CORRECTION

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Correction: Inhomogeneities and local chain stretching in partially swollen networks

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Correction for 'Inhomogeneities and local chain stretching in partially swollen networks' by Walter Chassé *et al.*, *Soft Matter*, 2013, **9**, 6943–6954.

Eqn (3) in the original manuscript needs to be replaced by

$$M_{c,app} = M_c \frac{f}{f-2} = -\frac{\rho_p V_s \omega_{el} \phi_p^{*\frac{1}{3}}}{\ln\left(1 - \phi_p^*\right) + \phi_p^* + \chi \phi_p^{*2}} \tag{1}$$

The previous version of the above Flory–Rehner equation incorporated an earlier suggested[1] and later revised[2] incorrect account of a fraction of elastically inactive defects $\omega_{def,sw}$, as determined by NMR experiments in the swollen state. In short, the previous version incorporated a modified $\phi_{p,el}^{*\frac{1}{3}} = \left[\left(1 - \omega_{def,sw}\right)\phi_p^*\right]^{\frac{1}{3}}$ dependence on the polymer volume fraction at swelling equilibrium in the numerator. The dependence on ϕ_p^*, however, merely relates to the geometric deformation of the sample as a whole, not to the fact that a part of the material is inactive. Rather, the fraction of elastically active material $\omega_{el} = 1 - \omega_{def,sw}$ is to be used to correct the resulting overall density of active network chains $1/M_c$, resulting in eqn (1).

Our revision[2] has also revealed that the interaction parameter χ for PDMS/toluene, to be used in the above equation, should be revised in so far as a different literature value,[3] $\chi = 0.445 + 0.287\phi_p^*$, provided more conclusive results. The corrections only affect the results shown in the final Fig. 9 of the paper, see Fig. 1 for a revised version. The overall changes are minor, amounting to systematic shifts of the absolute-value results for $1/M_{c,app}$, but not to significant changes in the relative linear relationships. Thus, all drawn conclusions remain valid.

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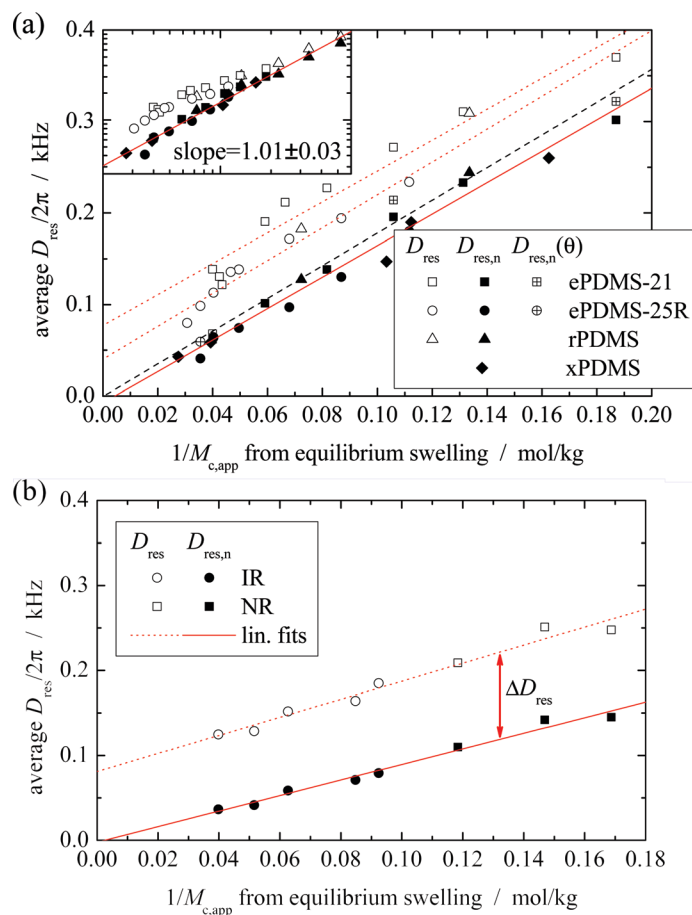
Fig. 1 Corrected version of Fig. 9 of original manuscript.

References

1 W. Chassé, M. Lang, J.-U. Sommer and K. Saalwächter, *Macromolecules*, 2012, **45**, 899–912.
2 W. Chassé, M. Lang, J.-U. Sommer and K. Saalwächter, *Macromolecules*, 2015, **48**, 1267–1268.
3 N. Kuwahara, T. Okazawa and M. Kaneko, *J. Polym. Sci., Part C: Polym. Symp.*, 1968, **23**, 543–553.

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