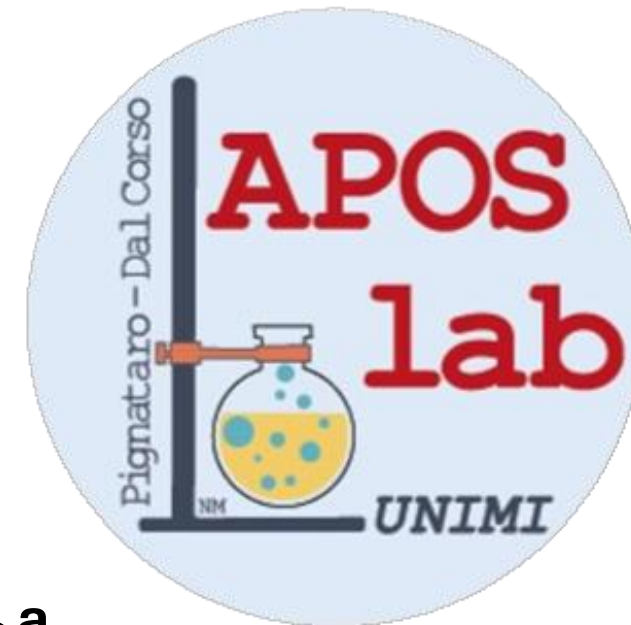




BIFUNCTIONAL CATALYSTS FOR NICKEL PHOTOREDOX REACTIONS

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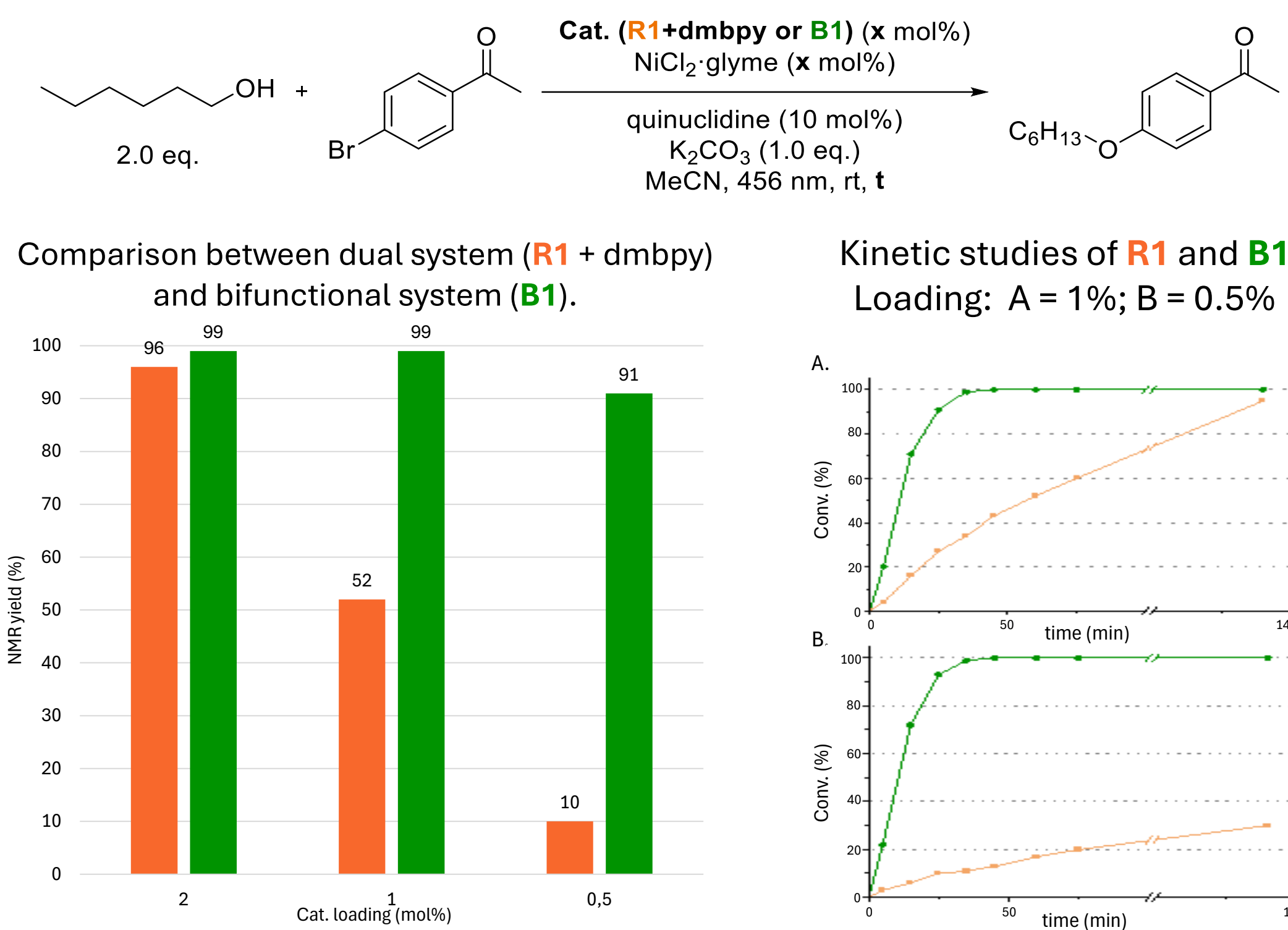
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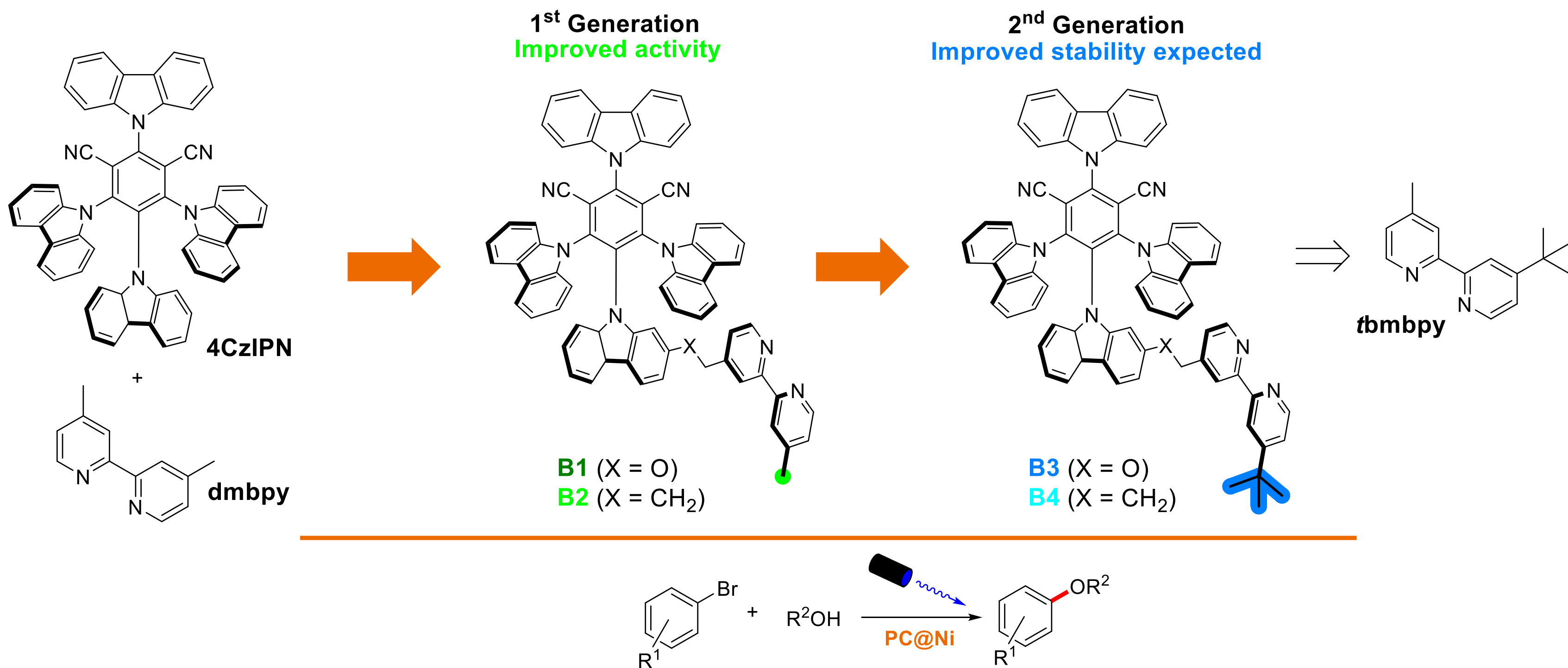
INTRODUCTION

Thanks to proximity, two covalently linked groups may be able to operate synergistically and combine different types of activation than a corresponding “dual system”. Bifunctional catalysts (BCs) have been tested in a range of transformations to improve yield, selectivity or even to attain new types of reactivity. Our group has recently applied this concept to metallaphotoredox catalysis reporting the bifunctional PCs **B1** and **B2**, which contain a Donor-Acceptor cyanonarene “core” working as a photocatalyst (PC) and a bipyridine moiety as ligand for the metal (usually Ni) involved in the coupling cycle. We were able to prove that the vicinity of the parts indeed improved the activity when compared to the corresponding dual system.¹ Now, we are working on a new generation of these catalysts with better stability to photoirradiation.

