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CORRECTION

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Correction: Errors matter when measuring Poisson's ratio of nearly incompressible elastomers

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Correction for 'Errors matter when measuring Poisson's ratio of nearly incompressible elastomers' by Robert D. Nedoluha *et al.*, *Soft Matter*, 2025, **21**, 6689–6696, https://doi.org/10.1039/D5SM00535C.

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The authors regret that in the discussion of the results of ref. 28 ("Facile determination of the Poisson's ratio and Young's modulus of polyacrylamide gels and polydimethylsiloxane" by A. M. Smith, D. G. Inocencio, B. M. Pardi, A. Gopinath and R. C. A. Eguiluz, *ACS Appl. Polym. Mater.*, 2024, **6**, 2405–2416) the method of calculating Poisson's ratio was mistakenly identified as combining the Young's modulus and shear modulus. In fact, Smith *et al.* calculated Poisson's ratio through an optical strain gauge analysis that was applied to uniaxial extension measurements. The authors would like to apologise for any inconvenience caused by this error. The interpretation of the results presented in this article relies upon the propagation of error and cumulative error arguments made in the discussion section and remains unaffected by this correction.

Consequently, sections of the text, and Fig. 1 and **Table S1** have been updated to correct this mis-characterisation, with the changes detailed below.

The following text in the Introduction on page 6690 should be updated to remove ref. 28 as detailed below.

"This category includes techniques such as pressurization[19–22] to measure K combined with separate measurements of either E or the shear modulus μ,[23–25] radially confined compression (RCC)[2,8,24–27] to measure K combined with a separate measurement of E, and an emerging trend[28,29] of combining measurements of E and μ to infer ν." This sentence should read, "This category includes techniques such as pressurization[19–22] to measure K combined with separate measurements of either E or the shear modulus μ,[23–25] radially confined compression (RCC)[2,8,24–27] to measure K combined with a separate measurement of E, and an emerging trend[29] of combining measurements of E and μ to infer ν."

"Notably, the reported values for inferring ν from E and μ have all been generated from measurements in different setups (*e.g.* combining data from tensile tests and rheology[28] or tensile tests and lap shear tests[29]) and have not been attempted in a single setup." This sentence should read, "Notably, the reported values for inferring ν from E and μ have all been generated from measurements in different setups (*e.g.* tensile tests and lap shear tests[29]) and have not been attempted in a single setup."

The following text in Section 4 on page 6693 should be updated to remove ref. 28 as detailed below.

"Performing such measurements have recently been proposed as a method to meaningfully quantify ν of nearly incompressible elastomers.[28,29]" This sentence should read, "Performing such measurements have recently been proposed as a method to meaningfully quantify ν of nearly incompressible elastomers.[29]"

The following text in Section 4 on page 6694 should be updated to remove ref. 28 as detailed below.

"In this work, inferring ν from E and μ is given its best chance of working by performing both moduli measurements on the same sample instead of combining measurements from different setups as was done in previous works.[28,29]" This sentence should read, "In this work, inferring ν from E and μ is given its best chance of working by performing both moduli measurements on the same sample instead of combining measurements from different setups as was done in previous works.[29]"

The following text in Section 5 on page 6695 should be updated to remove ref. 28 as detailed below.

"Notably, it only takes a cumulative error of 10% to see an apparent value of ν = 0.35 which likely explains some of the more extreme values reported in the literature.[28]" This sentence should read, "Notably, it only takes a cumulative error of 10% to see an apparent value of ν = 0.35."

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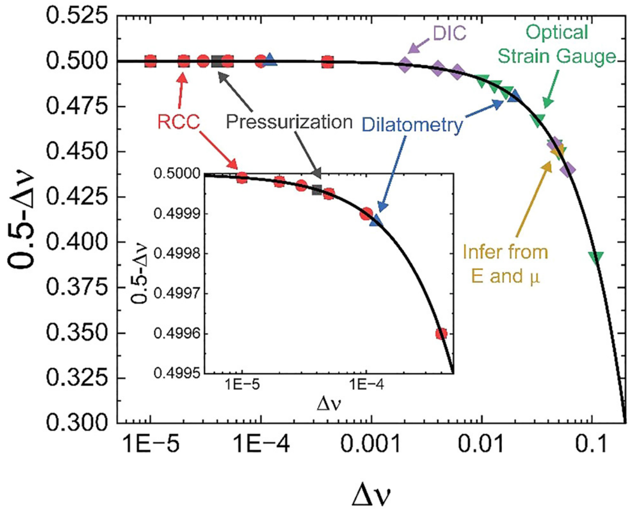

Fig. 1 Plot showing 0.5 ¬ $\Delta\nu$ *vs.* $\Delta\nu$ from literature data for RCC,[7,8,24,25] pressurization,[23–25] DIC,[9,11,12] strain gauge analysis,[28,30] dilatometry,[17,30] and inferred from E and μ.[29]

Fig. 1 on page 6690 should be replaced with the following revised Fig. 1 to refer to Smith *et al.*'s measurements as optical strain gauge measurements.

