Corrections for *Inorganic Chemistry*, Second Edition, by Gary L. Miessler and Donald A. Tarr

The list given here is of the corrections that are most important for student use of the text. These corrections, as well as others that are more cosmetic in nature, are being made in future reprintings. Our apologies to those using this first printing for the inconvenience and misunderstanding that may be caused by the errors.

page 70, problem 3-1. The formula should be $[S_2CN(CH_3)_2]^-$ (to match the formula in part c).

page 70, problem 3-8i. Formula should be PH_4^+.

page 72, problem 3-20. Add sentence: Use the Allred values for electronegativity.

page 72, problem 3-23. The equation in the reference is in error. It should be changed to

$$\text{L-L charge} = \begin{matrix}\text{(US) group} \\ \text{number of A}\end{matrix} - \begin{matrix}\text{number of unshared} \\ \text{electrons on A}\end{matrix} - 2\sum_B \frac{\chi_A}{\chi_A + \chi_B} \times \begin{pmatrix}\text{number of bonds} \\ \text{between A and B}\end{pmatrix}$$

page 115, equation about 3/4 down the page. Change the minus sign to the left of c_2 to ±.

$$\Psi = c_1\psi(2s_a) \pm c_2\psi(2s_b) \pm c_3\psi(2p_a) \pm c_4\psi(2p_b)$$

page 124, Figure 5-10. Label under the bottom figure should read $d_{x^2-y^2}$ or d_{xz} orbitals..., not d_{yz}.

page 144, Figure 5-30. The fluorine group orbitals formed from $2p_x$ in the second set of figures should be labeled E', not E''.

page 145, Figure 5-31. Two more orbitals should be added above those shown, labeled $5e'$. Their shapes are shown at the right..

page 225. Lots of changes in 7-13 through 7-15 and 7-18:
Add data at the end of each of those problems. 7-13 through 7-15 are given completely, the changes only for 7-18.

7-13 Calculate the lattice energies of the hypothetical compounds $NaCl_2$ and MgCl, assuming that the Mg^+ and Na^+ ions and the Na^{2+} and Mg^{2+} ions have the same radii. How do these results explain which compounds are found experimentally? Data to use in the calculation:

Second ionization energies ($M^+ \rightarrow M^{2+} + e^-$) Na 4,562 kJ/mol Mg 1,451 kJ/mol

Enthalpy of formation: NaCl −98 kJ/mol $MgCl_2$ −153 kJ/mol

7-14 Use the Born-Haber cycle to calculate the enthalpy of formation of KBr, which crystallizes in the NaCl lattice. Data to use in the calculation:

ΔH_{vap} (Br_2) = 29.8 kJ/mol Br_2 bond energy = 190.2 kJ/mol

ΔH_{sub} (K) = 79 kJ/mol

7-15 Use the Born-Haber cycle to calculate the enthalpy of formation of MgO, which crystallizes in the rutile lattice. Data to use in the calculation:

O_2 bond energy = 247 kJ/mol ΔH_{sub} (Mg) = 37 kJ/mol

Second ionization energies O 3,388 kJ/mol Mg 1,451 kJ/mol

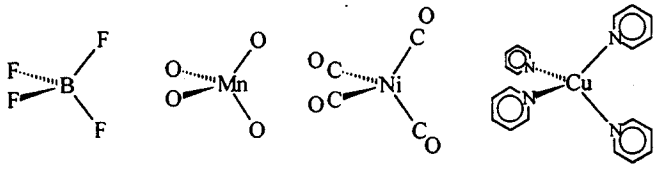
7-18 Delete (kJ/mol) from the fourth line of the text, and change the data at the end of the problem:

S^{2-} (*g*) 535 kJ/mol Pb(*g*) 196 kJ/mol PbS −98 kJ/mol

Second ionization energy for Pb 15.03 eV

page 250, table. Tricarbide (4−) rather than 3−.

page 304, Figure 9-24 The wedge bonds should be aimed better, and the angles changed (smaller on the left, larger on the right). They should be about 109° on the right.



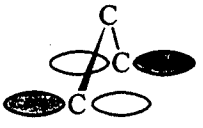
page 310, problem 9-9. The formula is wrong. first sentence should be: Assume that $[Cr(CO)_2(CN)_2(NH_3)_2]^+$ has been synthesized.

page 311, problem 9-19. The reference is wrong. The first author's name is Bayler, and the reference is *Inorg. Chem.*, **1996**, *35*, 5959.

page 419, problem 12-6d. SCN^- rather than NCS^-.

page 419, problem 12-8. 45°C, not 45%C.

page 451, Figure 13-25, middle drawing. The shaded and unshaded lobes should be reversed for the lower C.

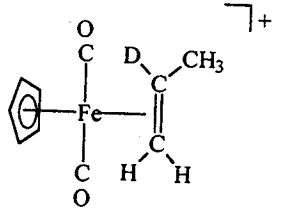


page 437, table in the middle, in paragraph just below the table, and in Exercise 13-5. $[Mn(CO)_5]^+$ should be $[Mn(CO)_6]^+$

page 471, Table 13-7. The second line headed IR bands: should have 3 and 3, rather than 1 and 2 under the figures (under the $M(CO)_3L_2$ and $M(CO)_3L_3$).

page 480, problem 13-23. The complex should be $[Fe(CO)_6]^{2+}$, and the page for the reference should be 158.

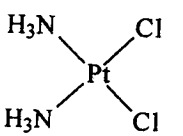
page 497, Figure 14-12. The bond from the Fe should go to the center of the double bond.



page 502, Figure 14-15, bottom. O is missing from the figure. Should be H—Rh—CO across the middle of the diagram just above the 7.

page 550, problem 15-10. Second line should read...the unstable CH_5^+ and CH_6^{2+} ions... Also, delete the first reference and make the last sentence read: See G. A. Olah and G. Rasul, *Acc. Chem. Res.*, 1997, *25*, 56 and references therein.

page 570, lower third. The figure at the right (with no number) should be added in the margin.



Cisplatin

page 572, middle. Add the word compounds, so it reads: ...methylmercury compounds seems uncertain,...

page 581, problem 16-6. First sentence should be "Methyl cobalamin is usually described as a Co(II) compound, which changes to Co(III) on dissociation of CH_3^-. " [Changes (I) and (II) to (II) and (III).]

Inside back cover. The multiplication signs and minus signs in exponents are wrong in all but one or two instances. All × symbols have been replaced by 3, and all minus signs in exponents by 2 (both with extra space following). In addition, the third entry under permittivity of a vacuum should be 2.3071×10^{-28} J m (extra zero should be removed) and in the sentence under Conversion Factors, 1 eV = 96.4853 kJ/mol.