

AZIRIDINES XI. REACTION OF 1, 2, 3-TRIPHENYL AZIRIDINE  
WITH DIETHYLACETYLENE DICARBOXYLATE AND MALEIC  
ANHYDRIDE

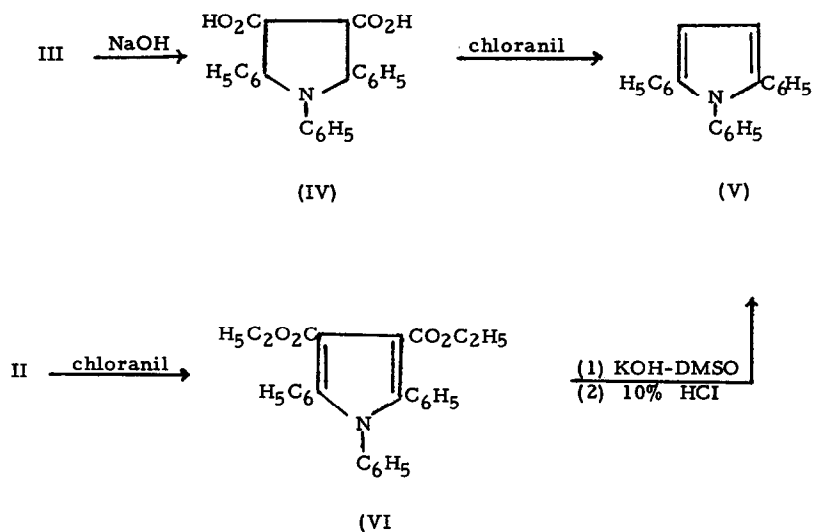
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A new reaction involving carbon-carbon bond cleavage of the aziridine ring has been observed. Refluxing of 1, 2, 3-triphenylaziridine<sup>(1)</sup> (I) with diethylacetylene dicarboxylate in toluene for eleven hours forms 1, 2, 5-triphenyl-3, 4-dicarbethoxy-3-pyrroline(II) in 98% yield. Recrystallization from ethanol gave material melting at 182-184°. (Calcd. for  $C_{28}H_{27}NO_4$ : C, 76.30; H, 6.26; N, 3.30. Found: C, 76.17; H, 6.16; N, 3.17). A similar reaction with maleic anhydride in refluxing p-xylene gave 1, 2, 5-triphenylpyrrolidine-3, 4-dicarboxylic anhydride(III) in 94% yield. Compound III recrystallized from acetonitrile melted at 213.5-215°. (Calcd. for  $C_{24}H_{19}NO_3$ : C, 78.06; H, 5.18; N, 3.79. Found: C, 78.26; H, 5.14; N, 3.79).





1, 2, 3-Triphenylaziridine also forms adducts with dibenzoylacetylene, cis and trans 1, 2-dibenzoyl ethylene and diethylazodicarboxylate. Satisfactory analyses for these adducts have been obtained and proof of structure is underway.

Carbon-carbon cleavage of the epoxide ring has also been observed recently. Tetracyanoethylene oxide adds to ethylene and acetylene to give 2, 2, 5, 5-tetracyanotetrahydrofuran and 2, 2, 5, 5-tetracyanodihydrofuran respectively.<sup>3</sup>

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## REFERENCES

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