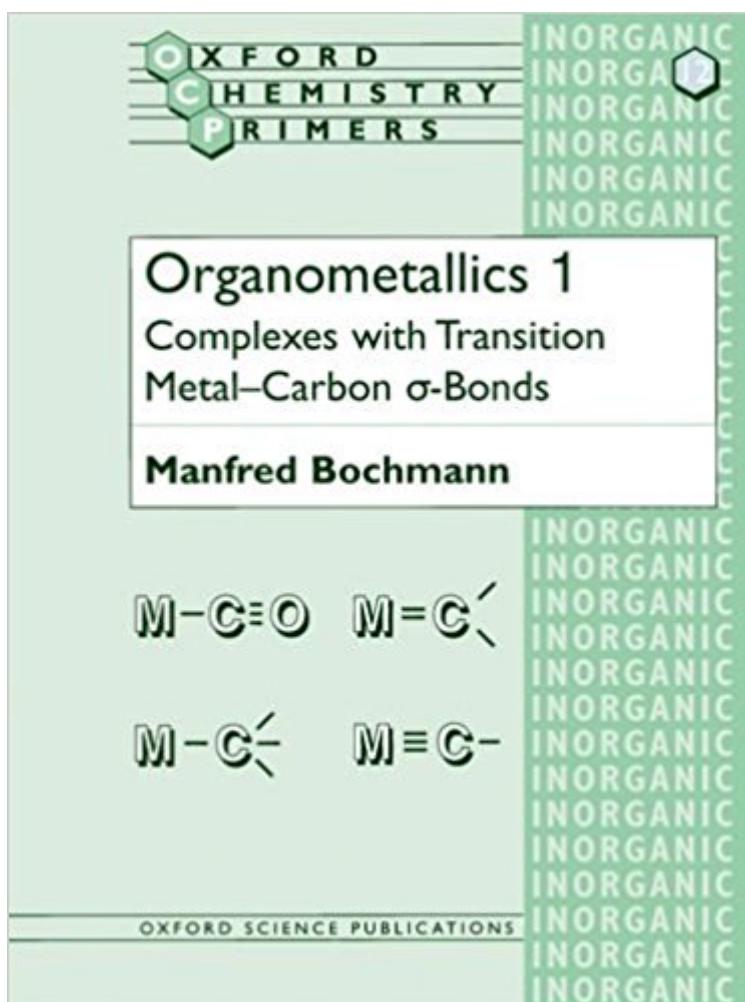


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# Organometallics 1: Complexes With Transition Metal–Carbon $\sigma$ -bonds (Oxford Chemistry Primers) (Vol 1)



## Synopsis

The field of organometallic chemistry has seen explosive growth over the last forty years. On a fundamental level, new structural and bonding concepts have been discovered, while applications range from catalysis to new synthetic methods. This succinct text outlines the main classes of transition metal organometallic complexes and introduces the reader to the chemistry of compounds with metal-carbon bonds: metal carbonyls, metal alkyls, and metal alkylidenes and alkylidynes. The synthetic methods leading to each class of compounds are illustrated with pertinent examples, followed by the discussion of characteristic structures and reactivity patterns. The book stresses general principles and relates the material to specific applications such as catalytic processes. This book is ideal for supplying a quick overview of the discipline to students of chemistry.

## Book Information

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## Customer Reviews

'a solid, basic course for transition metal organic chemistry ... The book should be an 'aperitif' for every new student and stimulate more intensive study of the subject matter' *Nachrichten aus Chemie Tecknik und laboratorium*, Vol. 42, No. 12 (Dec. 1994) 'The treatment is straightforward, easy to read, but not patronising. It should be a useful resource for many undergraduate courses.' *Journal of Organometallic Chemistry* 492 (1995) 'These two little volumes fulfil a need that has not yet been met by other books. Students, at least in the UK, often no longer have the funds to buy as many text books as one might desire, and these books appear to achieve comprehensiveness and cheapness at the same time. They are to be welcomed.' *Journal of Organometallic Chemistry* 492 (1995) 'Ces

deux ouvrages s'adressent aux etudiants de deuxieme et troisieme cycles ainsi qu'aux chimistes recherchant un cours condense de chimie organometallique.'La Recherche, No. 271, Decembre 1994`Few contemporary books in introductory organometallic chemistry offer so much for such a trivial financial outlay ... it is written in an exceptionally lucid style with excellent diagrams and reaction schemes, and should be especially attractive to undergraduate students at the very lowprice. I strongly recommend the book as a suitable first text for students in this area of chemistry.'A.M. Arthurs, Chemistry in Britain, January

This series of short texts provides accessible accounts of a range of essential topics in chemistry. Written with the needs of the student in mind, the Oxford Chemistry Primers offer just the right level of detail for undergraduate study, and will be invaluable as a source of material commonly presented in lecture courses yet not adequately covered in existing texts. All the basic principles and facts in a particular area are presented in a clear and straightforward style, to produce concise yet comprehensive accounts of topics covered in both core and specialist courses. The interaction of transition metals with unsaturated organic molecules has led to fundamental insights in the nature of the chemical bond which, in turn, have provided the basis of important present-day applications such as transition metal mediated synthesis or homogeneous and heterogeneous catalysis. This slim volume outlines the chemistry and discusses the bonding in some of the most important classes of organometallic compounds: the complexes of transition metals with ( $\pi$ )-ligands such as alkenes, alkynes, arenes, and cyclopentadienyl and allyl ligands. The material covered follows on from Organometallics 1 which covers the chemistry of complexes with metal-carbon ( $\sigma$ )-bonds. Synthetic and reactivity aspects of each class of compounds are illustrated with pertinent examples from the recent chemical literature. Highlighted excursions relate the fundamental chemistry to current synthetic or catalytic applications.

An excellent reference book for an organometallic class. Despite it's somehow short, it's a good source of information about this topic.

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