

## عنوان مقاله:

Synthesis, characterization and electronic absorption spectra of new mononuclear cyclopalladated benzo[h]quinolate complexes containing phosphorus ylides

## 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*

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

## خلاصه مقاله:

The chemistry of Pd(II) complexes containing cyclometalated ligands has attracted great interest in recent years due to their applications in different areas [1-3]. A series of mononuclear cyclopalladated benzo[h]quinolate complexes with bidentate phosphine ligands, namely,  $[Pd(bzq)((Ph_2PCH_2PPh_2C(H)C(O)PhR)]ClO_4$  ( $R = Cl$  (1),  $Br$  (2)  $NO_2$  (3)  $OCH_3$  (4)), were synthesized. The reactions of  $[Pd(bzq)(\mu-Cl)]_2$  with bidentate phosphorus ylide (1:2 molar ratio) in presence of  $NaClO_4$  led to the splitting of the chloride bridge and obtained the mononuclear complexes that benzoquinolate and phosphorus ligand are bonded to the Pd atom giving two five membered rings. These complexes were fully characterized by elemental analysis, IR,  $^1H$ ,  $^{31}P$ , and  $^{13}C$  NMR. The spectroscopic data revealed that the phosphorus ylide is coordinated to palladium via the phosphine group ( $PPh_2$ ) and methene group ( $CH$ ). These analyses being consistent with a 1:1:1 stoichiometry  $bzq/ylide/Pd(II)$  for compounds 1 through 4. In addition, the UV-vis absorption spectra of complexes were recorded in dichloromethane solvent at 298 K. All of the complexes exhibit absorption bands at high energy due to the intraligand transitions ( $\pi \rightarrow \pi^*$ ) and absorptions at lower energy which are attributed to MLCT transition ( $\pi \rightarrow \pi^*$ ). Also the absorption spectra of complex 3 were recorded in several solvents such as acetonitrile and acetone.

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/851012>

