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Master Thesis Defense

Entitled

*ONE POT O-ALKYLATION AND C-C-CROSS COUPLING REACTIONS INVOLVING STABILIZED
PHOSPHORANES*

by

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Abstract

This thesis is concerned with one pot reactions that are considered to be beneficial to preserve resources and to save time. To plan such one pot reactions, it is important to combine two or more reactions that are compatible with each other and can be run under the same reaction conditions. In this work, possibilities of a combination of Wittig-olefination and Suzuki C-C-cross coupling reactions are explored further. Reaction sequences involve the combination of a Suzuki-reaction / Wittig olefination, a Suzuki reaction / Wittig olefination / hydrolysis and a Suzuki-reaction / double Wittig olefination. In all cases, stabilized Wittig reagents were used. Also, a novel one-pot O-alkylation / Wittig olefination of hydroxybenzaldehydes to alkoxycinnamates was developed. Furthermore, during the synthesis of starting materials a new approach to arylmaleimides was found, using a modified Appel-type reaction

Keywords: One-pot synthesis, Suzuki reaction, Wittig olefination, ON-alkylation, Appel reaction