

## Errata for Introduction to Solid State Physics by Charles Kittel, 8<sup>th</sup> Edition

- p. 12 – Figure 14 caption – one of the (100)'s should be  $(\bar{1}00)$ .
- p. 30 - Figure 6 - The phase factor under the outgoing beam should be  $e^{ik' \cdot r}$  -- the prime is missing on k.
- p. 36 – The text between eq (30) and eq (31) - "We have, using (28)," should be "We have, using (29),".
- p. 36-38 – Eqs (29), (31), (34), (36) are not the definition of the BCC and SCC primitive vectors used on pgs 10 & 11 (Figs 10 & 11)
- p. 42 - Equation (50) - the last "=" sign should be deleted;  $\sin(Gr)/Gr$  is part of the integrand.
- p. 58, Fig. 3-6 (LJ potential). In the 7th edition, the vertical axis was labeled  $U(R)/4\epsilon$  and the minimum value was -0.25, which is correct. In the 8th edition, they changed the axis label to  $U(R)/\epsilon$  (which would make the minimum value -1.0), but forgot to actually multiply the curve by a factor of 4. Therefore the y-axis label should be  $U(R)/4\epsilon$ .
- p. 61, Figure 8, lower right corner - change "Cohesive energy" to "Lattice energy".
- p. 62, Eq. (17). A prime is used on the  $\Sigma$  without explanation. Where he says "where the summation includes all ions except  $j=i$ " he means, "where the prime on the  $\Sigma$  indicates that the summation includes all ions except  $j=i$ ".
- p. 73, Line 5 - Change " $a=4.16 \text{ \AA}$ " to " $a=5.88 \text{ \AA}$ ". (Note from Dr. Colton: I haven't verified this one.)
- p. 80, Eq. (51). The left-most variable should be  $C_{44}$ , not  $C_{14}$ .
- p. 98, Equation (21), the upper right matrix entry should be  $-C(1+e^{-ika})$ ; the minus sign is missing in the exponent.
- p. 104, the minus sign between  $\omega^2/\omega_0^2$  and the sine-squared term should be an equals sign; also, below the summation sign,  $p-1$  should be  $p=1$ .
- p. 128: Problem 5-1, Singularity in density of states. In the last sentence, change the word "discontinuous" to "continuous, but has a kink."
- p. 142, Equation (24a) - the closing bracket in the denominator should follow the T, not the 1:  $\dots/k_B T] + 1$
- p. 205 - Equation (37) should be density of states per volume, not just density of states.
- P. 206 - In Equation (42), the integral should go from  $-\infty$  to  $E_v$ , not to  $E_c$ , and should have  $(E_v - \mu)$  in the exponential, not  $(E_c - \mu)$ .
- p. 258 - The Appendices' page numbers should be H: 665; I: 667; J: 671.