Synthesis of Bis(aryl)acenaphtenequinonediime based NHC ligands

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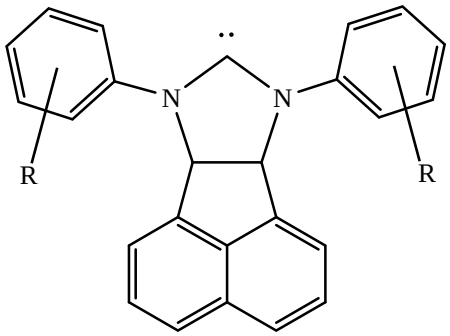
Bis(aryl)acenaphtenequinonediimes (Ar-BIANs) have been heavily investigated as ligands in the past [1]. Their use as NHC precursors however is rather poorly examined. In fact we only know of two publications from Green *et al.*, using exclusively Mesitylen or 2,6-Diisopropylphenyl as Aryls. They reported hydroformylation reactions utilizing Ir and Rh complexes [1] and deployed Pd complexes in cross coupling reactions [2].

We herein want to present an extended scope of Aryls as well as further applications in catalysis (e.g. hydrogenations).



[1] N. J. Hill, I. Vargas-Baca, A. H. Cowley, *Dalton Trans.* **2009**, *2*, 213-384

[2] S. Dastgir, K. S. Coleman, A. R. Cowley, M. L. H. Green, *Dalton Trans.* **2009**, *35*, 7203-7214

[3] S. Dastgir, K. S. Coleman, A. R. Cowley, M. L. H. Green, *Organometallics* **2010**, *29*, 4858-4870