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Correction: A passive star polymer in a dense active bath: insights from computer simulations

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Correction for 'A passive star polymer in a dense active bath: insights from computer simulations' by Ramanand Singh Yadav *et al.*, *Soft Matter*, 2024, 20, 3910–3922, <https://doi.org/10.1039/D4SM00144C>.

The authors regret that in the original article they incorrectly referred to all the star polymers as flexible, *i.e.*, devoid of any bending potential. Instead, all reported results were for star polymers with the bending potential:¹

$$V_{\text{Bend}} = \kappa(1 - \cos \theta).$$

In all simulations they took the value $\kappa = 75$ (in units of $k_B T$) for the bending coefficient and θ is the angle between two successive bond vectors of the polymer.

Therefore, the simulated star polymers should be considered as semiflexible, and all results presented in the original article are for semiflexible polymers and the given values of the Péclet number Pe . For flexible chains with $\kappa = 0$ one may expect different configurational shapes of the star polymers. The biggest difference is expected for the case of inactive crowders ($Pe = 0$).

The authors also regret that Fig. 1 and its caption were also incorrect in the original article. The correct version of Fig. 1 and the caption are presented below.

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

References

- 1 S. Chaki, L. Theeyancheri and R. Chakrabarti, *Soft Matter*, 2023, 19, 1348–1355.

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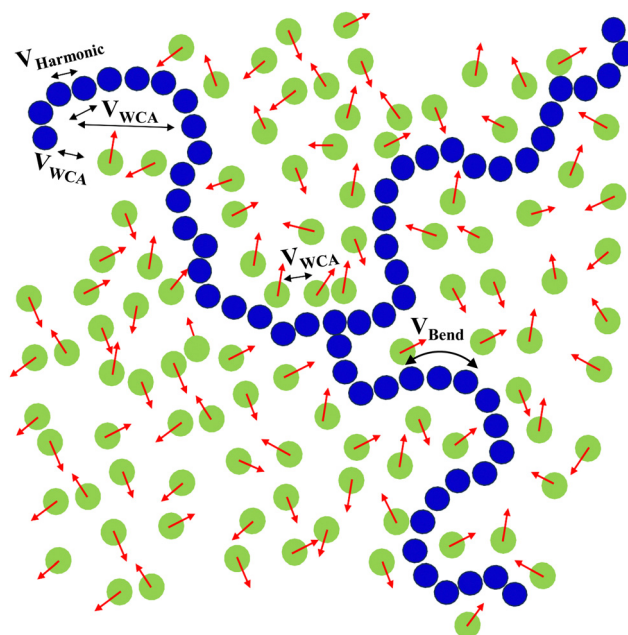


Fig. 1 A schematic depiction of the model system (not to scale): A single star polymer with three arms (blue) is immersed in a dense bath of ABPs (green). The red arrows show the instant direction of ABPs. The pairwise non-bonded interactions among the beads of the polymer and to the ABPs, as well as among the ABPs are WCA, which are shown as double headed arrows. In addition, there is a harmonic interaction to connect the neighbouring beads of polymer, and a bending potential between two successive bond vectors.

