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CORRECTION

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Correction: A microporous Cu-MOF with optimized open metal sites and pore spaces for high gas storage and active chemical fixation of CO_2

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Correction for 'A microporous Cu-MOF with optimized open metal sites and pore spaces for high gas storage and active chemical fixation of CO_2' by Chao-Ying Gao *et al.*, *Chem. Commun.*, 2016, **52**, 11147–11150.

After publication of this manuscript the authors were made aware of a previous report of the synthesis of the compound 5,5′-(dimethylsilanediyl)diisophthalic acid (H_4L).[1] The authors acknowledge that the compound is isostructural to the PCN-12′ MOF reported in ref. 26(*a*) [Lopez, B. J. Murphy, J. B. Parise and H. C. Zhou, *Angew. Chem.*, 2008, **38**, 7373–7376 (*Angew. Chem., Int. Ed.*, 2008, **47**, 7263–7266)].

A comparison of the reported structure to the PCN-12′ MOF should be added to the end of column 2, line 16 on page 11148, after "...wt%).[23]" as follows: "As for the difference between PCN-12′ (2.4 wt%) and **1a** (2.7 wt%) at 77 K, it may be attributed to the incorporation of silicon, which possesses a higher polarizability than carbon, and subsequently has a positive impact on the binding energy to hydrogen.[1]"

An additional reference should be added to ref. 13, as 13(*c*), to highlight the work of Bayzavi *et al.*[2]

An incorrect reference was given as ref. 19, the correct reference is to the work of Jia *et al.*[3]

An incorrect reference was included on page 11149, column 2, line 10. The reference, given as ref. 26, should be to ref. 16 in the original manuscript.

The authors have removed Fig. S9 from the electronic supplementary information file as the micropore size analysis based on N_2 adsorption is inaccurate. Accordingly, the text starting on column 1, line 15 of page 11148 should be changed from "with an approximate pore diameter of 8.0 Å (taking the van der Waals radii of atoms into consideration) (Fig. 1d and Fig. S9, ESI†)" to "...with an approximate pore diameter of 8.0 Å (C–C distance on the opposite, taking the van der Waals radii of atoms into consideration) (Fig. 1d)".

The following data entry has been inserted into Table S3 in the electronic supplementary information file:

The authors would like to simplify Fig. 1 in the original article by replacing the bent linker with a 4-c rectangle. The authors also provide replacement text for the accompanying description on column 1, line 3, page 11148: "The framework is built from typical $Cu_2(CO_2)_4$ paddlewheel secondary building units (SBUs) and organic L^{4-} linkers (Fig. 1b), isostructural to MOF PCN-12′;[26a] the Cu paddlewheel SBU can be viewed as a four-coordinated node shown as a green square (Fig. 1a, right) and the linker can be simplified as an outstretched red rectangle (Fig. 1a, left)."

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

References

1 S. E. Wenzel, M. Fischer, F. Hoffmann and M. Fröba, *Inorg. Chem.*, 2009, **48**, 6559–6565.
2 M. H. Beyzavi, C. J. Stephenson, Y. Liu, O. Karagiaridi, J. T. Hupp and O. K. Farha, *Front. Energy Res.*, 2015, **2**, 63.
3 J. Jia, F. Sun, Q. Fang, X. Liang, K. Cai, Z. Bian, H. Zhao, L. Gao and G. Zhu, *Chem. Commun.*, 2011, **47**, 9167–9169.

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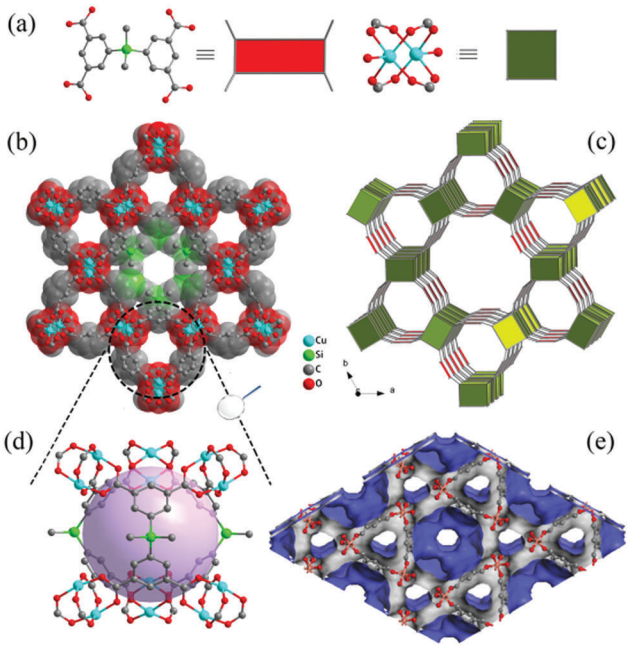

Fig. 1 (a) The organic ligand H_4L and the Cu paddlewheel SBU, as well as their abstracted geometric shapes. A view of the 3D architecture of the framework (b) and the assembly of abstracted geometric shapes (c) in compound **1** along the *c*-axis. (d) The cage confined by six SBUs and three linkers. (e) Connolly surface representation showing the 3D structure. Colour scheme: C (black), O (red), Cu (blue) and Si (green). Guest molecules and hydrogen atoms have been omitted for clarity.

Table S3 The reported porous MOFs which exhibit over 2.0 wt% H_2 uptake at 77 K and 1 bar

Compounds	SA_{BET} ($m^2\ g^{-1}$)	H_2 uptake (wt%)	Ref.
PCN-12′	1943	2.4	8