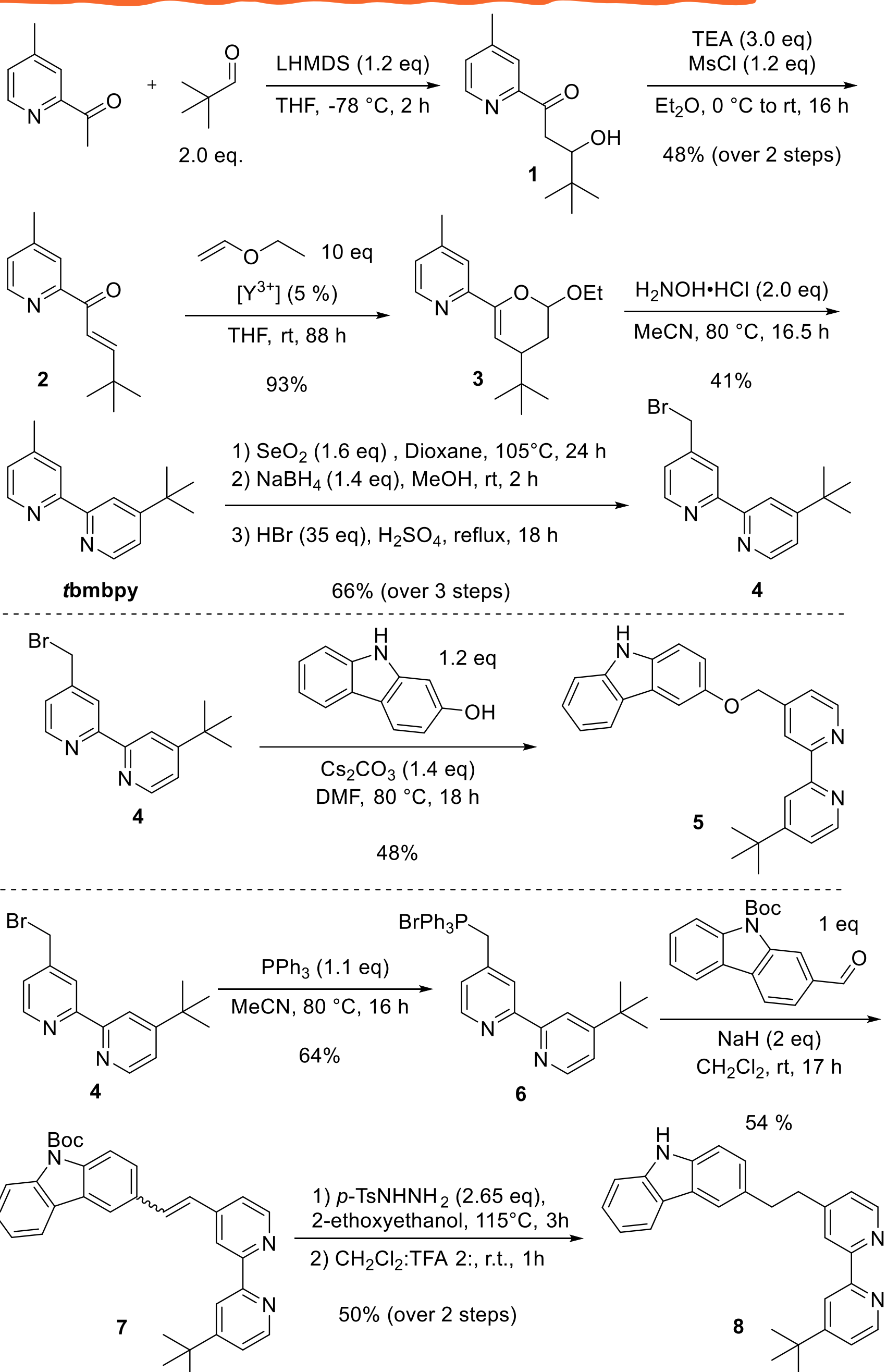
PREVIOUS WORK



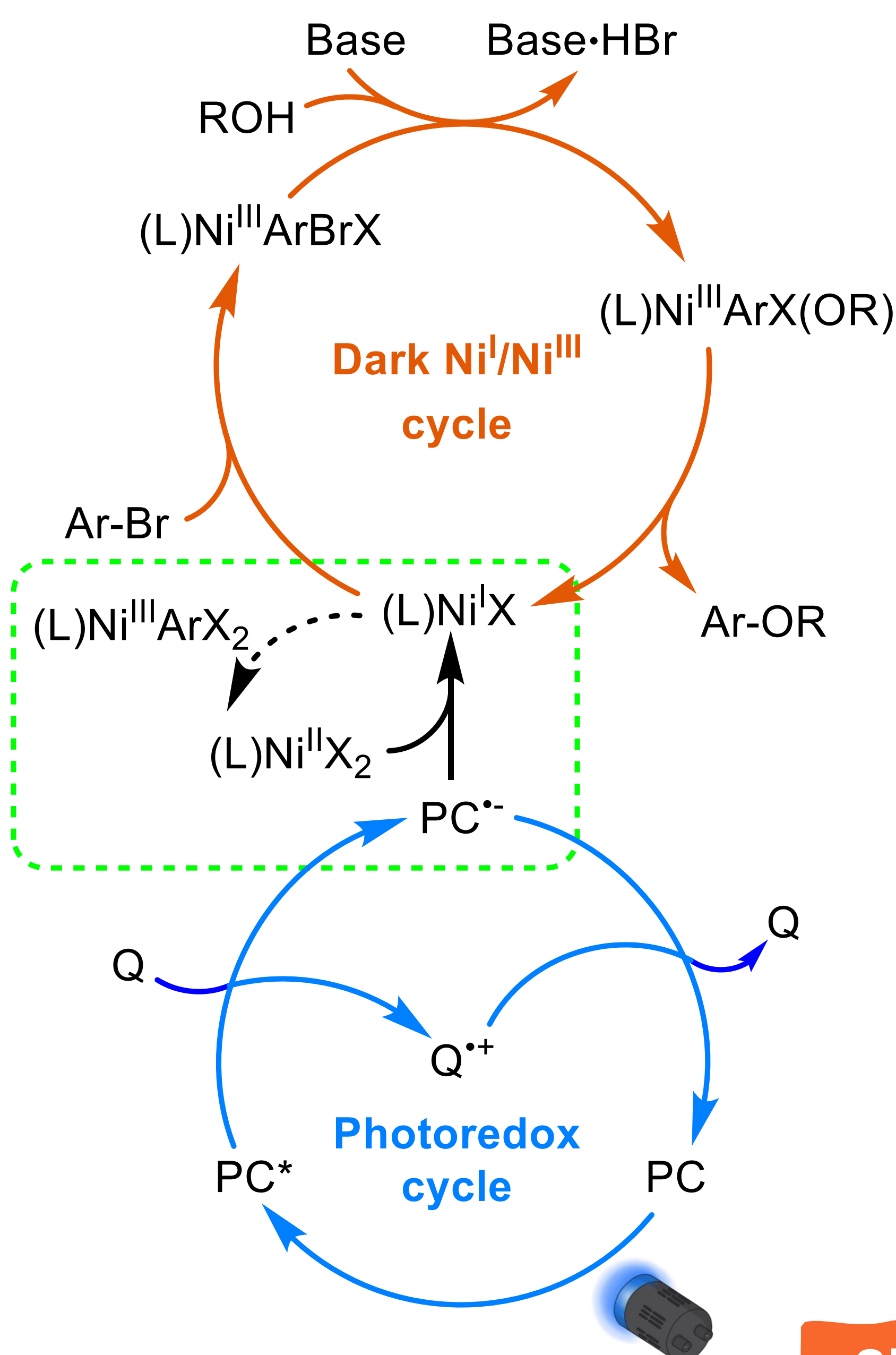
