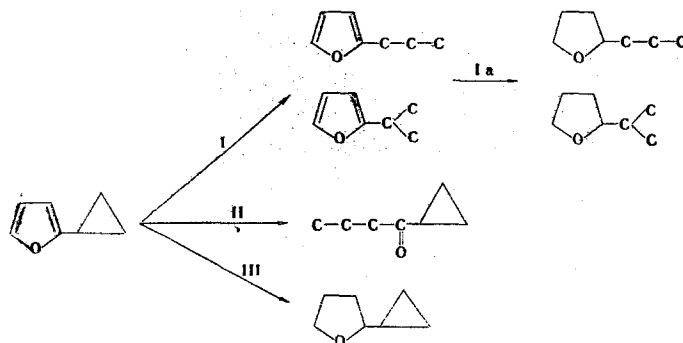


## HYDROGENOLYSIS OF FURYL CYCLOPROPANE

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In a study of the hydrogenation of  $\alpha$ -furylcyclopropane under pulse conditions on rhodium catalysts we expected to obtain alkylfurans and tetrahydrofurans. However, we found that at 180-300°C the reaction goes in three parallel directions (I-III):



The rate of hydrogenolysis of the furan ring is higher than the rate of hydrogenolysis of cyclopropane, and the yields of products formed via reactions I + Ia and II, respectively, are 20 and 40% at 230° and 27 and 28% at 300°. The hydrogenation of the furan ring (Ia and II) and hydrogenolysis of the three-membered ring proceed at identical rates, and the yield of tetrahydrofurylcyclopropane is 10-15%, whereas the total yield of tetrahydrofurans via reaction Ia + II is 25-30%. The structures of the compounds obtained were proved by chemical methods and also by means of IR, PMR, and mass spectroscopy.

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