

**Chiral and achiral phosphine derivatives of alkylidyne tricobalt carbonyl clusters
as catalyst precursors for (asymmetric) inter- and intramolecular Pauson-Khand
reactions**

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SUPPLEMENTARY MATERIAL

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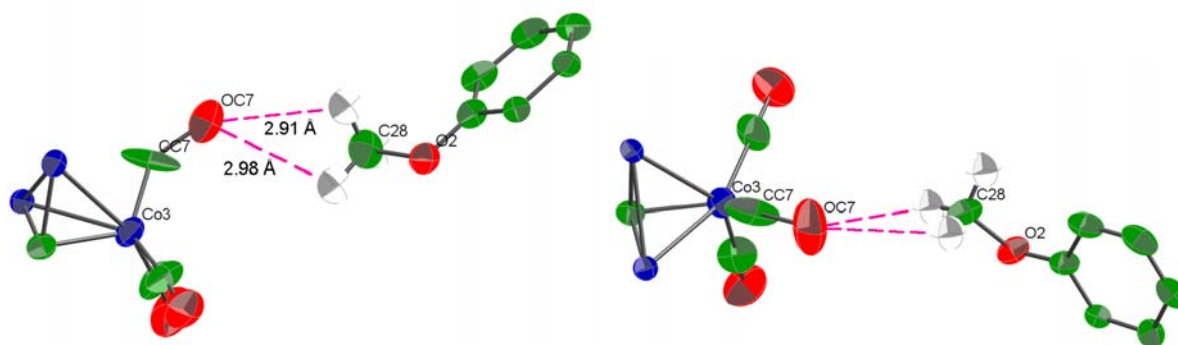


Figure S1. Two views (with 30% thermal ellipsoids) of the ‘bent’ carbonyl ligand in the crystal structure of $[\text{Co}_3(\mu_3\text{-CH})(\text{CO})_7(\mu\text{-1,2-DIPAMP})]$ (**12**) highlighting: (i) the shortest intermolecular distances between the carbonyl O-atom (OC7) and the H-atoms attached to C28 of the DIAMP ligand on the neighbouring cluster; and (ii) that the larger axes of the elongated thermal ellipsoids of the carbonyl C- and O-atoms are almost orthogonally aligned (indicating disorder of the carbonyl is not responsible for the observed bending).