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Book Review

URSULA BÜNZLI-TREPP

Systematic Nomenclature of Organic, Organometallic and Coordination Chemistry: Chemical-Abstracts Guidelines with IUPAC Recommendations and Many Trivial Names

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The scope of this book is wide-ranging, and it is not surprising it runs to over 600 pages in A4 format. Originally published in German in 2000, this English edition has been updated and expanded. The author has over 30 years editorial experience at *Helvetica Chimica Acta* and has obviously taken an unusually keen interest in nomenclature. The book is intended as a practical nomenclature manual for those confronted by often very complicated chemical names. "Directions for Use of the Book" provides a clear introduction. Although it is largely based on the guidelines used by the Chemical Abstracts Service (CAS), the book also shows many IUPAC recommendations and trivial names. This is a very good idea as different styles of name frequently cause confusion and it helps to see them next to each other. Even nomenclators tend to specialise, and there are subtle (and not so subtle) differences between CAS and IUPAC names. In these days of reliance on software to provide names, it was pleasing to see a warning that you still need knowledge of nomenclature to check the accuracy of the computer. It is explained that many organic compounds consist of three components, which are here colour-coded in diagram and name, 'prefixes' (green) + 'parent

name' (red) + 'suffix' (blue), so you can see clearly which part of the structure relates to which part of the name. This is a very useful device which will aid understanding.

A glossary follows, which explains the basic terms used in the work. Although the author says that she will not be recommending new nomenclature rules, the nesting order for enclosing marks is given as {{{{[O]}}}}, whereas CAS would use [[[[[O]]]]], and IUPAC would use {{{{[O]}}}} etc. A particular strength of the book is the number of examples which back up instructions on how to name the structures. The coverage of organometallic and coordination nomenclature is detailed with many examples, so if you are struggling to name a structure you might well find one like it, and be able to make a direct comparison. Any names with "mu", "eta" or "kappa" in them will cause problems, but they are all explained here. Even quite complicated examples appear. More than 50 pages are devoted to this area, but of course the remainder of the work is also necessary to name compounds correctly. Footnotes appear on the same page where they are referenced, so the reader does not have to try to look at two pages at once. The index is extensive, although it does not attempt the task of listing all 6000 chemical names that appears in the book!

Inevitably, in a book of this size there are some errors, but the reader is directed to a website, <http://www.chemical-nomenclature.ch> where corrections and updates are published. This is a very good guide to the construction of chemical names.

Kevin ThurlowHead, Chemical Nomenclature Advisory Service LGC Limited,
Teddington UK