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## The Reaction of Potassium Amide in Liquid Ammonia with Diaryl bromethenes

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## THE REACTION OF POTASSIUM AMIDE IN LIQUID AMMONIA WITH DIARYLBROMOETHENES

GEORGE H. COLEMAN AND WILLIAM H. HOST

The behavior of certain diarylchloroethenes with potassium amide in liquid ammonia has been reported previously.<sup>1</sup> A rapid reaction occurs and the ethenes are changed with the loss of hydrochloric acid to tolanes. Thus 1, 1-di-p-tolyl-2-chloroethene forms p. p'-dimethyltolane. A series of such para substituted compounds was studied and as anticipated only symmetrical tolanes were obtained.

In the present work the following diarylbromoethenes with substituents in the ortho and in the meta positions were used:

1,1-di-o-tolyl-2-bromoethene;  
1,1-di-m-tolyl-2-bromoethene;  
1,1-di-o-methoxyphenyl-2-bromoethene  
1,1-di-m-methoxyphenyl-2-bromoethene

In each case the corresponding symmetrical tolane was obtained. Therefore whatever the exact mechanism of this rearrangement may be a given substituent in the aryl radical of the ethene is found in the same relative position in the tolane.

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## HYDROXYFURANS AND THEIR BIOLOGICAL SIGNIFICANCE

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Hydroxyfurans, particularly the mono- and di- $\beta$ -substituted types (prepared from furans and by ring closure procedures) have been examined biologically, particularly for their growth **stimulation** effects on bacteria, yeasts and various higher plants. A discussion is included of the synthetic procedures and the proof of structure of the variously substituted hydroxyfurans.

<sup>1</sup> Coleman and Maxwell, J. Am. Chem. Soc., 56, 132 (1934).

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