

## Errata

### Re: STEREOCHEMICAL CHANGES DURING OCTAHEDRAL SUBSTITUTION REACTIONS

by R. D. ARCHER, *Coordin. Chem. Rev.*, 4 (1969), 243–272

Page 251, lines 6 and 7 should read:

that the higher entropies imply an incipient if not actual trigonal bipyramid, whereas the lower entropies are associated with an incipient tetragonal pyramid, or at least

Page 251, line 14 should read:

group *trans* to the leaving group had unshared electrons and the four groups *cis*

Page 254, line 34 should read:

with the chloro ligand in the trigonal plane has  $4,000\text{ cm}^{-1}$  (about 11 kcal.) less

Page 255, Table 4 should read:

TABLE 4

ANTIBONDING EFFECTS FOR SEVERAL COBALT(III) COMPLEXES AND INTERMEDIATES

| Complex   | <i>d</i> -orbital antibonding energies ( <i>kK</i> ) <sup>a</sup> | Total spin-paired <i>d</i> <sup>6</sup> antibonding effect ( <i>kK</i> ) <sup>b</sup> |
|---|---|---|
| <i>cis</i> -[Co(en) <sub>2</sub> Cl <sub>2</sub> ] <sup>+</sup>                   | 2, 2, 4, 23, 23   | 16  |
| {Co(en) <sub>2</sub> Cl} <sup>2+</sup> tetragonal pyramid<br>Cl in plane          | 0, 2, 2, 15, 23   | 8   |
| {Co(en) <sub>2</sub> Cl} <sup>2+</sup> trigonal bipyramid<br>Cl at xy coordinate  | 0, 2, 9, 11, 21   | 22 <sup>c</sup>   |
| {Co(en) <sub>2</sub> Cl} <sup>2+</sup> trigonal bipyramid<br>Cl in axial position | 2, 2, 9, 9, 21  | 26 <sup>d</sup>   |
| <i>cis</i> -[Co(en) <sub>2</sub> Cl(H <sub>2</sub> O)] <sup>2+</sup>              | $\frac{1}{2}$ , 2, 2 $\frac{1}{2}$ , 22, 23                       | 10  |
| <i>trans</i> -[Co(en) <sub>2</sub> Cl(H <sub>2</sub> O)] <sup>2+</sup>            | 0, 2 $\frac{1}{2}$ , 2 $\frac{1}{2}$ , 22, 23                     | 10  |

<sup>a</sup> Calculations based on angular parameter model<sup>55,56</sup> used for ML<sub>6</sub> species by Yatsimirskii<sup>34,35</sup> as modified<sup>52</sup> to allow for complexes with nonequivalent ligands. *kK* =  $1000\text{ cm}^{-1}$  = 2.86 kcal/mole. Parameters based on spectral data tabulated by Wentworth and Piper<sup>57</sup>, but using nomenclature of Yatsimirskii<sup>34,35</sup>.  $\Delta\sigma(\text{en}) = 23\text{ kK}$ ;  $\Delta\pi(\text{en}) = 0\text{ kK}$ ;  $\Delta\sigma(\text{Cl}) = 23\text{ kK}$ ;  $\Delta\pi(\text{Cl}) = 8\text{ kK}$ ;  $\Delta\sigma(\text{H}_2\text{O}) = 21\text{ kK}$ ;  $\Delta\pi(\text{H}_2\text{O}) = 2\text{ kK}$ .

<sup>b</sup> Calculations assume electrons are paired in lowest energy orbitals.

<sup>c</sup> If intermediate is ground state triplet, intermediate total antibonding effect = 24 *kK* — (pairing energy).

<sup>d</sup> If intermediate is ground state triplet, intermediate total antibonding effect = 26 *kK* — (pairing energy).