

Book reviews

Metals and Ligand Reactivity, by E.C. Constable, Ellis Horwood Series in Inorganic Chemistry, Chichester, 1990, 246 pp., \$54.50. ISBN 13–577222–2.

The quality and production of this book are excellent. The author is a good writer and through eight chapters plus an envoi guides the reader into the ligand reactivity field.

The first chapter is a qualitative and general introduction to bonding in metal complexes and the principles of reactivity. Activation by coordination is discussed in Chapter 2. The next chapter is specially devoted to the reaction of carbonyl ligands with nucleophiles. Reactivity enhancement as a consequence of coordination to a metal centre is well exemplified in Chapters 4 and 5 and an extensive discussion of the template effect and macrocycle chemistry is presented in Chapter 6. The reactivity of coordinated aromatic and heterocyclic ligands is discussed in Chapter 7 and ligand redox reactions are briefly considered in Chapter 8. The author finally addresses the reader with some general concluding remarks (pp. 228–236).

The author's style makes this book stimulating, but some shortcomings must also be mentioned.

Literature citations have been deliberately excluded from the text. Had they been included, it would have saved time and been an additional incentive to the reader to “delve deeper into this subject ...”, as the writer wishes. The list of suggestions for further reading is good, although more up-to-date references could also have been included.

I felt the lack of topics about C_1 chemistry, namely CO and CO_2 activation. Also, the oxidation–reduction chapter could have been treated in more detail and Chapter 7 easily enlarged. The macrocycles are not usually treated in textbooks and therefore an extension dedicated to this topic is justified. The content of the first chapter can be found in general chemistry textbooks. Chapters 1 and 2 could have been condensed easily into only one without any reduction in quality.

Overall, I think this is a useful book for introducing students and non-specialists to the ligand activation field.

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