THIS WORK



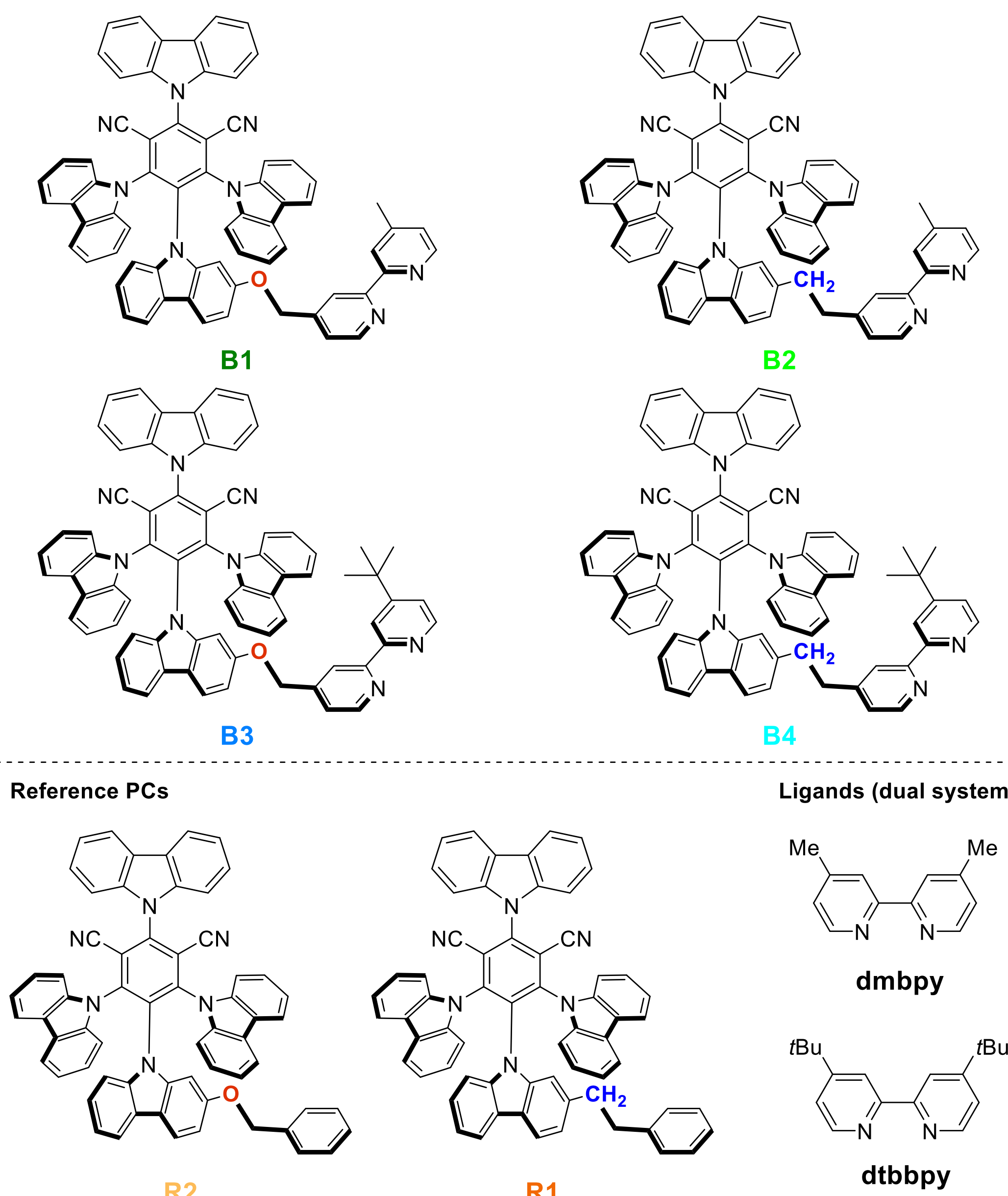
