Synthetic Communications®, 36: 2711–2717, 2006

ISSN 0039-7911 print/1532-2432 online
DOI: 10.1080/00397910600764741

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One-Pot Solvent-Free Preparation of 2-Phenyl-1,3,2-aryldioxaborins on Acidic Alumina

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Abstract: One-pot, solvent-free, microwave-promoted preparation of 1,3,2-aryldioxaborines on the surface of acidic alumina is described.

Keywords: Alumina, boronic acid, microwave irradiation, phenols, solvent-free synthesis

INTRODUCTION

The 2-phenyl-1,3,2,-aryldioxaborins (**4**) have been found to be very useful and versatile synthetic intermediatens to prepare saligenol derivatives. Although direct derivatization of a phenol with an aldehyde is not *ortho*-specific and results usually in a mixture of *ortho*-, *para*-, and poly substitution, **4** can be readily oxidized to the corresponding α-hydroxyalkylphenols.[1] It can be also reduced to *o*-alkylphenols or transformed to alkylthiomethylphenol and alkoxymethylphenol derivatives (Scheme 1).[2] Chambers et al. have reported the successful use of this substance as a stable precursor of quinine

Received in Poland February 3, 2006
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