Hysteretic vapour response of a heterodinuclear

platinum(II)-copper(II) complex derived from the dimer-of-dimer

motif and guest-absorbing site

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Fig. S1 Thermogravimatric and differential thermal analyses (TG/DTA) for the included forms of (a) *syn*-[**PtCu-MeCN**], (b) *syn*-[**PtCu-Me₂CO**], and (c) *syn*-[**PtCu-MeOH**]: The red, blue and green lines exhibit temperature, weight loss, and DTA curves, respectively.



Fig. S2 Dimer-of-dimer structure for *syn*-[PtCu-MeOH] showing the arrangement of the methanol molecules included in the crystal.



Fig. S3 IR spectra (ATR method) of the included and desorbed forms for (a) *syn*-[**PtCu-MeCN**], (b) *syn*-[**PtCu-Me₂CO**], and (c) *syn*-[**PtCu-MeOH**]: ocher, red, and blue lines are for the included forms and brown, pink, and cyan lines are for the desorbed forms, respectively.



Fig. S4 PXRD showing reversible structural transformations induced by the guest exchange for *syn*-[**PtCu-G**]: left, (b) Me₂CO and (c) MeOH vapour exposure to (a) *syn*-[**PtCu-MeCN**]; middle, (e) MeCN and (f) MeOH vapour exposure to (d) *syn*-[**PtCu-Me₂CO**]; right, (h) MeCN and (i) Me₂CO vapour exposure to (g) *syn*-[**PtCu-MeOH**]. Sim. patterns stand for the calculated ones based on the single-crystal structures of *syn*-[**PtCu-MeCN**] (ochre), *syn*-[**PtCu-Me₂CO**] (red) and *syn*-[**PtCu-MeOH**] (blue), respectively.