

New water-soluble palladium(II) iodide complexes derived from *N*-protonated or *N*-alkyl-1,3,5-triaza-7-phosphaadamantanes: synthesis, crystal structure and catalytic properties in aqua media.

Autorzy

Aleksandra Zatajska

Miłosz Siczek

Anna Skarżyńska

Piotr Smoleński

Rok wydania

2017

Czasopismo

Inorganica Chimica Acta

Numer woluminu

455

Strony

701-706

DOI

10.1016/j.ica.2016.03.041

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Reactions of $[\text{NH}_4]_2[\text{PdCl}_4]$ with *N*-protonated or *N*-alkyl-1,3,5-triaza-7-phosphaadamantane iodide salts $[\text{PTA-R}]\text{I}$ ($\text{R} = \text{H}, \text{Me}, \text{Et}, n\text{Pr}, n\text{Bu}$) give the water-soluble palladium(II) complexes of type $[\text{PdI}_3(\text{PTA-R})]$ in isolated yields of 62–81%. All these compounds have been fully characterized by IR and NMR spectroscopies and elemental analyses. Their molecular structures were confirmed by single crystal X-ray diffraction analysis. The complexes belong to the relatively unusual zwitterionic, coordination compounds. Moreover, they constitute, as far as we are aware, the first reported examples of palladium compounds bearing *N*-alkyl-1,3,5-triaza-7-phosphaadamantane ligands. The complexes catalyze efficiently Heck reaction of iodobenzene and *n*-butyl acrylate as well as iodobenzene and substituted styrenes, under mild conditions in water as a solvent.

Słowa kluczowe

Palladium(II), 1,3,5-Triaza-7-phosphaadamantane derivative, Water-soluble complexes, crystal structure, NMR spectroscopy, catalysis

Adres publiczny

<http://dx.doi.org/10.1016/j.ica.2016.03.041>

Strona internetowa wydawcy

<http://www.elsevier.com>