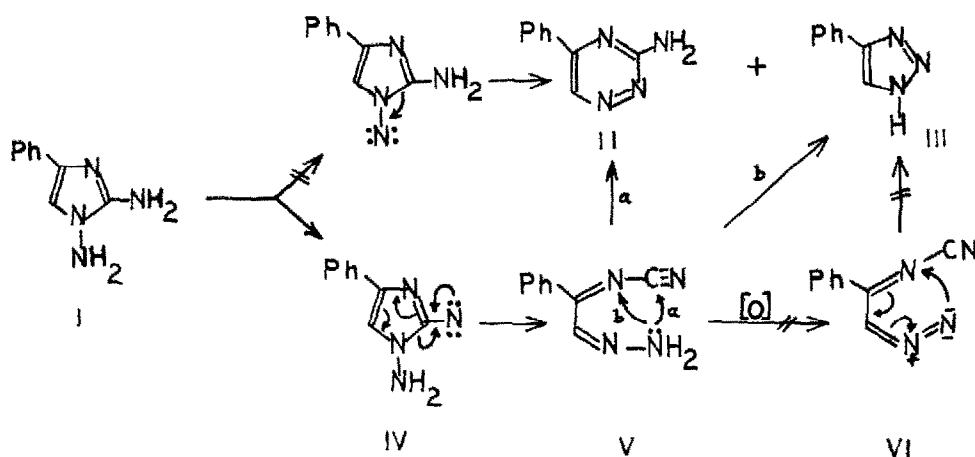


Hermes and Marsh⁶ had shown that many α -diazo-N-cyanoimines exist in tautomeric equilibrium with corresponding N-cyanotriazoles. The cyanation of 4-(5-)phenyl-1,2,3-triazole anion with cyanogen bromide⁶ yielded what appears to be mainly an N-cyanotriazole tautomer,⁷ which was found to be surprisingly stable under the conditions of our reaction. These findings suggest that V cyclizes directly to 4-(5-)phenyl-1,2,3-triazole with little or no involvement of the α -



diazo-N-cyanoimine VI. The scope of this reaction is currently under investigation.

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REFERENCES

1. H. C. van der Plas, "Ring Transformation of Heterocycles," Academic Press, New York, N.Y. 1973; P. A. S. Smith in "Nitrenes," W. Lwowski, Ed., Interscience Publishers, New York, 1970, p. 99.
2. K. Sakai and J.-P. Anselme, *J. Org. Chem.*, **37**, 2351 (1972).
3. H. Beyer, A. Ketzheim, H. Honek, D. Ling and T. Pyl, *Chem. Ber.*, **101**, 3151 (1968).
4. G. Koga and J.-P. Anselme, *J. Org. Chem.*, **35**, 950 (1970).
5. H. H. Takimoto and G. C. Denault, *Tetrahedron Letters*, 5369 (1956).
6. M. E. Hermes and F. D. Marsh, *J. Am. Chem. Soc.*, **89**, 4760 (1967).
7. The IR spectrum exhibited a strong absorption at $\sim 2257 \text{ cm}^{-1}$ (CN) while the band at $\sim 2222 \text{ cm}^{-1}$ ($>C=N=N$) was much weaker. Cyanation is presumed to have taken place at the 1-position to give mainly 4-phenyl-1-cyano-1,2,3-triazole.