

## Book review

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*Preparative Acetylene Chemistry*; by L. Brandsma. Elsevier Publishing Company, Amsterdam, London and New York, 1971, 10 + 207 pages, £8.25.

Dr. Brandsma is a leading exponent of the art of acetylene synthesis, and his authoritative text, the result of almost twenty years laboratory experience, details preparative methods for some 270 simple compounds, thus complementing recently published volumes by Rutledge [reviewed *J. Organometal. Chem.*, 18 (1969) P14; 27 (1971) C39] and by Viehe (Ed.) [*ibid.*, 26 (1971) 438.].

The first chapter, entitled general practical instructions, contains useful hints which would help to dispel the unsavory reputation associated with many acetylenes. The second, of greatest interest to the organometallic chemist, updates earlier preparatively oriented texts by Raphael and by Ziegenbein and deals critically with metal acetylides. This is a most informative account, packed with valuable time-saving tips: for example, the laborious inverse addition procedure for preparing ethynyl monomagnesium bromide which has achieved "Organic Syntheses" status is apparently unnecessary. It is sufficient in the author's opinion (and verified by the reviewer) to pass a rapid flow of acetylene through a THF solution of ethylmagnesium bromide provided the temperature is kept below 33°. Later chapters exemplify alkylation, carboxylation, etc., methods for introducing hetero-substituents, and preparations founded upon base-catalysed elimination, or triple-bond migration. The text concludes with forty pages of miscellaneous syntheses, including a range of key starting compounds, and all materials are easily located by means of concise type and formula indexes.

This book should be possessed by all acetylene practitioners. It has been criticised elsewhere for containing few references to the original literature, but this is a minor defect in view of the spirit in which it is written and the contemporary texts cited above.

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