

it is possible to choose the appropriate DEP. This is then installed on the automobile, fork lift truck or other equipment as near to the engine exhaust manifold as practicable.

Acknowledgement

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References

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- 3 California Exhaust Emission Standards, Test and Approval Procedures for Diesel Engines in 1973 and Subsequent Model Year, Vehicles over 6,001 lb. gross Weight, Proposed Nov. 18th, 1970, State of California Air Resources Board
- 4 D. P. Potter, J. Wignall, and M. L. Windsor, *J. Environmental Planning Pollution Control*, 1972, **2**, (2), 47-52
- 5 See any standard textbook on statistical design of experiments, e.g. "Experimental Designs", W. G. Cochran and G. M. Cox, 2nd edn., publ. John Wiley Ltd.

Organometallic Chemistry of Platinum

ORGANOMETALLIC AND COORDINATION CHEMISTRY OF PLATINUM BY UMBERTO BELLUCO, Academic Press, London and New York, 1974, 701 pp. £17.50

This volume is a recent addition to the series of monographs on Organometallic Chemistry which includes P. M. Maitlis' "The Organic Chemistry of Palladium". It is the first book to be devoted entirely to the chemistry of platinum complexes and supplements F. R. Hartley's "The Chemistry of Platinum and Palladium".

Dr Belluco and his colleagues do not claim to have comprehensively covered the literature, especially in the section on coordination complexes. They have, however, provided the most up-to-date compilation of information necessary for a full appreciation of reactivity and bonding in the organometallic chemistry of platinum. A total of 1400 references, up to August 1973, are quoted in the text, in addition to a list of reviews on the subjects covered by each chapter.

The book opens with a chapter on coordination compounds which is sub-divided into the chemistry of platinum in its various oxidation states. Each section contains details of the physical and spectral properties of the relevant complexes. Specific descriptions of preparative methods have been omitted for the sake of brevity and the discussion is limited to general procedures and selected compounds. There is an additional section on oxidative addition to platinum(II) complexes.

There follows a discussion on the mechanism of substitution reactions with particular reference to the effect on reactivity of entering and leaving groups, *cis* and *trans* ligands, and the nature of the solvent.

There is also a very brief comparison with the reactivities found in other d^8 square planar systems.

The organometallic chemistry of the element is treated according to the nature of the ligands, with chapters on hydride complexes, metal-Group IV σ -bonded complexes, and compounds formed with unsaturated hydrocarbons. Each chapter is sub-divided as for the coordination compounds of a given oxidation state, but with particular emphasis on the preparative chemistry. In the five chapters on the complexes of platinum, extensive use has been made of tabulated nuclear magnetic resonance, infrared and Raman spectral data, and there are numerous illustrations of the molecular structures of significant complexes.

The final chapter is on homogeneous catalysis, where the emphasis is on the hydrogenation and isomerisation of olefins by platinum(II) complexes. However, the inclusion of short sections on homogeneous catalysis by other d^8 metal complexes appears rather incongruous when details of the industrially viable homogeneous hydrosilation catalyst, *trans*-Pt(Et₂S)₂Cl₂, have been omitted.

There is an adequate subject index, but the reviewer regrets the absence of author and formula indices which are found most useful in W. P. Griffith's "The Chemistry of the Rarer Platinum Metals".

Overall, the book is a welcome addition to the literature and will be valued by students and practical chemists alike.

P. C. H.