

## عنوان مقاله:

Catalytic activity of cyclopalladated complexes derived from benzo[h]quinolate and diphosphine ligands

## محل انتشار:

بیستمین کنگره شیمی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

## نویسندگان:

Sepideh Samiee - Department of Chemistry, Faculty of Science, Shahid Chamran University of Ahvaz, Ahvaz, Iran

Roya Azadi - Department of Chemistry, Faculty of Science, Shahid Chamran University of Ahvaz, Ahvaz, Iran

Fatemeh Esmipour Noorabadi - Department of Chemistry, Faculty of Science, Shahid Chamran University of Ahvaz, Ahvaz, Iran

## خلاصه مقاله:

Biaryl compounds are versatile building blocks in the field of pharmaceuticals, herbicides, polymers, liquid crystals, natural products, ligands for catalysis, and advanced materials. The Suzuki-Miyaura cross-coupling reaction catalyzed by palladium complexes is one of the most important methods for the preparation of biaryls in organic synthesis [1-3]. The use of phosphines as ligands in the Pd-catalyzed Suzuki reaction provides an efficient route to the synthesis of substituted biphenyl through cross-coupling reaction of aryl halides with arylboronic acid. In the case of less reactive aryl bromides and aryl chlorides usually, electron-rich bulky tertiary phosphines are used as ligands. Here, we would like to report the simple mononuclear cyclopalladated benzo[h]quinolate complexes with bidentate phosphine ligands, namely,  $[Pd(bzq)((Ph_2PCH_2PPh_2C(H)C(O)PhR)]ClO_4$  ( $R = Cl$  (C1),  $Br$  (C2)  $NO_2$  (C3)  $OCH_3$  (C4)) that act as an effective homogeneous pre-catalysts for Suzuki-Miyaura reaction of aryl iodides and bromides with phenylboronic acid in aqueous solution. Highly yields of corresponding product, low catalyst loadings and short reaction times are important features of these homogeneous reactions

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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