



Correction: Terahertz spectroscopy of the helium endofullerene He@C₆₀

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Correction for 'Terahertz spectroscopy of the helium endofullerene He@C₆₀' by Tanzeeha Jafari *et al.*, *Phys. Chem. Chem. Phys.*, 2022, **24**, 9943–9952, <https://doi.org/10.1039/D2CP00515H>.

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Eqn (12) in the published version of this manuscript contained some errors. The equation should have read as:

$$\langle l_f \parallel T_k \parallel l_i \rangle = (-1)^{l_f} \sqrt{\frac{(2l_f + 1)(2k + 1)(2l_i + 1)}{4\pi}} \begin{pmatrix} l_f & k & l_i \\ 0 & 0 & 0 \end{pmatrix}$$

In addition, the published version of this manuscript contains missing information in some of the sentences. The corrected sentences are listed as follows:

1. Introduction:

Page 9944, left column, 1st paragraph – 'The incarceration of large noble gas atoms results in the structural and electronic distortion of C₆₀ which has been examined by IR and Raman,³⁴ NMR,³⁷ X-ray³⁸ and electronic spectroscopy.³⁹'

Page 9944, left column, 2nd paragraph – 'It was spotted by mass spectrometry when the ⁴He atom was incorporated in C₆₀ as the highly accelerated C₆₀⁺ ions struck with helium gas⁹ and later found in fullerenes produced by arc discharge in the He gas.⁶'

2. Theory:

Page 9944, left column, 1st paragraph – 'Also, we ignore the effect of the translational motion of C₆₀ in the crystal lattice and its molecular vibrations.'

Page 9945, right column, 1st paragraph – 'Factor $(\eta^2 + 2)/3$ is the enhancement of radiation electric field at the molecule embedded in dielectric⁴⁷ and η is the index of refraction (for C₆₀ $\eta = 2$, ref. 48).'

3. Discussion:

Page 9947, left column, 2nd paragraph – 'Although the anharmonic contributions to the H₂ potential have been determined experimentally,^{15,22,23} a more detailed comparison with He is not meaningful as firstly, H₂ has translation–rotation coupling terms in the potential and secondly, it misses the V₆ term in the potential fit.'

Page 9947, right column, Fig. 3 caption – 'The anharmonic terms in the potential, V₄ and V₆, split the energy levels with different l and each energy level has the unique l value within the spherical symmetry, on the right.'

Page 9947, right column, 1st paragraph – 'In general, the interaction of neutral A with C₆₀ can be separated into repulsive interaction and electrostatic interaction expanded in induction and dispersion terms.³³ Since He has no electric dipole nor quadrupole moment the induction terms are zero.'

Page 9947, right column, 2nd paragraph – 'To further validate the potential parameters of He@C₆₀ obtained from the fit of single high temperature spectra we compare the temperature dependence of line intensities of measured and calculated spectra, Fig. 4.'

Page 9948, left column, 1st paragraph – 'The dipole moment of He is induced by the displacement from the C₆₀ cage center.' The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

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