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ERRATUM

# Erratum to: Composition–thermal expandability relations and oxidation processes in tourmaline studied by in situ Raman spectroscopy

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In the original publication of the article, the values of the anisotropic Grüneisen parameters $\gamma_{11}$ and $\gamma_{33}$ given in Table 3 are incorrect; they all should be divided by a factor of 3.

The correct values of $\gamma_{11}$ and $\gamma_{33}$ are given in the table below.

Table 3 Mode Grüneisen parameter of selected framework vibrational groups and OH-stretching modes of tourmalines

| Species (#) | Vibrational groups/ mode | $\gamma_{11}$ | $\gamma_{33}$ | $\gamma_V$ |
|---|---|---|---|---|
| Fluor-buergerite (S36) | $YO_6$ | 1.50(1) | 0.72(3) | 1.11(1) |
| | $ZO_6$ | 2.77(3) | 1.33(7) | 2.1(5) |
| | $SiO_4$-ring | 0.74(1) | 0.35(1) | 0.55(5) |
| | $SiO_4$ stretch | 1.23(1) | 0.59(1) | 0.92(1) |
| | $^{V}OH–3^{Y}Fe^{3+Z}Al^{Z}Al$ | 0.244(1) | 0.036(1) | 0.182(4) |
| Fluor-schorl (S8) | $YO_6$ | 1.15(1) | 1.04(1) | 1.1(1) |
| | $ZO_6$ | 2.03(1) | 1.83(2) | 1.95(2) |
| | $SiO_4$-ring | 0.86(1) | 0.78(1) | 0.84(2) |
| | $SiO_4$ stretch | 0.82(1) | 0.75(1) | 0.80(2) |
| | $^{V}OH–3^{Y}Fe^{2+Z}Al^{Z}Al$ | 0.085(1) | 0.077(1) | 0.083(3) |
| $Fe^{2+}$-bearing elbaite (S19) | $YO_6$ | 2.01(1) | 0.84(1) | 1.37(6) |
| | $ZO_6$ | 1.75(1) | 0.73(1) | 1.20(6) |
| | $SiO_4$-ring | 1.30(1) | 0.54(1) | 0.88(4) |
| | $SiO_4$ stretch | 1.25(1) | 0.52(1) | 0.85(4) |
| | $^{V}OH–2^{Y}Li^{Z}Al^{Z}Al$-$^{Y}Al^{Z}Al^{Z}Al$ | 0.055(1) | 0.022(1) | 0.037(7) |
| | $^{V}OH–2^{Y}Fe^{2+Z}Al^{Z}Al$-$^{Y}Al^{Z}Al^{Z}Al$ | 0.047(1) | 0.020(1) | 0.032(8) |

Notes: $YO_6$ and $ZO_6$ refer to the dominant vibrations in the spectral region 220–240 $cm^{-1}$ and 370–410 $cm^{-1}$, $SiO_4$-ring and $SiO_4$-stretch to the modes at 639–710 $cm^{-1}$ (611–640 $cm^{-1}$ for S36) and 1010–1065 $cm^{-1}$ (1065–1090 $cm^{-1}$ for S19). Digits in parentheses represent the uncertainty (standard deviation) in the last digit of the value

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