



Catalytic activity of a half-sandwich Ru(II)-N-heterocyclic carbene complex in the oligomerization of alkynes.

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The ruthenium(II)-N-heterocyclic carbene complex, [RuCl₂(1-butyl-3-methylimidazol-2-ylidene)(*p*-cymene)] selectively catalyzes oligomerization of phenylacetylene (PA) and its derivatives to linear oligomers, containing positively charged imidazolium end-group and uncharged ones. The charged oligomer chain consists of maximum 9–11 PA monomer units after 36 h reaction at 80 °C whereas mainly pentamers are formed as other products. The H₂ atmosphere retards oligomerization of PA and hydrogenation to vinylbenzene and ethylbenzene is observed instead.

Słowa kluczowe

Ruthenium(II), N-heterocyclic carbene, Phenylacetylene, Alkyne, Oligomerization

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