SYNTHESIS OF 2ND GEN BC



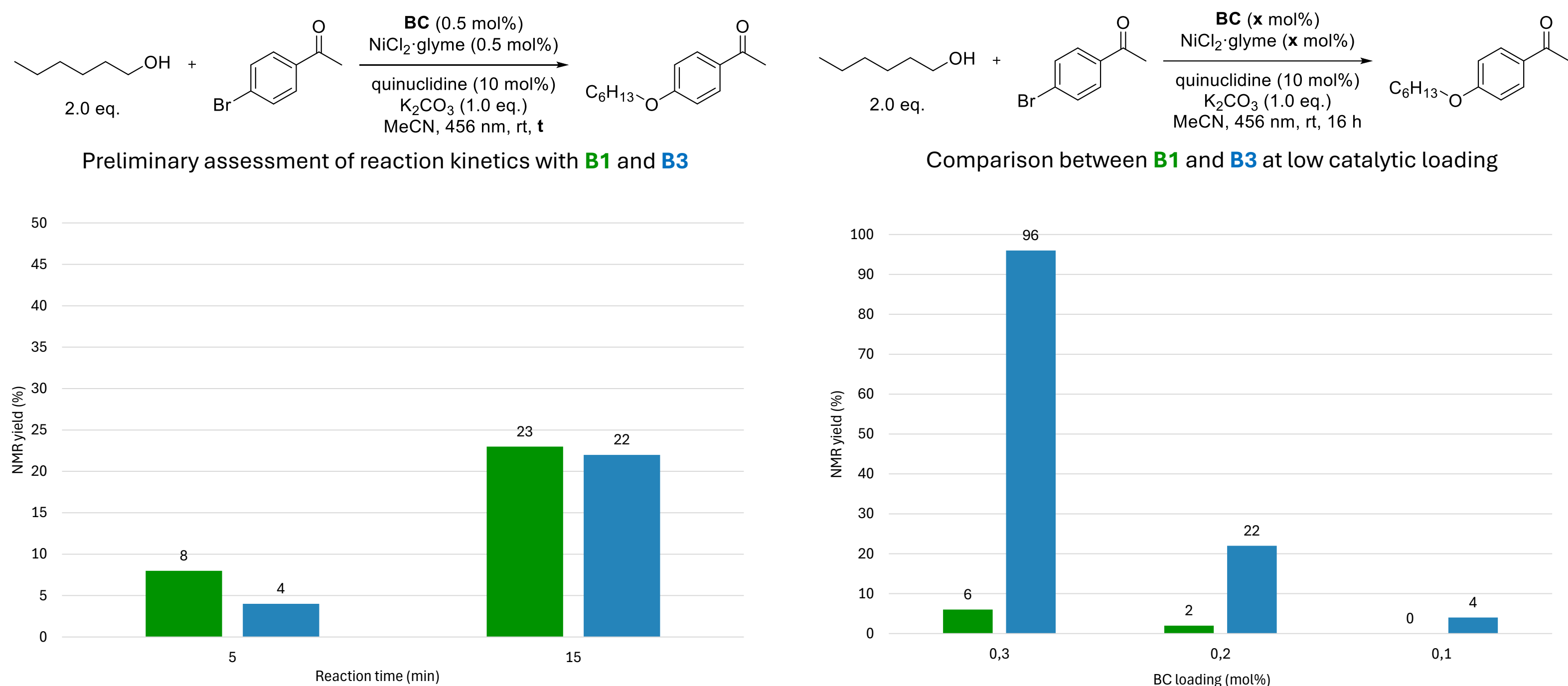
MECHANISM



