

## RETRACTION

 View Article Online  
View Journal | View Issue

 Cite this: *CrystEngComm*, 2019, 21, 5546

DOI: 10.1039/c9ce90139f

rsc.li/crystengcomm

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

Adelaida Perea-Cachero,<sup>a</sup> Enrique Romero,<sup>b</sup> Carlos Téllez<sup>\*a</sup> and Joaquín Coronas<sup>a</sup>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.*<sup>1</sup> 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,<sup>1</sup> as well as that reported by Asiabi *et al.*,<sup>2</sup> 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)<sub>DMF</sub> and MIL-68(Al). Only the literature procedure report by Seoane *et al.*<sup>3</sup> was found to result in a pure sample of nanocrystalline MIL-68(Al)<sub>THF</sub> (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)<sub>DMF</sub>, as previously suggested by Hartmann *et al.*<sup>4</sup>

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*.

Date: 8th August 2019.

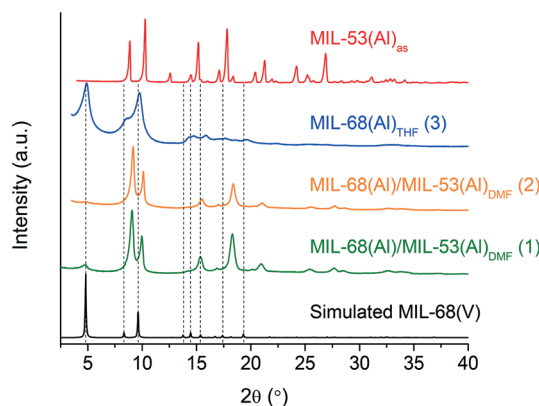


Fig. 1 PXRD patterns of the three products obtained by the authors under conditions reported by Yang *et al.*,<sup>1</sup> Asiabi *et al.*,<sup>2</sup> and Seoane *et al.*<sup>3</sup> and comparison with simulated MIL-68(V) and MIL-53(Al)<sub>as</sub>.

<sup>a</sup> Chemical and Environmental Engineering Department, Instituto de Nanociencia de Aragón (INA), Universidad de Zaragoza, 50018 Zaragoza, Spain.

E-mail: ctellez@unizar.es

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



## References

- 1 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.
- 2 M. Asiabi, A. Mehdinia and A. Jabbari, *Microchim. Acta*, 2017, **184**, 4495–4501.
- 3 B. Seoane, V. Sebastián, C. Téllez and J. Coronas, *CrystEngComm*, 2013, **15**, 9483–9490.
- 4 M. Kriesten, K. Hoffmann and M. Hartmann, *CrystEngComm*, 2018, **20**, 3117–3119.

