Carter: *Molecular Symmetry and Group Theory*
Errata in the First Printing

Page	Correction
15	In the caption to Fig. 1.12, σ_h should read σ_v.
35	In problem 1.7 (b), CIF_2^+ should read ClF_2^+. [Capital I should be lower case "el".]
60	In the two-line table in the middle of the page, which follows the line reading "complex-conjugate irreducible representations gives", the 1 under *E* should read 2.
63	In the first line of the final equation under point 4, the last term should read "$6(+1)^2$", not "$6(-1)^2$". The result is unaffected.
65	In the first line, (3) should be (e).
65	In problem 2.4, delete the comma after C_{3v}.
75	In the last line of the third paragraph, change V to IV.
77	In line 16, add subscript 1 to *A* to read A_1.
84	In the last paragraph, lines 5 and 6, delete "secondary rotation axis or vertical" and replace with "horizontal".
88	In the first line under section 4.1, read "Feynman" for "Feyman".
115	Five lines from the bottom, replace "electron" with "pair" to read "four-pair density".
117	Tenth line from the top, insert a comma after σ_2.
117	Line 18 from the top (first line of the last paragraph before section 4.4), change "electrons" to read "pairs".
125	Fig. 4.23 The drawing in the lower left corner of the σ_g SALC should have positive signs for both 2*s* orbitals.
133	In problem 4.6, "alkyl" should read "allyl".
141-7	All references to the totally symmetric representation of the group *O* should be A_1, rather than *A* as printed on these pages (except p. 146).
145	Last line should read "$= -2 - 2 + 1 + 1 - 2 - 2 = -6 \neq 0$" [The sum as shown is incorrect, because the signs on the two 1's should be positive, not negative as printed.]

149 Add a line under Eq. (5.10c) to indicate summation.

150 In the D_{6h} table, in the row for E_{2u}, in the column for C_2, the character 1 should be 2.

156 Equation labeled (5.18) on this page should be (5.19). In this equation, the 4 x 4 matrix should read as follows: (first line) ½ ½ ½ ½; (second line) ½ -½ -½ ½; (third line) ½ ½ -½ -½; (fourth line) ½ -½ ½ -½. [The matrix shown erroneously copies the matrix in Eq. (5.17); the intended matrix is the transpose.]

179 Fig. 6.10. Add short arrows to central atoms in figures for ν_{3a}, ν_{3b}, and ν_{3c}. Arrow for ν_{3a} points left along the dotted line for the *x* axis, away from the marked *x*. Arrow for ν_{3b} points along the dotted line for the *z* axis, toward the marked *z*. Arrow for ν_{3c} points down along the dotted line for the *y* axis, away from the marked *y*. These new arrows should be as short as possible (shorter than the existing arrows on this figure).

186 In the D_{4h} worksheet, minus signs should be inserted before the 1's under C_2 for A_{1u}, A_{2u}, B_{1u}, and B_{2u}.

198 Problem 6.4 (d). Read "XY_4" for "MX_4".

199 Problem 6.7 (a). Add the following phrase to the end of the sentence: ", giving priority to nondegenerate modes."

206 Fig. 7.2. The *y* and *z* axis labels for the drawing of the $d_{x^2-y^2}$ orbital should be switched.

209 Line 13 from the top. Read "(7.2)–(7.6)" for "(7.3)–(7.7)".

242 Fig. 7.24. The dotted line at the bottom, connecting $^3T_{1g}$ on the left and right, should be a solid line.

247 Fig. 7.27. The third term on the right, $^4T_1$, should read $^2T_1$ (as it does in the same diagram in Appendix D).

251 Lines 12 and 15 [excluding Eq. (7.17)]. ψ_v should read ψ_v', making the expression $\psi_e \mu \psi_e' \psi_v$ become $\psi_e \mu \psi_e' \psi_v'$ at both places.

251 Line 17 [excluding Eq. (7.17)]. For $^2T_{1g}$, read $^2T_{2g}$.

251 Line 19 [excluding Eq. (7.17)]. For T_{1g}, read T_{2g}.

251 Line 19 [excluding Eq. (7.17)]. For E_{1g}, read E_g.

256 Problem 7.2. Part labeled (k) should be labeled (j).

259 Problem 7.19 (c). Read $[Cr(H_2O)_6]^{3+}$ for $[Cr(H_2O)_6]^{2+}$; i.e., the superscript 2+ should be

3+.

267 In the D_{8h} table, switch $2S_8$ and $2S_8^3$ in the top (header) row. Leave all numbers as shown in the columns underneath.

269 In the T_h table, switch $4S_6$ and $4S_6^5$ in the top (header) row. Also, in the column for i, in the line for T_g the 1 should be 3, and in the line for T_u the -1 should be -3.

273 In the C_{3v} correlation table (second from the top), in the second column (under C_3), for consistency of notation, E should be surrounded with braces to become $\{E\}$ in the last entry.

274 In the C_{3h} correlation table (third from the top), in the first column (under C_{3h}), for consistency of notation, E' and E'' should be surrounded with braces to become $\{E'\}$ and $\{E''\}$, in the second and last entries, respectively.

281 In the O correlation table (bottom table), in the fourth column (under C_4), for consistency of notation E should be surrounded with braces to become $\{E\}$ in the last two entries; viz., $A + \{E\}$ and $B + \{E\}$, respectively.