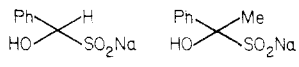
if the ketyl radicals are involved in these reductions, their lifetimes are extremely short, most likely due to rapid second electron transfer to form the carbanion. However, this possibility is rather unlikely in view of the fact that the dissolving-metal reduction of cyclopropyl ketones invariably gives the ring-opened product despite the well-known efficiency of the second electron redution of the conditions.[13].

When the progress of the $Na_2S_2O_4$ reduction of benzaldehyde was monitored by $^1H$ NMR, the benzaldehyde signal ($\delta$ 10.10) was quickly replaced, after mixing, by a signal at $\delta$ 5.50 (s, 1 H), which could be most reasonably ascribed to the $\alpha$-hydrogen in addition product 1. Similarly, the acetophenone signal at $\delta$ 2.66 (s, 3 H) was replaced by a singlet at $\delta$ 1.97 (s, 3 H), which could again be attributed to the methyl group of the adduct 2. The rapid adduct formation has also been observed in the attempted $Na_2S_2O_4$ reduction of $\alpha,\beta$-unsaturated ketones. Conjugated ketones have been found to be resistant to the reduction by $Na_2S_2O_4$, and the reason for this behavior appears to be due to formation of the 1,4-adduct in which reducibility of the carbonyl group is greatly diminished (Scheme III).[15]




1 2

(14) Similar results were obtained from the $Na_2S_2O_4$ reductions of benzaldehyde in $D_2O$–dioxane and of acetophenone in $D_2O$–DMF.

In summary, we suggest that pathway B (Scheme I) is more likely in operation in the $Na_2S_2O_4$ reduction of the "normal" carbonyl group, although the stepwise electron-transfer process (pathway A) may become available if the adduct formation becomes difficult due to steric reasons.

**Acknowledgment** is made to the Robert A. Welch Foundation (Grant No. A-752) and the National Institutes of Health for the financial support of this work.

**Registry No.** 1, 14339-77-6; 2, 79855-25-7; $Na_2S_2O_4$, 7775-14-6; phenyl cyclopropyl ketone, 3481-02-5; nortricyclanone, 695-05-6; benzaldehyde, 100-52-7; benzyl alcohol, 100-51-6; acetophenone, 98-86-2; *trans*-4-phenyl-3-buten-2-one, 1896-62-4; sodium 1-phenyl-3-ketobutylsulfinate, 79855-26-8; methyl 1-phenyl-3-ketobutyl sulfone, 79855-27-9; 4-methyl-3-penten-2-one, 141-79-7; sodium 2-methyl-4-ketopent-2-ylsulfinate, 79855-28-0; methyl 2-methyl-4-ketopent-2-yl sulfone, 68152-40-9.

**Supplementary Material Available:** Experimental details for the preparation and the reduction of the substrates (2 pages). Ordering information is given on any current masthead page.

(15) The 1,4-adduct obtained from mesityl oxide was similarly methylated to give the sulfone product, $Me_2C(SO_2Me)CH_2C(O)CH_3$: $^1H$ NMR ($CDCl_3$) $\delta$ 2.92 (s, 2 H), 2.83 (s, 3 H), 2.22 (s, 3 H), 1.57 (s, 6 H); IR ($CHCl_3$) 1720, 1295, 1108 $cm^{-1}$; mass spectrum, $m/e$ 178 ($M^+$, not observed), 99 ($M^+ - SO_2Me$), 43.

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# *Additions and Corrections*

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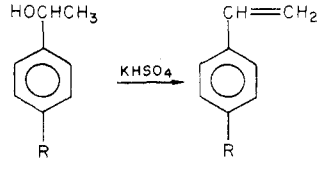
**Robert V. Hoffman,* Richard D. Bishop, Patricia M. Fitch, and Richard Hardenstein.** Anhydrous Copper(II) Sulfate: An Efficient Catalyst for the Liquid-Phase Dehydration of Alcohols.

Page 917. Professor R. Arshady has kindly called attention to the fact that there are several references in the literature to instances where potassium bisulfate gives styrenes by dehydration in yields higher than those reported for this catalyst in our paper.[1-4]

1. D. Bailey, D. Tirrel, and O. Vogel, *J. Polym. Sci. Polym. Chem. Ed.*, **14**, 2725 (1973).
2. B. B. Corson, W. G. Hentzelman, L. H. Schwartzman, H. E. Tiepenthal, R. J. Lokken, J. E. Nickel, G. R. Atwood, and F. G. Pavlic, *J. Org. Chem.*, **23**, 544 (1958).
3. P. Ferruti and A. J. Fere, *J. Polym. Sci. A-1*, **9**, 3671 (1971).
4. R. Arshady and A. Ledwith, *Makromol. Chem.*, **179**, 819 (1978).

In particular he cites the dehydration of para-substituted 1-phenyl ethanols i which give the corresponding styrenes ii in 71–77% yields. With exception of ref 1, all these dehydrations involve activated phenyl ethanols. We have not tested these particular substrates, but we note that for those activated compounds we have tested, yields of dehydration with copper(II) sulfate increase noticeably.




i ii

R = H, OAc, $OCH_2C_6H_5$, $CH_2OCH_3$

**C. H. Heathcock,* C. T. Buse, W. A. Kleschick, M. C. Pirrung, J. E. Sohn, and J. Lampe.** Acyclic Stereoselection. 7. Stereoselective Synthesis of 2-Alkyl-3-hydroxy Carbonyl Compounds by Aldol Condensation.

Page 1066. Abstract, "(±)-ephedrine (**51**)".
Page 1077. Table VIII, the column headings should be interchanged.
Page 1079. Line 5 of second column, "9.36 g of 2-(1-ethoxyethoxy)-2-methylpropionitrile".
Page 1079. Line 14 of second column, "pure hydroxy ketone **38**".

**Daniel H. Rich,* Byung Jo Moon, and Amrit S. Boparai.** Synthesis of (2*S*,3*R*)-3-Amino-2-hydroxy-5-methylhexanoic Acid Derivatives. Application to the Synthesis of Amastatin, an Inhibitor of Aminopeptidases.

Page 2289. The values given for the 3-amino-2-hydroxy-5-methylhexanoic acid derivatives are assigned to the wrong diastereomers in Table I. The properties of **5a** and **5b** should be interchanged; **6a** and **6b** should also be interchanged. These errors were introduced while preparing the original table and have no effect on the other published results.