which is likely to be of specific interest to the organometallic chemist. Indeed, it is hard to imagine why the editors chose to include it in this volume: it is difficult to envisage that a reader who has mastered the intricacies of quantum electrodynamics and guage-invariant quantum theory to the required level for reading Woolley's article will have the slightest interest in the structure of the alkyl and aryl complexes of antimony(V). Similarly, the average synthetic chemist who enjoys reading the final article will flounder in the first paragraph of Woolley's review. Nevertheless, despite this anomaly, and despite the preposterous title of the volume, this book is well worth purchasing at its very reasonable price. As a general note on this series, it would be very useful if the editors included a cumulative subject index to complement the cumulative author index which appears in each volume.

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Mechanisms of Inorganic and Organometallic Reactions, Volume 2. Edited by M.V. Twigg, Plenum Press, New York, 1984, xvii + 453 pages, $59.50, ISBN 0-306-41404-X (v. 2).

The volume under review is the second in a series which seeks to provide a continuing survey of the literature concerned with mechanistic aspects of inorganic and organometallic reactions in solution, and deals with the period 1981—June 1982. The format is similar to that of the first volume, with material arranged according to reaction or compound type. In the present instance, extra space has been devoted to areas concerned with electron transfer processes and substitution reactions of inert complexes.

The various chapters are written with authority, and further details are provided below, by identifying the authors and chapter headings; also shown, in parentheses after each entry, are the number of pages and references. There is both an author and subject index, and the book is attractively produced; it is divided into 3 parts: electron transfer reactions (Chs. 1—3), substitution and related reactions (Chs. 4—9), and reactions of organometallic compounds (CHs. 10—14).

Chapter 1, Electron Transfer: General and Theoretical, by R.D. Cannon (20 pages, 116 references); Chapter 2, Redox Reactions between Metal Complexes, by A.G. Lappin (29 pages, 118 references); Chapter 3, Metal—Ligand Redox Reactions, by A.G. Lappin (23 pages, 151 references); Chapter 4, reactions of Compounds of the Nonmetallic Elements, by M.N. Hughes (25 pages, 205 references); Chapter 5, Substitution Reactions of Inert Metal Complexes — Coordination Numbers 4 and 5, by R.J. Cross (28 pages, 80 references); Chapter 6, Substitution Reactions of Inert Metal Complexes — Coordination Numbers 6 and Above: Chromium, by P. Moore (20 pages, 62 references); Chapter 7, Substitution Reactions of Inert Metal Complexes — Coordination Numbers 6 and Above: Cobalt, by R.W. Hay (33 pages, 122 references); Chapter 8, Substitution Reactions of Inert Metal Complexes — Coordination

Numbers 6 and Above: Other Inert Centers" by J. Burgess (27 pages, 150 references); Chapter 9, Substitution Reactions of Labile Metal Complexes, by D.N. Hague (19 pages, 115 references); Chapter 10, Substitution and Insertion Reactions of Organometallic Compounds, by D.A. Sweigart (33 pages, 116 references); Chapter 11, Metal—Alkyl Bond Formation and Fission; Oxidative Addition and Reductive Elimination, by M. Green (30 pages, 98 references); Chapter 12, Reactivity of Coordinated Hydrocarbons, by L.A.P. Kane-Maguire (18 pages, 56 references); Chapter 13, Rearrangements, Intramolecular Exchanges, and Isomerizations of Organometallic Compounds, by A.J. Deeming (31 pages, 130 references); and Chapter 14, Homogeneous Catalysis of Organic Reactions by Complexes of Metal Ions, by C. White (26 pages, 184 references).

The stand-point in Part 3 (Chs. 10—14), which is of principal interest to the majority of the readers of this Journal, is essentially that of the inorganic chemist, but the vast area of Main Group element organometallic chemistry is barely considered. Even in Part 2 the treatment of Main Group element chemistry is highly selective, and in places one might even say superficial. For instance, the area of silicon chemistry (in Ch. 4) takes 4 pages, and reference is made to 18 papers. This might well be contrasted with the series: Organometallic Chemistry Reviews; Annual Surveys. Silicon — Lead (J. Organomet. Chem. Library, 14, 1984), in which organosilicon reaction mechanisms for the year 1981 are covered in 71 pages, with 290 literature citations.

In summary, this is a useful and attractively produced book, which is primarily directed to practitioners of inorganic reaction mechanisms, and especially to those interested in transition metal complexes.

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Fourier Transform N.M.R. Spectroscopy; by D. Shaw. Elsevier, Amsterdam etc., 1984, xi + 344 pages, D.Fl. 250.

The eight years since the first edition of this useful book was published have seen many advances in Fourier Transform N.M.R. spectroscopy and many chemists now have access to high field instruments capable of a wide range of sophisticated experiments. This book describes the factors affecting the acquisition of N.M.R. data, and discusses the ways in which the techniques available can be applied.

Nine of the ten chapters are titled as in the first edition, viz.: Introduction; Principles of magnetic resonance; The mathematics of Fourier N.M.R.; Excitation techniques in N.M.R.; Pulsed N.M.R.; Instrumentation; Experimental techniques; Multiple resonance and Relaxation. The chapter in the previous edition concerned with discussion of the N.M.R. spectrum has been replaced in this volume by one about multidimensional N.M.R., which describes 2D spectra, multiple quantum experiments and N.M.R. imaging, and gives refer-