Nanoscale Advances

ROYAL SOCIETY OF CHEMISTRY

CORRECTION

View Article Online
View Journal | View Issue

Cite this: *Nanoscale Adv.*, 2024, **6**, 4259

Correction: Beyond Newton's law of cooling in evaluating magnetic hyperthermia performance: a device-independent procedure

Sergiu Ruta,*[a] Yilian Fernández-Afonso,[b] Samuel E. Rannala,[c] M. Puerto Morales,[d] Sabino Veintemillas-Verdaguer,[d] Carlton Jones,[e] Lucía Gutiérrez,*[b] Roy W. Chantrell[c] and David Serantes[fg]

DOI: 10.1039/d4na90079k

rsc.li/nanoscale-advances

Correction for 'Beyond Newton's law of cooling in evaluating magnetic hyperthermia performance: a device-independent procedure' by Sergiu Ruta *et al.*, *Nanoscale Adv.*, 2024, https://doi.org/10.1039/d4na00383g.

The authors regret that some of the notation used to represent eqn (6)–(8) could be misinterpreted and therefore have been amended.

All calculations were carried out using the 1D heat transport model (eqn (5)). Eqn (6)–(8) indicate the correction to the SLP taking into account the instantaneous losses. The notation is intended to indicate derivatives during heating and cooling rather than absolute values.

In general, the expectation is that the second term in eqn (8) is negative, therefore the correction will be an increase in SLP prediction based on the heating part only. The correct notation is to use square brackets rather than vertical lines around the derivatives, as seen below:

$$\left[\frac{\partial \Delta T_r}{\partial t}\right]_{\text{heating}} = \alpha_r \left[\frac{\partial^2 \Delta T_r}{\partial r^2}\right]_{\text{heating}} + S, \tag{6}$$

$$\left[\frac{\partial \Delta T_r}{\partial t}\right]_{\text{cooling}} = \alpha_r \left[\frac{\partial^2 \Delta T_r}{\partial r^2}\right]_{\text{cooling}}, \tag{7}$$

$$S = \left[\frac{\partial \Delta T_r}{\partial t}\right]_{\text{heating}} - \left[\frac{\partial \Delta T_r}{\partial t}\right]_{\text{cooling}}. \tag{8}$$

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

[a]*College of Business, Technology and Engineering, Sheffield Hallam University, UK. E-mail: sergiu.ruta@shu.ac.uk*
[b]*Instituto de Nanociencia y Materiales de Aragón (INMA), CSIC-Universidad de Zaragoza and CIBER-BBN, Spain. E-mail: lu@unizar.es*
[c]*Department of Physics, University of York, UK*
[d]*Materials Science Institute of Madrid (ICMM/CSIC), Spain*
[e]*nanoTherics Ltd, Brookside Farm, Dig Lane, Warrington, WA2 0SH, UK*
[f]*Applied Physics Department, Universidade de Santiago de Compostela, Spain*
[g]*Instituto de Materiais (iMATUS), Universidade de Santiago de Compostela, Spain*