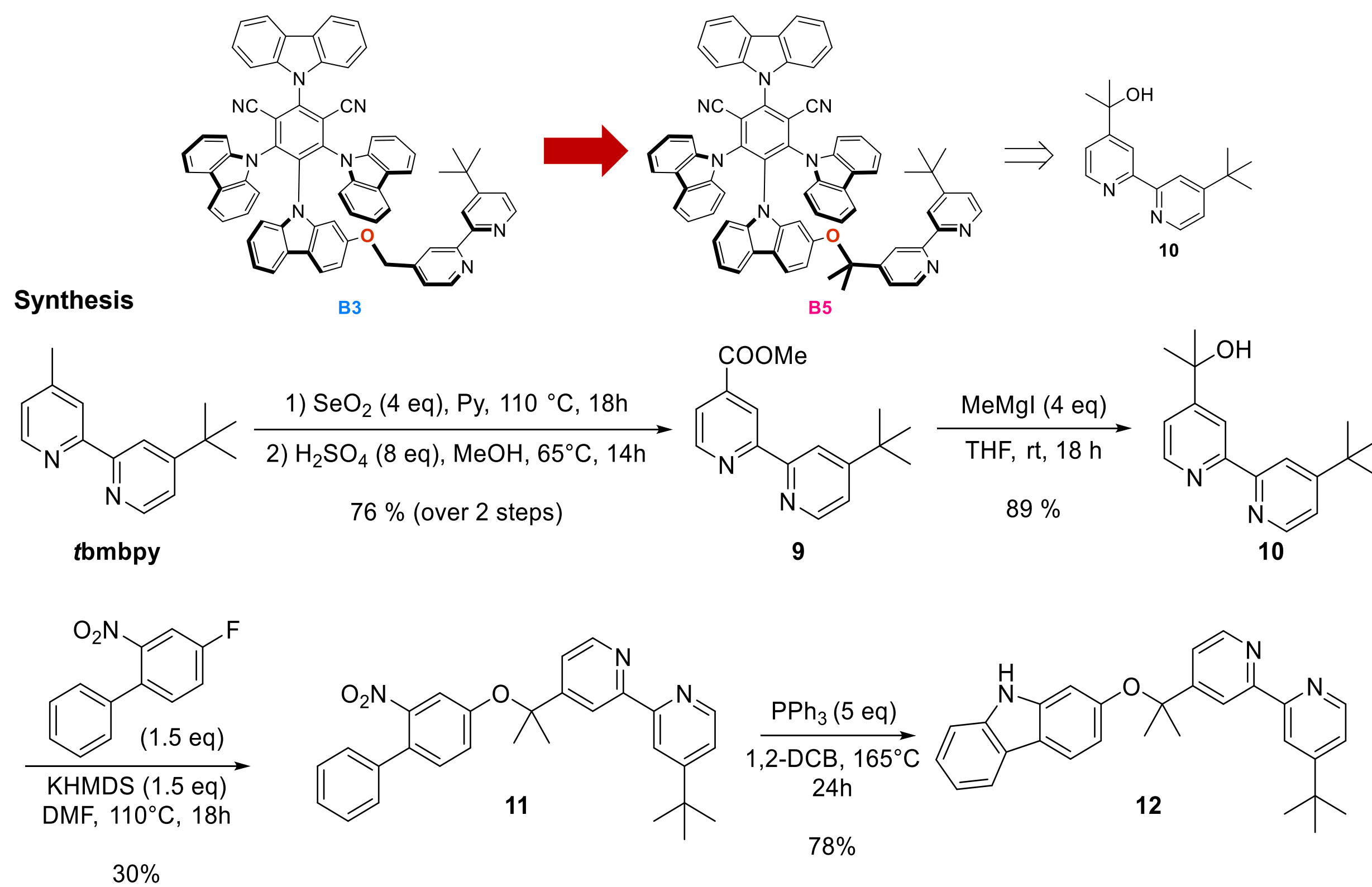
BIFUNCTIONAL LIBRARY



PRELIMINARY TESTS



3RD GEN BC (ONGOING)



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