4(\mu\text{-I})_3(\mu\text{-dpmppm})_2(\text{MesNC})_2]\text{PF}_6$ (**8b**).

Fig. S5. ORTEP for the complex cation of $[\text{Cu}_8(\mu\text{-I})_6(\mu\text{-dpmppm})_2(\text{tBuNC})_2](\text{PF}_6)_2$ (**9**).

Fig. S1. ORTEP for complex $[\text{Cu}_8(\mu\text{-I})_2(\mu_3\text{-I})_6(\mu\text{-dpmppm})_2]$ (**1c**).

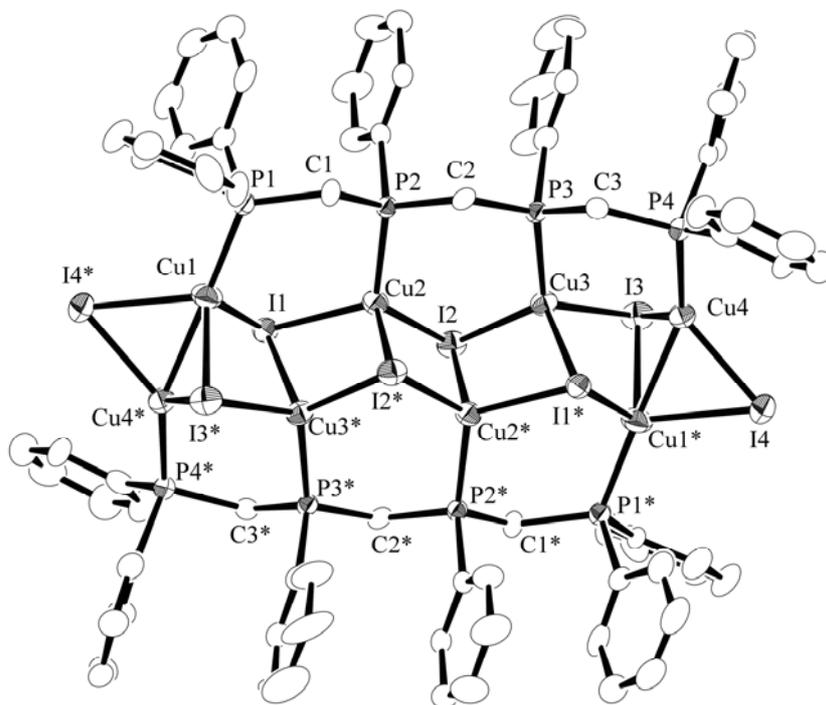


Fig. S2 $^{31}\text{P}\{^1\text{H}\}$ NMR spectra of (a) **1a**, (b) **1b** and (c) **2** in $\text{dms}\text{-}d_6$ and (d) **7b** and (e) **8c** in $\text{dmf-}d_7$ at room temperature.

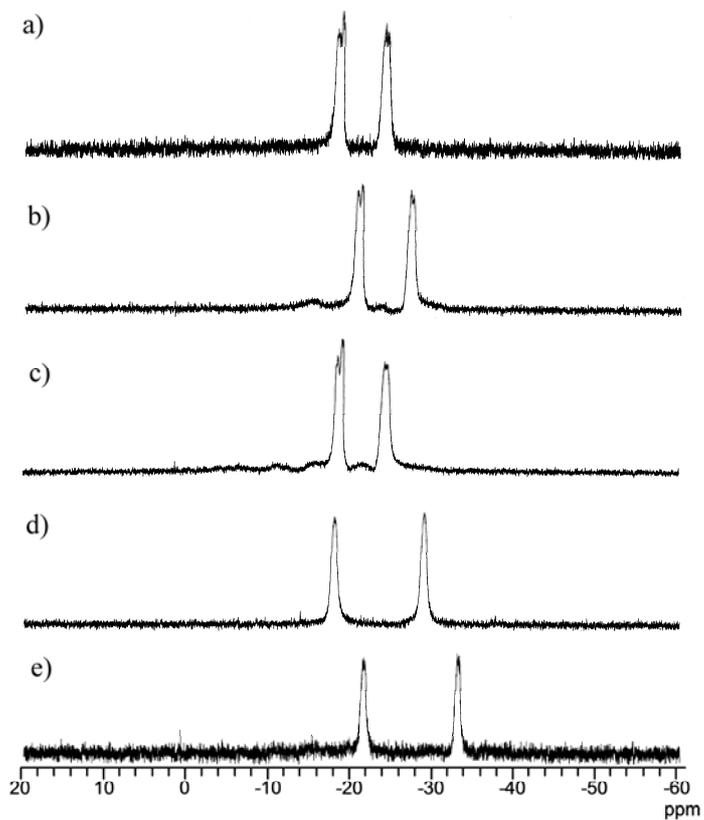


Fig. S3. ORTEP for the complex cation of $[\text{Cu}_4(\mu\text{-I})_3(\mu\text{-dpmppm})_2(\text{py})_2]\text{I}$ (**5**).

