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RETRACTION

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Retraction: Insight into the reversible structural crystalline-state transformation from MIL-53(Al) to MIL-68(Al)

Adelaida Perea-Cachero, a Enrique Romero, b Carlos Téllez*a and Joaquín Coronasa

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Retraction of 'Insight into the reversible structural crystalline-state transformation from MIL-53(Al) to MIL-68(Al)' by Adelaida Perea-Cachero et al., CrystEngComm, 2018, 20, 402-406.

We, the named authors, hereby wholly retract this CrystEngComm article. The conclusions presented in this work were that MIL-53(Al) can undergo a reversible phase change to MIL-68(Al) when treated with DMF. The product of this reaction was characterised by comparison with a sample produced according to the literature procedure of Yang et al. which was reported to result in pure MIL-68(Al). The PXRD of this sample matched that of a sample of MIL-53(Al) after treatment with DMF, leading to the conclusion that the sample had undergone a phase change to MIL-68(Al).

However, recent further investigations by the authors have shown that the literature procedure reported by Yang, as well as that reported by Asiabi et al., when repeated in our laboratory, do not result in a pure sample of MIL-68(Al). They instead result in a combination of MIL-53(Al)_{DMF} and MIL-68(Al). Only the literature procedure report by Seoane et al.³ was found to result in a pure sample of nanocrystalline MIL-68(Al)_{THF} (Fig. 1). These results demonstrate that the product of DMF treatment of MIL-53(Al) was not MIL-68(Al) as originally reported in this paper, but instead was the DMF solvate MIL-53(Al)_{DMF}, as previously suggested by Hartmann et al.4

The authors would like to apologise for any inconvenience to the readers.

Signed: Adelaida Perea-Cachero, Enrique Romero, Carlos Téllez and Joaquín Coronas.

Retraction endorsed by Andrew Shore, Executive Editor, CrystEngComm.

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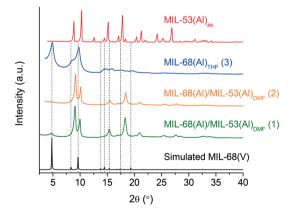


Fig. 1 PXRD patterns of the three products obtained by the authors under conditions reported by Yang et al. 1 Asiabi et al. 2 and Seoane et al. 3 and comparison with simulated MIL-68(V) and MIL-53(Al)as

a Chemical and Environmental Engineering Department, Instituto de Nanociencia de Aragón (INA), Universidad de Zaragoza, 50018 Zaragoza, Spain. E-mail: ctellez@unizar.es

b Chemical and Environmental Engineering Department, Instituto de Investigación en Ingeniería de Aragón (I3A), Universidad de Zaragoza, 50018 Zaragoza, Spain

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References

Q. Yang, S. Vaesen, M. Vishnuvarthan, F. Ragon, C. Serre, A. Vimont, M. Daturi, G. De Weireld and G. Maurin, J. Mater. Chem., 2012, 22, 10210-10220.

- M. Asiabi, A. Mehdinia and A. Jabbari, Microchim. Acta, 2017, 184, 4495-4501.
- B. Seoane, V. Sebastián, C. Téllez and J. Coronas, CrystEngComm, 2013, 15, 9483-9490.
- M. Kriesten, K. Hoffmann and M. Hartmann, CrystEngComm, 2018, 20, 3117-3119.