Accordingly, **Table S1** in the original Supplementary Information should be replaced with the following revised **Table S1** to change Smith *et al.*'s method description to Optical Strain Gauge. The original Supplementary Information has been updated.

Table S1 Table showing the compiled literature data used in the first figure of the main text

Source	Material	Method	Further analysis to estimate error?	ν	$\Delta\nu$
Rightmire[1]	White rubber 35	Pressurization	Yes	0.49991	0.00001
Rightmire[1]	Sample 52	Pressurization	Yes	0.49984	0.00001
Rightmire[1]	Paracril 48	Pressurization	Yes	0.49985	0.00001
Rightmire[1]	Neoprene 74	Pressurization	Yes	0.49964	0.00001
Rightmire[1]	Sample 50	Pressurization	Yes	0.49981	0.00001
Rightmire[1]	Sample 77	Pressurization	Yes	0.49947	0.00001
Rightmire[1]	Paracril 72	Pressurization	Yes	0.49953	0.00001
Rightmire[1]	Urethane 83	Pressurization	Yes	0.49963	0.00001
Rightmire[1]	Sample 100	Pressurization	Yes	0.49881	0.00001
Holownia[10]	NR 0.173	RCC	No	0.49986	0.0001
Holownia[10]	NR 40.4	RCC	No	0.4997	0.0001
Holownia[10]	NR 60.09	RCC	No	0.49961	0.0001
Holownia[10]	NR 80.1	RCC	No	0.49943	0.0001
Holownia[10]	NR 100.1	RCC	No	0.49905	0.0001
Holownia[10]	NR 121.1	RCC	No	0.499879	0.0001
Fishman and Machmer[2]	Adeprene 70	DJC pressurization	Yes	0.49969	0.00005
Fishman and Machmer[2]	Adeprene 70	VCD pressurization	Yes	0.49969	0.00004
Fishman and Machmer[2]	Adeprene 70	RCC	Yes	0.4997	0.00003
Fishman and Machmer[2]	Adeprene 90	VCD pressurization	Yes	0.4987	0.0004
Fishman and Machmer[2]	Adeprene 90	RCC	Yes	0.4986	0.0004
Stanojevic and Lewis[5]	NR	Pressurization	Yes	0.49979	0.00002
Stanojevic and Lewis[5]	NR	RCC	Yes	0.49968	0.00002
Laufer *et al.*[6]	Asbestos filled polybutadiene	Dilatometry	No	0.4993	0.00012
Barney *et al.*[7]	Silicone	RCC	Yes	0.4998	0.00005
Barney *et al.*[7]	Silicone	RCC	Yes	0.49995	0.00001

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Barney *et al.*[7]	Silicone	RCC	Yes	0.49998	0.00001
Barney *et al.*[7]	Silicone	RCC	Yes	0.49999	0.00001
Barney *et al.*[7]	Silicone	RCC	Yes	0.4999	0.0001
Barney *et al.*[7]	Silicone	RCC	Yes	0.49995	0.00001
Barney *et al.*[7]	Silicone	RCC	Yes	0.49998	0.00001
Barney *et al.*[7]	Silicone	RCC	Yes	0.49999	0.00001
T.L. Smith[8]	Filled polyurethane	Dilatometry	Yes	0.446	0.02
T.L. Smith[8]	Filled polyurethane	Strain gauge	Yes	0.47	0.01
Pritchard *et al.*[11]	Homogeneous CNT in PDMS	DIC	No	0.492	0.004
Pritchard *et al.*[11]	Heterogeneous CNT in PDMS	DIC	No	0.479	0.046
Pritchard *et al.*[11]	PDMS	DIC	No	0.5	0.002
Smith *et al.*[9]	Polyacrylamide	Optical strain gauge	Yes	0.3055	0.0165
Smith *et al.*[9]	Polyacrylamide	Optical strain gauge	Yes	0.342	0.046
Smith *et al.*[9]	Polyacrylamide	Optical strain gauge	Yes	0.374	0.013
Smith *et al.*[9]	PDMS	Optical strain gauge	Yes	0.314	0.032
Smith *et al.*[9]	PDMS	Optical strain gauge	Yes	0.417	0.108
Smith *et al.*[9]	PDMS	Optical strain gauge	Yes	0.462	0.05
Pal and Bhattacharyya[12]	PDMS	Shear and Young's modulus	No	0.44	0.05
Farfan-Cabrera *et al.*[13]	EPDM	DIC	No	0.516	0.06
Dogru *et al.*[14]	PDMS	DIC	No	0.491	0.006

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