REACTIONS OF 1,2-DIARYL-1-AZASPIRO[2.2]PENTANES AND 2-PHENYL-1-AZASPIRO[2.2]PENT-1-ENE WITH NITRILIMINES

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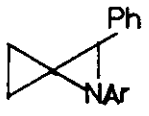
The reaction of 1,2-diaryl-1-azaspiro[2.2]pentane (1) with C,n-diarylnitrilimine 3b in chloroform afforded two 1:1 adducts 4 and 5, together with pyrazoline 6, triazolinone 7, and/or pentaazaspirononadiene 8. The products 6, 7, and 8 can be interpreted as arising from 5 which corresponds to the cycloadduct of cyclobutanone anil to nitrilimine 3b.

In the reaction of 2-phenyl-1-azaspiro[2.2]pent-1-ene (2) with nitrilimines 3, the corresponding rearranged 1:1 adducts 11 were obtained in excellent yields. Hydrolysis of 11 afforded triazabicyclo[3.3.0]octanone 13 and 1,2,4-triazole 14. The pathway for the formation of 13 and 14 will be also discussed.



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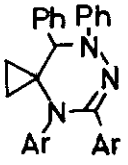

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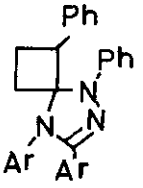

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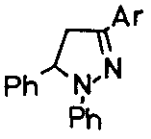

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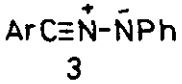

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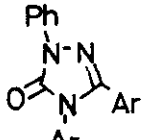

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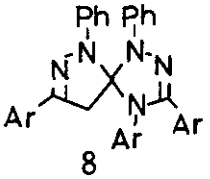

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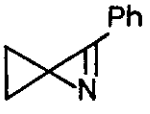

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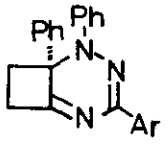

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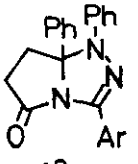

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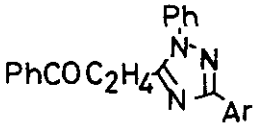

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