

References

- 1 D. P. Dunne and C. M. Wayman, *Metall. Trans.*, 1973, **4**, (1), 137
- 2 T. Tadaki and K. Shimizu, *Scripta Metall.*, 1975, **9**, (7), 771
- 3 M. Foos, C. Frante and M. Gantois, in "Shape Memory Effects in Alloys", ed. J. Perkins, (AIME Internat. Symp., Toronto, 1975). Publ. Plenum Press, New York, 1975, p. 407
- 4 S. Kachi, Y. Bando and S. Higuchi, *Japan. J. Appl. Phys.*, 1962, **1**, (6), 307
- 5 G. Hausch and H. Warlimont, *Phys. Lett. A.*, 1971, **36**, (5), 415
- 6 J. Paulevé and D. Dautreppe, *J. Physique*, 1963, **24**, (1), 522
- 7 G. Inden, Max-Planck-Institute, Düsseldorf, private communication
- 8 A. Kussman and K. Jessen, *Arch. Eisenhüttenw.*, 1958, **29**, (9), 585
- 9 K. Sumiyama, M. Shiga and Y. Nakamura, *J. Phys. Soc. Japan*, 1976, **40**, (4), 996

Patent Information on Catalytic Processes

Hydrogenation Catalysts 1977 BY ROBERT J. PETERSON,

Noyes Data Corporation, Park Ridge, New Jersey, 1977, 324 pages, \$36

This book is a digest of the United States patents granted since 1970 on the subject of catalysts for hydrogenation processes. Shorn of legal phraseology, each entry describes concisely the essential features of the invention, usually with details of at least one or two examples. To those, not only academics, who pay scant regard to the patent literature, this book will come as an eye-opener: some 200 patents have been abstracted, and they represent a very substantial contribution of our knowledge of the practice of catalysis. Unfortunately there is no means of knowing whether this is all, or only a part, of what appeared in this period.

The arrangement of the subject-matter however calls for comment. The book under review serves the same function as a telephone directory, in the sense that few will wish to read it from cover to cover, while many may wish to seek information in it. For such a book, the logical arrangement of its contents is of paramount importance. The first two chapters concern catalyst preparation in general, while the following ones (which are not numbered) cover catalysts for hydro-refining, for hydrogenating aromatics, olefins, dienes, acetylenes, polymers, nitriles, nitro-compounds and "other materials". The drawback to this mode of presentation is that a method of preparing a catalyst is rarely specific to only one functional group. Thus the reader, desiring to acquaint himself with the present state of the art of making, say, palladium catalysts will have to search each and every chapter diligently for this information, since the book contains no subject index: this is a quite inexcusable omission, even although the table of contents is quite

detailed. In short the book is the repository of much useful information which is difficult to recall on demand. It is, as Bottom's speech, "like a tangled chain: nothing impaired but all disordered". However I do not wish to be unkind. It is a very interesting book, and I am pleased to have it on my bookshelf.

G. C. B.

Fast Response Temperature Detector

A temperature measuring device which is capable of responding quickly to temperature changes, and which in addition is approved for use in some hazardous areas—including certain glass lined reaction vessels—incorporates a Pallaplat (rhodium-platinum versus palladium-gold) thermocouple which is compatible with the glass lining of the enclosing glassed-steel probe.

Recently announced (*Electronics W.*, 1977, (886), 10), the device brings together temperature detecting elements developed by Henry Balfour & Co. Limited of Leven, Fife, and intrinsically safe instrumentation provided by Measurement Technology Limited of Luton, Bedfordshire.

The temperature detecting element responds exponentially to temperature change and has a half-time of only about 2.5 seconds. As the temperature transmitter is considerably faster than this the whole unit is eminently suitable for responding rapidly to any variation from the temperature required in an automatically controlled process, or for activating alarms if the temperature of a product deviates from a critical level.