

## Palladium complexes with chiral imidazole ligands as potential catalysts for asymmetric C—C coupling reactions.

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Two palladium complexes of the type  $[Pd(im)(2)Cl-2]$  containing chiral imidazole ligands ( $im = 1$ -bomyloxymethylene imidazole,  $1$ -fenchyloxymethylene imidazole) were synthesized and structurally characterized. The square planar structure of one of the complexes was confirmed by the X-ray analysis. The new palladium complexes were tested as catalysts in various C-C bond forming reactions, namely Suzuki-Miyaura, carbonylative Suzuki-Miyaura, asymmetric Heck-type coupling reactions and asymmetric conjugate addition of phenylboronic acid to heterocyclic acceptors. In all the reactions the cross-coupling products were obtained with high yield and selectivity under mild conditions. In case of coupling of 2,3-dihydrofuran with phenylboronic acid ee value ca. 10 was observed.

### Słowa kluczowe

palladium, chiral imidazole, Suzuki-Miyaura coupling, carbonylative coupling, Assymmetric reaction

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