Soft Matter

CORRECTION



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Correction: Tap density equations of granular powders based on the rate process theory and the free volume concept

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Correction for 'Tap density equations of granular powders based on the rate process theory and the free volume concept' by Tian Hao et al., Soft Matter, 2015, DOI: 10.1039/c4sm02472a.

The authors regret the following errors in eqns (23), (24) and (26). The corrected equations are shown below. The section on page 4

The energy flowing from the shaker to the powder³⁶ is:

$$E(t) = \frac{M_{\rm g} L_0 \omega}{\pi} \tag{23}$$

where $M_{\rm g}$ is the weight of powder. The total energy flowing to the powder after a series of tapping processes with the tapping number, n, may be expressed as:

$$E = nE(t) = \frac{nM_g L_0 \omega}{\pi} \tag{24}$$

should be corrected to The energy flowing rate from the shaker to the powder³⁶ is:

$$E(t) = \frac{MgL_0\omega}{2\pi} \tag{23}$$

where Mg is the weight of powder. The total energy flowing to the powder after a series of tapping processes with the tapping number, n, may be expressed as:

$$E = nE(t)t = nMgL_0 \tag{24}$$

where *t* is the time spent for one tap.

The sentence on page 5 Substituting eqn (24) into eqn (25) yields:

$$k = A \exp\left[-\left(\frac{nMgL_0\omega}{\pi RT}\right)^{\beta}\right] = A \exp\left[-\left(\frac{n}{\tau}\right)^{\beta}\right]$$
(26)

where τ is a constant of $\tau = \pi RT/(MgL_0\omega)$ should be corrected to Substituting eqn (24) into eqn (25) yields:

$$k = A \exp\left[-\left(\frac{nMgL_0}{RT}\right)^{\beta}\right] = A \exp\left[-\left(\frac{n}{\tau}\right)^{\beta}\right]$$
(26)

where τ is a constant of $\tau = RT/(MgL_0)$.

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

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