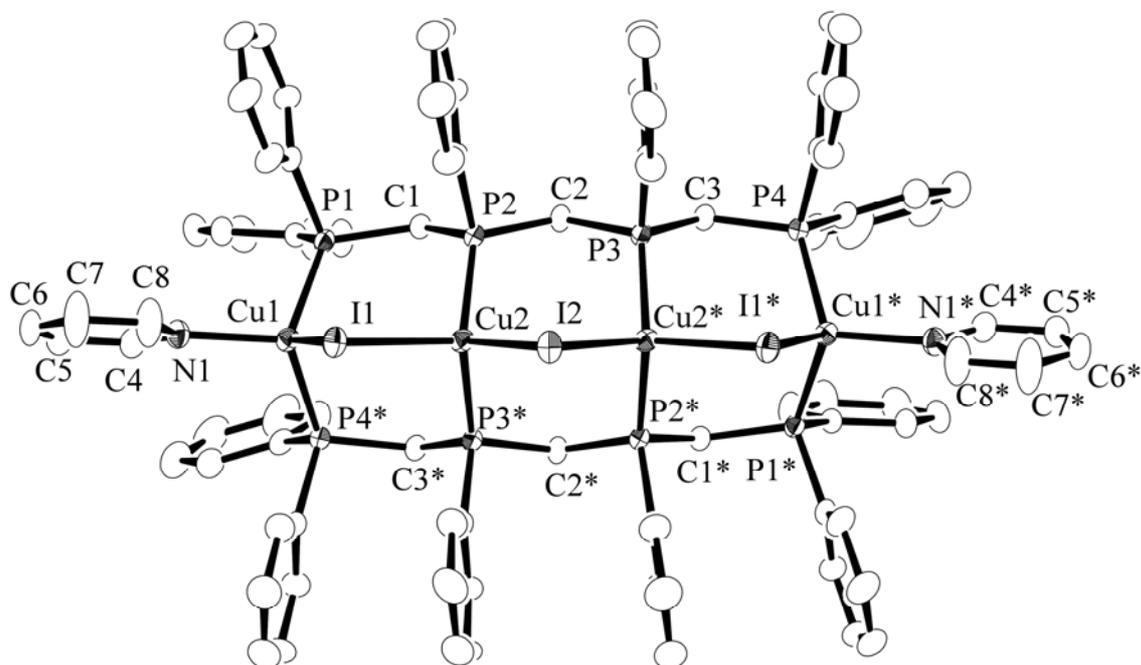


Fig. S4. ORTEP for the complex cation of $[\text{Cu}_4(\mu\text{-I})_3(\mu\text{-dpmppm})_2(\text{MesNC})_2]\text{PF}_6$ (**8b**).

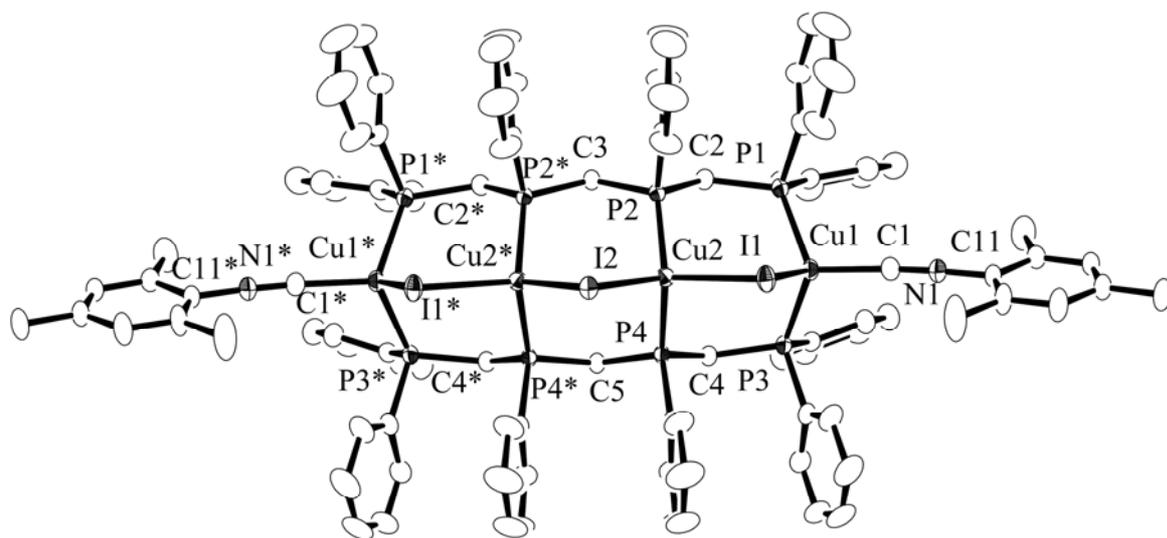


Fig. S5. ORTEP for the complex cation of $[\text{Cu}_8(\mu\text{-I})_6(\mu\text{-dpmppm})_2(\text{BuNC})_2](\text{PF}_6)_2$ (**9**). The terminal isocyanide ligand is disordered in two sites (0.64 and 0.36 occupancies). The thermal ellipsoids of the Cu, I, and P atoms are drawn at the 40% probability level and the N and C atoms are drawn with arbitrary circles for clarity.

