

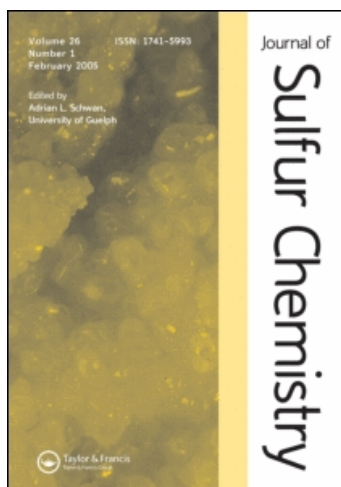
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**A Review of: "S. Patai (Ed.), The Chemistry of Functional Groups: The chemistry of sulphenic acids and their derivatives, John Wiley & Sons, Chichester etc., 1990, ISBN 0 471 92373 7, 819 pp., £190"**

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## BOOK REVIEW

S. Patai (Ed.), *The Chemistry of Functional Groups: The chemistry of sulphenic acids and their derivatives*, John Wiley & Sons, Chichester etc., 1990, ISBN 0 471 92373 7, 819 pp., £190.

With this penultimate of a number of Patai volumes wholly devoted to organic sulfur (as well as selenium and tellurium) chemistry the legendary Patai handbook adds further to its authority in this area, on a par with the classic Houben-Weyl encyclopedia.

This volume contains the following 18 chapters:

1. G. C. Barrett, Structural chemistry.
2. D. Kost and M. Raban, Stereochemistry and chiroptical properties.
3. J. Zabicky, Analytical aspects of sulfenic acids and their functional derivatives.
4. A. Bassindale and J. Iley, NMR and ESR of sulphenic acids and their derivatives.
5. J. Drabowicz, P. Lyzwa and M. Mikolajczyk, Syntheses of sulphenic acids and esters.
6. J. Drabowicz, P. Kielbainski and M. Mikolajczyk, Syntheses of sulphenyl halides and sulphenamides.
7. P. De Maria, Acidity, hydrogen bonding and complex formation.
8. S. Braverman, Rearrangements involving sulphenic acids and their derivatives.
9. D. R. Hogg, Chemistry of sulphenic acids and esters.
10. G. Capozzi, G. Modena and L. Pasquato, Chemistry of sulphenyl halides and sulphenamides.
11. W. H. Horspool, Photochemistry and radiation chemistry.
12. C. Chatgililoglu, Free radical chemistry of sulfenic acids and their derivatives.
13. H. Sayo, Electrochemistry of sulfenic acids and their derivatives.
14. M. Zielinski and M. Kanska, Syntheses and uses of isotopically labelled sulfenic acid derivatives.
15. M. Charton, Directing and activating effects of chalcogen substituents.
16. L. A. G. M. van de Broek, L. P. C. Delbressine and H. C. J. Ottenheijm, Biochemistry and metabolic pathways of sulfenic acids and their derivatives.
17. P. K. Claus, Sulfenimines.
18. T. Okuyama, Mechanistic aspects of nucleophilic substitutions of sulphenic acid derivatives.

with a total of 2564 references (including duplicates) covering the literature through 1988 plus a significant number of 1989 references. The review authors have all contributed significantly to the state of the art and this is fully reflected in their lucid and comprehensive presentations including subjects where a novice would find a traditional literature search unrewarding. Chapters 2, 4, 8, and 16 are especially enjoyable in this respect.

While the overall impression of this volume's usefulness as a source of information and inspiration is excellent there are, probably unavoidably in a multi-author effort of this size, details which will offend the seasoned organosulfur chemist. Chapters 12, 14, and 15 contain substantial amounts of material unrelated to sulfenic acid chemistry. The intriguing DNMR of sulfenamides is treated extremely well in chapter 2, but also

touched upon (more or less erratically) in chapters 1, 4, and 10. The sulfenimines are fully discussed in chapter 17, an effort which is duplicated in chapter 6 without any cross references. On p. 206 a compound incorrectly reported as allyl trichloromethanesulfenate is naively listed as such in a table while the correct structure (allyl trichloromethyl sulfoxide) is mentioned on p. 328. For obscure reasons several sections dealing with sulfenyl iodides fail to mention the key reviews by Danehy and by Field and Lukehart in Vols. 1 and 4, respectively, of A. Senning (Ed.), *Sulfur in organic and Inorganic Chemistry*. The relatively few misprints and distorted structural formulas detract only mildly and do not corrupt the meaning of the respective paragraphs. The parallel use of British (sulphur) and US (sulfur) spelling is somewhat disconcerting.

Altogether the editor and the review authors deserve our gratitude for this timely codification of yet another subrealm of organosulfur chemistry.

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