

## CORRECTION

[View Article Online](#)  
[View Journal](#) | [View Issue](#)



Cite this: *Energy Environ. Sci.*, 2021, 14, 5097

DOI: 10.1039/d1ee90049h

rsc.li/ees

## Correction: Quantification of heterogeneous, irreversible lithium plating in extreme fast charging of lithium-ion batteries

Partha P. Paul,<sup>ID a</sup> Vivek Thamby,<sup>a</sup> Chuntian Cao,<sup>ID ab</sup> Hans-Georg Steinrück,<sup>ID ac</sup> Tanvir R. Tanim,<sup>d</sup> Alison R. Dunlop,<sup>e</sup> Eric J. Dufek,<sup>ID d</sup> Stephen E. Trask,<sup>ID e</sup> Andrew N. Jansen,<sup>e</sup> Michael F. Toney<sup>ID \*ab</sup> and Johanna Nelson Weker<sup>ID \*a</sup>

Correction for 'Quantification of heterogeneous, irreversible lithium plating in extreme fast charging of lithium-ion batteries' by Partha P. Paul *et al.*, *Energy Environ. Sci.*, 2021, DOI: 10.1039/d1ee01216a.

The original article included a minor error in eqn (1). Specifically, the  $\left( \frac{\cos(2\theta_{NMC}^{hkl})}{\cos(2\theta_i^{hkl})} \right)$  term is erroneous. Therefore, the corrected eqn (1) should read:

$$\text{mass}_i = \left( \frac{I_i^{hkl}}{I_{NMC}^{hkl}} \right) \left( \frac{\text{LPF}_{NMC}^{hkl}}{\text{LPF}_i^{hkl}} \times \frac{m_{NMC}^{hkl}}{m_i^{hkl}} \times \frac{|F_{NMC}^{hkl}|^2}{|F_i^{hkl}|^2} \right) \left( \frac{v_i^2}{v_{NMC}^2} \right) (\rho_i \times V_{NMC}) \quad (1)$$

We note that the corrected equation does not alter any of the results obtained in this work, since the  $2\theta$  values in our work are small. For example, the  $2\theta$  values for the (003) NMC peak and the (110) Li peak used in this work are 0.038 and 0.076 radians, respectively. This results in  $\cos(2\theta_{NMC}^{003})$  and  $\cos(2\theta_{Li}^{110})$  equalling 0.999 and 0.997, respectively. Their ratio is 1.002, which is very close to unity. Hence, it does not change the results or conclusions of the paper.

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

<sup>a</sup> SLAC National Accelerator Laboratory, 2575 Sand Hill Road, Menlo Park, CA 94025, USA. E-mail: jlnelson@slac.stanford.edu

<sup>b</sup> Department of Chemical and Biological Engineering, University of Colorado, Boulder, CO 80309, USA. E-mail: Michael.Toney@colorado.edu

<sup>c</sup> Department Chemie, Universität Paderborn, Warburger Str. 100, 33098, Paderborn, Germany

<sup>d</sup> Idaho National Laboratory, 2525 N. Fremont, Idaho Falls, ID 83415, USA

<sup>e</sup> Argonne National Laboratory, 9700 South Cass Avenue, Lemont, IL 60439, USA