Coordination Chemistry Reviews
Elsevier Publishing Company Amsterdam
Printed in The Netherlands

Errata

Re: THE EFFECT OF AXIAL LIGAND FIELD ON GROUND STATE PROPERTIES OF COMPLEXES WITH ORBITALLY DEGENERATE GROUND TERMS

by G. A. WEBB, *Coordin. Chem. Rev.*, 4 (1969) 107–145

p. 109, equation (3) should read, $V = V_0 + V_T$

p. 110, sentence beginning on line 4 should read,

"In contrast the two parameter axial field model[8] considers the more general case with b' being different from zero, ..."

p. 111, line 13 should read,

"...angle subtended at the metal ion by a vertex and the major symmetry axis[14]."

Equation (7) should read,

$$Ds = \frac{2}{7} Ze\bar{r}^2 \left(\frac{1}{b^3} - \frac{1}{a^3}\right)$$

Equation (8) should read,

$$Ds = \frac{3}{7} \frac{Ze\bar{r}^2}{a^3} (1 - 3\cos^2 \alpha)$$

The sentences accompanying equation (8) should read,

"For an octahedron deformed along a trigonal axis (eq. (8)) so that Ds is negative for a compression and positive for an extension along the trigonal axis. Hence for an octahedron distorted by a tetragonal deformation a compression produces a positive value of Δ for T_2 terms and a negative value for T_1 terms, the converse being true in the case of a compression along a trigonal axis."

Equation (9) should read,

$$Ds = \frac{2}{7} \frac{Ze\bar{r}^2}{a^3} (1 - 3\cos^2 \alpha)$$

The sentence accompanying equation (9) should read,

"In the case of a tetrahedron with a tetragonal distortion along the S_4 axis

(eq. (9)) which implies that *Ds* is negative for a compression of the tetrahedron and positive for an elongation along the tetragonal axis."

The sentence beginning 8 lines from the bottom of p. 111 should read,

"In general the sign of Δ produced by distortion of a tetrahedron is the same as tbat produced by a similar distortion of an octahedron."

p. 113, equation (14) should read,

$$X_{\alpha M} = \frac{N \sum_i \left[\frac{(E^{I}_{i\alpha})^2}{kT} - 2E^{II}_{i\alpha} \right] e^{\frac{-E^{0}_{i\alpha}}{kT}}}{\sum_i e^{\frac{-E^{0}_{i\alpha}}{kT}}}$$

line 14 should read,

"the g tensor to derive expressions for the magnetic moment, see page 121."

p. 115, equation (20) should read,

$$S_1 = X_\perp$$

$$S_2 = X_\parallel \cos^2\alpha + X_\perp \sin^2\alpha$$

$$S_3 = X_\parallel \sin^2\alpha + X_\perp \cos^2\alpha$$

followed by, "Therefore $X_\perp = S_1$——-"

p. 116, penultimate line should read,

"—— first excited level is split into 2 degenerate sets of states by $\Delta E_Q = e^2qQ/2$."

p. 119, line 5 should read,

"pair by definition, and from (30) it follows that q_{val} is positive. Now for the"

p. 121, equation (44) should read,

$$g_\perp = 2 - \frac{2\lambda}{\Delta} - \frac{4\lambda}{10\,Dq}$$

equation (45) should read,

$$g_\parallel = 2\left(1 - \frac{4\lambda}{\Delta_1}\right)$$

and $$g_\perp = 2\left(1 - \frac{\lambda}{\Delta_2}\right)$$

equation (46) and following sentence should read,

$$g_{\parallel} = 2$$

$$g_{\perp} = 2\left(1 - \frac{3\lambda}{\Delta_3}\right)$$

Where Δ_1 = the separation between the d_{xy} and $d_{x^2-y^2}$ orbitals, Δ_2 the separation between $d_{x^2-y^2}$ and the pair d_{xz}, d_{yz} and Δ_3 is the separation between the d_{z^2} and the d_{xz}, d_{yz} pair of orbitals."

p. 125, equation (53) should read,

$$p^2 = \frac{\sum_{n=1}^{9}\left(A_n + \frac{B_n}{y}\right)e^{a_n y}}{\sum_{n=1}^{6} 2e^{a_n y} + \sum_{n=7}^{9} e^{a_n y}}$$

equation (54) should read,

$$\Delta E_Q = \frac{2}{7}e^2 Q(1-R)\langle r^{-3}\rangle \frac{\sum_{n=1}^{9} C_n e^{a_n y}}{\sum_{n=1}^{9} e^{a_n y}}$$

p. 133, Table 3; the second complex should be,

$[(C_6H_5)_3CH_3As]_2\,NiCl_4$

p. 137, third line from the bottom should read,

"data on the corresponding Mn^{III} complex (see page 134). The apparent dependence"

p. 139, line 18 should read,

"The data for the alum $Cs_2(SO_4)Ti(SO_4)12H_2O$ have heen derived from a number"