Correction

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The authors discovered an error in the numerical code used to produce the force-stroke plots shown in figure 8. This error lead to non-monotonic behaviour in both figure 8a,b of the published paper. This error has been fixed and was extensively tested with both the Born model and Finite-Element models. The corrected figure calculated using the Born Model is shown below. Note, all force-stroke curves in the corrected diagram are monotonic. This error also means that our interpretation of the reason for the non-monotonic behaviour of the force-stroke curves in the discussion of the old figures at the start of page 10 (first two paragraphs) is also erroneous. We originally thought this behaviour was due to the change in honeycomb configuration with swelling.

Figure 8. Working configurations and force developed by a honeycomb actuator (calculated by the Born Model). A pressurized honeycomb (grey) can be used as a linear actuator to displace an external load (dark cube). At least, three configurations can be thought of: (a) applying a moderate pushing force at high strokes, (b) applying a high pulling force at low strokes and (c) applying a low pushing force at very low strokes. Three graphs (bottom) show the working characteristics for different pressures fed in the honeycomb.