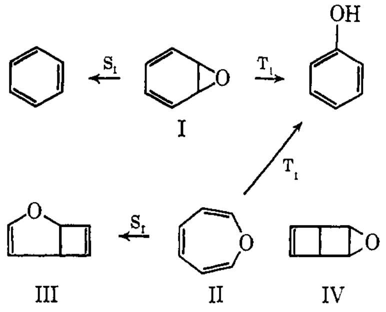
$\phi_{ST} = 0.4$[9]) was chosen as a sensitizer,[10] probably capable of transferring its triplet energy to both I and II. Irradiation of the I–II–naphthalene system (26°) with 2537-Å light gave only phenol and at a rate *at least 30 times faster than that of an identical but unsensitized run.* It is important to note that this enormous rate enhancement was observed under conditions where the II:I ratio is *ca.* 70:30[1] and must be a consequence of energy transfer to both species. Phenol is thus the product of triplet II as well as I and possibly also of singlet I. It follows that III, shown earlier to come from II, is the product of a singlet process and that intersystem crossing of singlet II must be extremely inefficient. Data obtained with other sensitizers are not quite as decisive as those described but are in complete accord with conclusions drawn.

Dewar benzene oxide (IV) is known to give phenol and I–II thermally as well as photochemically[11] and therefore warrants consideration as a possible intermediate in transformations of I–II. Repeated attempts to detect intermediates such as IV have not been successful. Until direct evidence for the involvement of IV is in hand, we will assume that the photoconversion of IV to phenol proceeds *via* I–II.



Corroborative data from quantum yield measurements are presently being obtained, and it is expected that we will be able to refine the scheme outlined above and comment in the full paper on the likelihood of hot ground-state reactions.[5,12]

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(9) A. A. Lamola and G. S. Hammond, *J. Chem. Phys.*, **43**, 2129 (1965).

(10) Photosensitization experiments were performed in matched quartz cells. The two were identical in *all* respects, except for the deletion of sensitizer from the reference cell. Comparisons are drawn only between the two sets of data from such a pair. Except where noted, solutions (pentane) were 0.1 *M* in substrate and 1.0 *M* in sensitizer.

(11) E. E. van Tamelen and D. Carty, *J. Am. Chem. Soc.*, **89**, 3922 (1967).

(12) This is considered unlikely, because collisonal deactivation of vibrationally excited molecules is normally very fast in solution. The possibility cannot be dismissed in this case, however, because the thermal formation of phenol is quite facile.

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# Additions and Corrections

**Alkylcobaloximes and Their Relation to Alkylcobalamins** [*J. Am. Chem. Soc.*, **88**, 3738 (1966)]. By G. N. Schrauzer and R. J. Windgassen. Department of Chemistry, University of California, San Diego, California.

In Table II the values for the O–H··O signals in the $^1$H nmr spectra of several methylcobaloximes were erroneously quoted 500 cps too far upfield. The last column of Table II should read:

| Axial component | O–H··O |
|---|---|
| $H_2O$ | −8.93 |
| py | −8.93 |
| $P(OCH_3)_3$ | −8.83 |
| $P(n\text{-}C_4H_9)_3$ | −8.18 |
| $P(C_6H_5)_3$ | −8.20 |

On page 3741, column 1, the third line from the bottom should read: O–H··O protons at −0.6.

**Aromatic Azapentalenes. III. 1,3a,6,6a-Tetraazapentalenes** [*J. Am. Chem. Soc.*, **89**, 2633 (1967)]. By J. C. Kauer and R. A. Carboni. Central Research Department, Experimental Station, E. I. du Pont de Nemours and Company, Wilmington, Delaware.

On page 2633, in the last line of the second column, "ferric" should be corrected to "ferrous."

**Nucleophilic Displacements at Sulfur. III. The Exchange of Oxygen-18 between Sodium Thiosulfate-$^{18}$O and Water** [*J. Am. Chem. Soc.*, **89**, 3379 (1967)]. By William A. Pryor and Umberto Tonellato. Department of Chemistry, Louisiana State University, Baton Rouge, Louisiana 70803.

The mechanism postulated for this exchange, eq 7 and 9, predicts a negative slope when log *k* is plotted *vs.* $\mu^{1/2}$. The data of Table II and Figure 2 show that the slope is near zero. Two possible explanations can be suggested for this discrepancy. First, these data are all at ionic strengths greater than 0.1, and the Debye–Hückel limiting law may well not apply here. Second, these data of necessity were determined in unbuffered solutions, and the effect of ionic strength on the dissociation of water should be taken into account. If this is done, the data can be recalculated to show a slight negative slope. The exact value of the slope cannot be determined without a knowledge of $\alpha$ and $K_w$ at 80°, but it is doubtful if these data in unbuffered solutions are accurate enough to justify a detailed treatment. In either case, the mechanistic arguments of the paper stand unchanged.