

δ 3 (2H; broad S; CH); δ 5.1~5.4 (1H; broad S; $>$ CH); δ 7.4-8.4 (4H; *m*; aromatic).

An important evidence for the chromanone structure of the above compounds was also obtained by the fact that the compound IV prepared by the above method was found to be identical (m.m.p.; i.r.) with the chromanone synthesized by Shizuri *et al.*,² by the condensation of 4-hydroxycoumarin with β - β -dimethylacryloyl chloride in the presence of pyridine.

We have also observed that the above synthesis of coumarinochromanones is a general one and takes place with 6-, 7- and 8-methyl 4-hydroxy coumarins with the above α , β -unsaturated acids in the presence of PPA.

All the compounds gave satisfactory C, H, N analysis.

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SUNEEL DIKE.

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BIS (2-METHYL- $\Delta^{2(3)}$ -OXADIAZINE-4, 6-DIONE)-5-SULFONYL

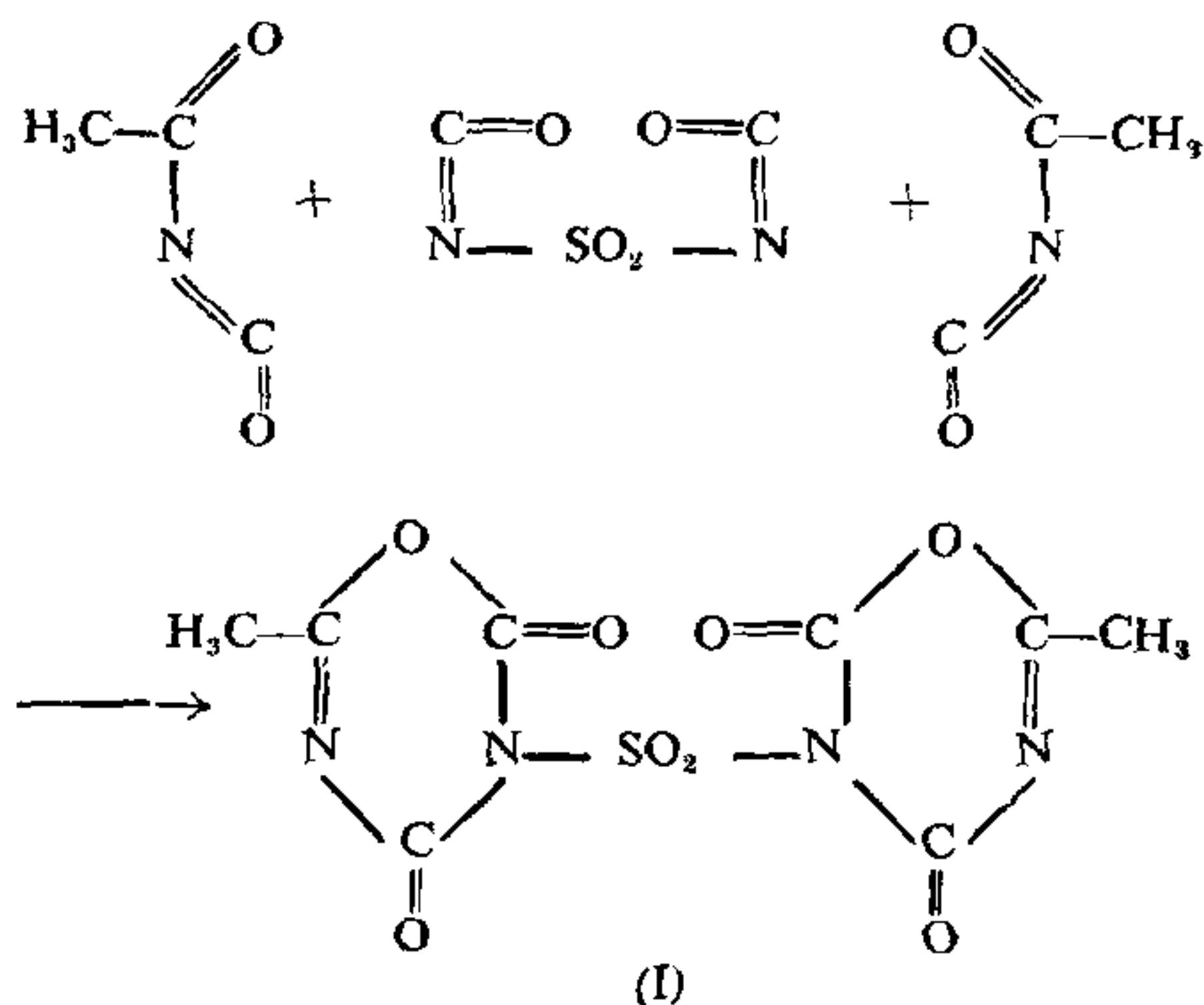
THE reaction of acetylisocyanate with sulfonyldiisocyanate leads to bis (2-methyl- $\Delta^{2(3)}$ -oxadiazine-4, 6-dione)-5-sulfonyl.

Ulrich described the reaction of acetylthiocyanate with methylisocyanate¹. The preparation of bis (2-methyl- $\Delta^{2(3)}$ -oxadiazine-4, 6-dione)-5-sulfonyl, by the reaction of acetylisocyanate and sulfonyldiisocyanate, is analogous to the previously reported preparation for 2,5-dimethyl- $\Delta^{2(3)}$ -oxadiazine-4, 6-dione², 2-methyl-5-phenyl- $\Delta^{2(3)}$ -oxadiazine-4, 6-dione² and 3-chloro-sulfonyl-6-methyl-2H-1, 3, 5-oxadiazine-2, 4 (3H)-dione⁵. The reaction was complete in $\frac{1}{2}$ hour, at 60~70°C, yielding a brown compound (I) (decomp. at 82°C).

The ¹H-NMR spectrum of bis (2-methyl- $\Delta^{2(3)}$ -oxadiazine-4, 6-dione)-5-sulfonyl, which was recorded in deuterium dimethylsulfoxide, shows a signal at $\tau = 7.9$ ppm for the methyl protons.

The I.R. spectrum (in KBr) shows the usual absorptions for the C=O, S=O and C-O-C groups at 1710, 1175 and 1050 cm⁻¹, respectively. The mass spectrum was difficult to interpret due to thermal decomposition in the inlet system.

Reaction Scheme:



EXPERIMENTAL DATA

1. Preparation of acetylisocyanate (see ref. 5).
2. Preparation of $C_8H_8N_4O_8S$ (I).—Acetylisocyanate (2.9 g.; 0.033 mole) was heated with sulfonyldiisocyanate (2.5 g.; 0.017 mole) at 60-70°C for $\frac{1}{2}$ hour. Bis (2-methyl- $\Delta^{2(3)}$ -oxadiazine-4, 6-dione)-5-sulfonyl, crystallized on cooling (yield 1.2 g; 45%). (Found: C—30.07%, H—2.13%, N—17.85% and S—10.72%). (Calculated: C—30.20%, H—1.88%, N—17.53%, O—40.25% and S—10.06%).

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