feldspars, would be absent across a reflection twin boundary, such as that of albite twinning.

The factors that must be considered in any discussion of crystal growth or growth twinning are many, and their mutual evaluation is not easy through purely theoretical approaches. A theory can tell us if a certain factor ought to be important, but it can rarely tell us if this factor is more important than other factors. Theories that require the evaluation of twin boundary energies are forced to remain qualitative, for the most part, simply because these energies, even for crystals of rather simple, symmetrical structures, and possessing almost purely ionic bonding, are difficult to calculate. The calculation of the twin boundary energy for a feldspar, on the other hand, will be a formidable task. In a few cases, observations of certain crystals show that certain factors are important in these cases, and that other factors were of considerably less importance. There is no such thing as the importance of any one factor for all growth or twinning.

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UNIT-CELL PARAMETERS OF THE MICROCLINE-LOW ALBITE AND THE SANIDINE-HIGH ALBITE SOLID SOLUTION SERIES: A CORRECTION

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The entropy of disordering for the low- to high-albite transition calculated on page 71 of the above paper is too small by a factor of four. This incorrect value for ΔS was then used to calculate the effect of pressure on the low-high albite transition by means of the Clausius-Clapeyron equation. I am grateful to Dr. R. G. J. Strens of the University of Leeds for drawing my attention to this error.

The corrected lines are given below and should be substituted for lines 8–12 on page 71 and lines 1–5 on page 72.

The entropy change for the transition will be largely due to disordering one Al and three Si cations over four tetrahedral sites which is

$$\begin{aligned}\Delta S &= -4R(1/4 \ln 1/4 + 3/4 \ln 3/4) = 4.48 \text{ cal deg}^{-1} \text{ mole}^{-1}\\ &= 188 \text{ cm}^3 \text{ bar deg}^{-1} \text{ mole}^{-1}\end{aligned}$$

(Fyfe, Turner and Verhoogen, 1958, p. 32).

The effect of pressure on the transition temperature can be calculated from the Clausius-Clapeyron equation

$$\frac{dP}{dT}\,(\text{low Ab} \rightarrow \text{high Ab}) = \frac{\Delta S}{\Delta V} = 332 \pm 100 \text{ bar deg}^{-1}$$

An increase of 1000 bars in confining pressure should therefore raise the low albite-high albite transition by 2 to 4°C.

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THE NEAR INFRARED SPECTRUM OF BERYL: A CORRECTION

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The crystal (sample 3) which produced the anomalous near-infrared "beryl" spectrum reported in this earlier note (Wickersheim and Buchanan, 1959) has recently been identified by us as tourmaline. While this invalidates the conclusion drawn from that particular spectrum (Wickersheim and Buchanan, 1959; 1965) as far as beryl is concerned, the conclusions do still apply to tourmaline. Stated very briefly, the conclusions which can be drawn from the spectrum alone are: 1) that three types of OH^- (i.e., OH^- on three structurally dissimilar sites) exist; 2) that there is no detectable water present; 3) that, as indicated by the polarization of the OH^- vibrations, the OH^- directions do not quite parallel the axis of symmetry of the crystal; 4) that the OH^- ions are coupled fairly strongly to the rest of the crystal structure, and 5) that it seems likely, because of the recurrence of a 950 cm^{-1} combination with the OH^- stretching vibrations, that the oxygen of the OH^- group is directly bonded to a silicon ion—i.e., that we are observing silanol groups. Despite its originally erroneous identification, this spectrum is, to our knowledge, the only good spectrum of tourmaline in the 1 to 3 micron range available in the literature.

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