

INTRAMOLECULAR HYDROSILYLATION-OXIDATION OF ACYCLIC SECONDARY ALLYLIC ALCOHOLS

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Received 3-1-88

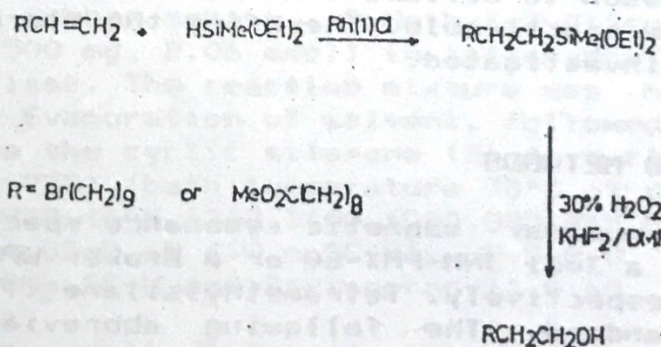
Accepted 8-2-88

ABSTRACT

Syn-2-Methylheptan-1,3-diol was synthesized stereoselectively via the intramolecular hydrosilylation/oxidation of 2-Methylhept-1-ene-3-ol. The overall yield of the diol is good and the stereoselectivity appears to be increased by the use of low concentration of substrate and catalyst.

INTRODUCTION

The recent development of methodology for the oxidation of Si-C [1-3] bond has allowed the hydrosilylation of carbon-carbon double bond to be used as an alternative to hydroboration (e.g. Scheme 1) [1].



Scheme 1

Hydroboration has been widely used as stereoselective method in the synthesis of acyclic molecules. In one example, Still and Barrish [4] employing a hydroboration-oxidation sequence, were able to attain threo-1,3-diols stereoselectively from acyclic secondary allylic alcohol (Scheme II).