

Indazolin-3-ylidenes (Indy*): easily accessible, sterically-hindered indazole-derived N-heterocyclic carbenes and their application in gold catalysis

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Streszczenie

Sterically-hindered N-heterocyclic carbenes (NHCs) with functionalized *N*-wingtips are a pivotal class of ligands in organic synthesis. Herein, we report the first class of sterically-hindered N-heterocyclic carbenes based on the indazole framework. These ligands combine the strong σ -donation of the carbene center due to the carbene placement at the C3-indazole position with the sterically-hindered and flexible *N*-substitution with the versatile 2,6-bis(diphenylmethyl)aryl moiety that extends beyond the metal centre for the first time in non-classical N-heterocyclic carbenes. The ligands are readily accessible by the rare Cadogan indazole synthesis of sterically-hindered *N*-aryl-1-(2-nitrophenyl)methanimines. Steric and electronic characterization as well as catalytic studies in the synthesis of oxazolines are described. Considering the unique properties of indazole-derived carbenes, we anticipate that this class of compounds will find broad application in organic synthesis and catalysis.

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