Electronic Supporting information

The formation of 1-5 can be represented by eqn (S1)–(S4) and are given below.

CH₃CN 3 [Cu₂(L)₄(MeOH)₂] + 4H₃tea → 2 [Cu₃(L)₄(H₂tea)₂] + 2HL + 6MeOH (eq.S1)

 $[Cu_2(L_1)_4(MeOH)_2] + 2H_3tea + 2NaOH \xrightarrow{CH_3CN}$

 $[Cu_2(L_1)_2(H_2tea)_2] + 2NaL_1 + 2H_2O + 2MeOH$

(eq.S2)

5 Cu(NO₃)₂·3H₂O +2H₃tea+8HL₂+10NaOH \longrightarrow $[Cu_3(L_2)_4(H_2tea)_2] + [Cu_2(L_2)_4(H_2O)_2] + 10NaNO_3 + 23H_2O$

(eq.S3)

5 Cu(NO₃)₂·3H₂O +2H₃tea+6HL₁+8NaOH \longrightarrow $[Cu_3(L_1)_2(H_2tea)_2(NO_3)_2] + [Cu_2(L_1)_4(H_2O)_2] + 8NaNO_3 + 21H_2O$

(eq.S4)



Figure S1. Partially labelled plot of the structure of **3a** with 30% thermal probability ellipsoids. Only the alkoxide hydrogen atoms are shown for clarity. Primed atoms are generated by symmetry operation: (') = -x, 1-y, -z.



Figure S2. Partially labelled plot of the structure of **3b** with 30% thermal probability ellipsoids. Only the alkoxide hydrogen atoms are shown for clarity. Primed atoms are generated by symmetry operation: (') = -x, -y, 1-z.