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CORRECTION

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Correction: Exploring the Mpemba effect: a universal ice pressing enables porous ceramics

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Correction for 'Exploring the Mpemba effect: a universal ice pressing enables porous ceramics' by Xiaodan Yang *et al.*, *Mater. Horiz.*, 2024, DOI: **https://doi.org/10.1039/d3mh01869e**.

The authors regret some errors in the published article, as outlined below. These corrections do not affect any of the conclusions of the article.

Ref. 1–3 included in the published article were incorrect, and should be as included here.

In addition, in Section 2.2, in the 3rd paragraph a citation to ref. 21 should be replaced with a citation to ref. 2, as follows: "Research conducted by J.D. Brownridge's group suggests that convection likely played a role in facilitating the faster freezing of water at higher temperatures.[2]"

In the Introduction, the sentence "During frost weathering,[7] when water fills the gaps in rocks and freezes in place, the resulting ice growth can exert pressures of up to 207 MPa inside cracks in the rock, assuming a temperature of -22 °C.[8–10]" should read as follows: "During frost weathering, when water fills the gaps in rocks and freezes, the underlying intermolecular forces associated with unfrozen water can exert enormous pressures.[7] The bulk equilibrium pressure of approximately 207 MPa inside cracks in the rock, assuming a temperature of -22 °C, is also substantial if circumstances allow it to be reached.[8–10]"

In Section 2.2, the word "exponentially" should be removed from two sentences in paragraph 3. The corrected sentences are as follows:

"According to the results of *in situ* temperature mappings (Movie S1, ESI†) and temperature curves (Fig. 2c & inset), hot water shows a faster cooling rate to reach the relative equilibrium than that in the cool case, which takes less time (about 15 seconds) to freeze."

and

"Therefore, the temperature of hot water cools rapidly at the beginning and then slows down."

In Fig. 2c, the temperature curves were labelled incorrectly, in addition the caption of Fig. 2c stated an incorrect temperature of 20 °C, which should be replaced with 30 °C. The corrected image and caption are as shown here.

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

References

1 E. B. Mpemba and D. G. Osborne, *Phys. Educ.*, 1969, **4**, 172.
2 J. D. Brownridge, *Am. J. Phys.*, 2011, **79**, 78–84.
3 M. Vynnycky and S. L. Mitchell, *Heat Mass Transfer*, 2010, **46**, 881–890.

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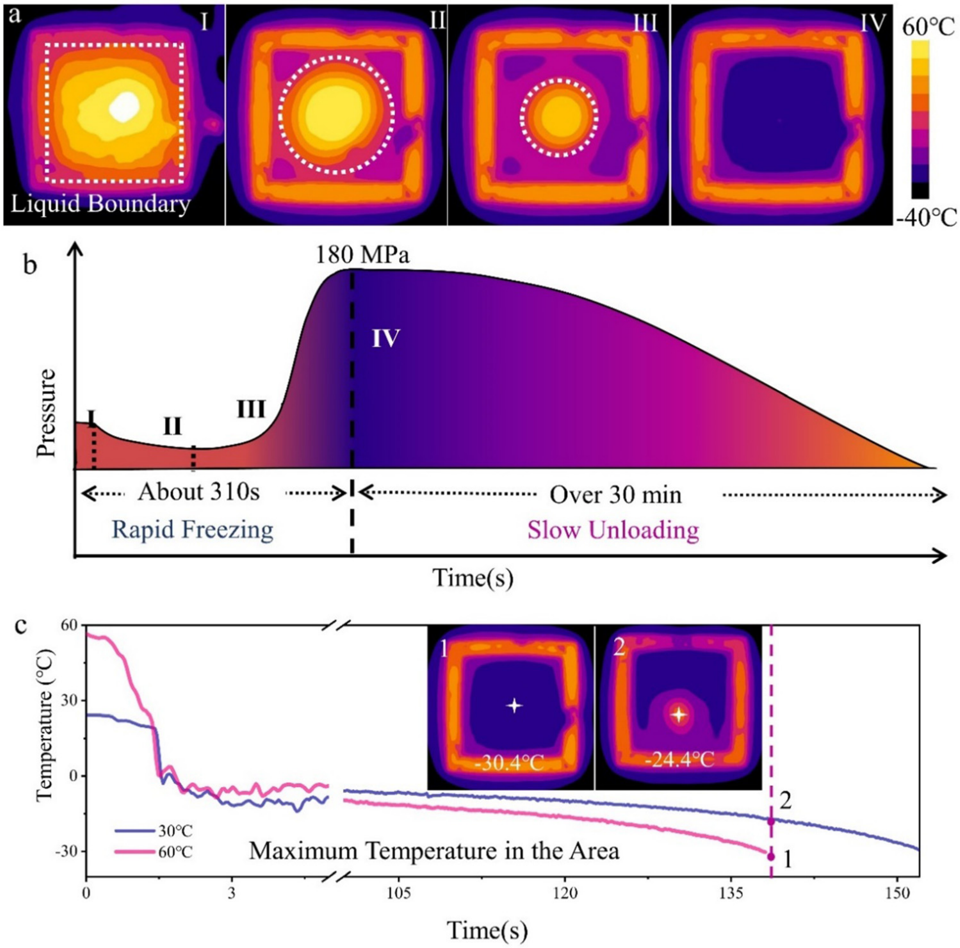

Fig. 2 Observation of water freezing and pressing process. (a) The infrared thermal mappings are taken from the top side to record the temperature. Water is in a liquid state during stage I; it is pseudo-solid (ice–water mixture) during stage II–III, and solid ice in stage IV. The temperature distribution mappings from I to IV demonstrate the pressure direction during the ice pressing process. (b) The pressure–time curve exhibits the main stages of the ice pressure process. First, there is a noticeable pressure drop from I to II, which is caused by the cooling of the equipment. Then stage II and III correspond to water freezing until it transforms into ice totally. We stopped cooling when water is completely frozen. In stage IV, ice starts to thaw and pressure unloads slowly. (c) The typical thermal mapping of the system with water in different initial temperatures (60 °C and 30 °C). The hot system (60 °C) takes less time (∼15 seconds) to be frozen in the system. (c inset) The thermal mapping of the hot system (left) and cool system (right) at 143 s.