

## Book Review

***Perspectives in Organopalladium Chemistry for the XXI Century*, Edited by J. Tsuji, Elsevier Science, Amsterdam, 1999, pp. xiii + 322. ISBN 0-444-50197-5; US\$ 147, NLG 290, Euro 131.60**

The importance of atom-efficient and enantioselective C–C bond-forming reaction methodology, emphasised in part by the efforts of organic chemists in natural product synthesis and in part by an increased environmental awareness of the chemical industry, has led to a growth in organopalladium chemistry. Palladium catalysts are now used routinely for a wealth of chemical transformations, and it is the transformations that are at the forefront of research that are highlighted by this collection of perspectives edited by Jiro Tsuji.

Unlike in his own review ‘Palladium Reagents and Catalysts-Innovations in Organic Synthesis’, Tsuji has here assembled manuscripts from some of the primary researchers in this field. This presents the reader with a more rounded view of the area, and so gives an overview of the most important Pd-catalysed reactions in organic synthesis. This is particularly useful to the organometallic chemist, as details on, for example, mechanisms and the origins of enantioselectivity are discussed throughout the book, so giving the book a more organometallic feel.

The manuscripts are presented according to the type of Pd-catalysed transformation: Heck-type reactions, both enantioselective and palladacycle-mediated, the construction of complex organic molecules via cyclisa-

tion, cascade, domino and annulation reactions, aryl amination, cross-coupling reactions, asymmetric allylic substitution, benzannulation, the co-polymerisation of CO and alkenes and Pd-catalysed oxidation chemistry. Each facet has, in general, been excellently reviewed, with clear textual and diagrammatic presentation, although a retrospective view is present throughout which does not sit well with the 21st century outlook promised in the title of the book. As a minor point, while the majority of the reviews understandably focus on phosphine-supported palladium catalysts, it is unfortunate that little space (other than in Herrmann’s perspective) is given over to the exciting, new area of carbene-supported catalysts.

Considering the broad collection of topics presented, I think this volume succeeds in its objectives, and provides the reader with an excellent, up-to-date overview of organopalladium chemistry. The detail provided by each of the authors also should enable the reader to access the recent primary literature and become more conversant with the area. As well as being an interesting read, this volume can also be considered as good reference material.

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