

### Book review

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*Sodium Dihydro-bis(2-methoxyethoxy)-aluminate (SDMA); A Versatile Organometallic Hydride*; by O. Šrouf, B. Čásenský and V. Kubánek, (*Journal of Organometallic Chemistry Library* 15), Elsevier, 1985, 236 pages. Dfl. 195.00, ISBN 0-444-99592-7.

This book is the first monograph dealing with SDMA, first made some 15 years ago by Czech chemists, and currently commercially available in a convenient solution as "Synhydrid" or "Vitride". Under currently acceptable definitions, however, it cannot strictly be described as an organometallic hydride, since it lacks any metal-carbon bond, and should more properly be defined as a metal alkoxy aluminium hydride.

After a brief introduction, Chapter 2 deals with the syntheses and physical properties of SDMA. Its principal value as a reagent lies in the differences between its properties and those of  $\text{NaAlH}_4$  and  $\text{LiAlH}_4$ , in particular a greater ease in handling and greater solubility in organic solvents. Chapter 3 describes the reactions of SDMA with organic compounds, chiefly, as one might expect, reductions and hydrogenolyses. The coverage is very detailed and systematic. In combination with transition metal salts, it may also act as a catalyst for hydrogenation and hydrosilylation. Whilst the section dealing with the reactions of SDMA with organometallic compounds is relatively brief, it is made clear that this may be an important area for future developments. The final section of the book deals with applications in polymer chemistry, most notably the anionic polymerisations of caprolactam and styrene.

The stated aim of the authors was to demonstrate the versatility of SDMA as a reagent for synthesis. For organic substrates this is largely achieved, and many useful references to material not readily accessible in English translation are given. The literature coverage seems to be thorough, but runs only to 1980 with isolated examples from 1981. Thus, while this is an excellent starting point for anyone wishing to use SDMA, the production time has been unacceptably long and many recent and interesting applications must be sought elsewhere.

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