

Recent advances in the chemistry of zirconocenes

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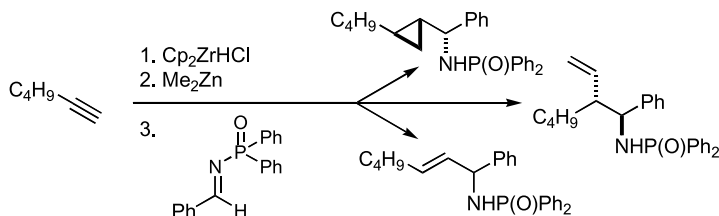
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REPORT

Selective carbon–carbon bond formations with alkenylzirconocenes

pp 1269–1279

Peter Wipf* and Ruth L. Nunes



Recent progress in the preparation of alkenylzirconocenes, the transmetalation of zirconium to zinc, palladium, and rhodium, and lithium carbenoid insertions via the 1,2-metalate rearrangement are reviewed. In addition, the regioselective alkylzirconation of alkynes and Zr-promoted cyclizations of diynes are discussed.

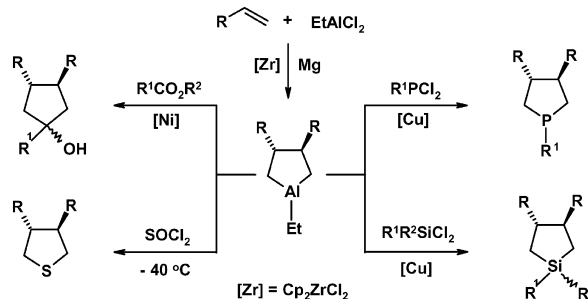
ARTICLES

Zirconium-catalyzed preparation of aluminacyclopentanes and synthesis of five-membered carbo- and heterocycles

pp 1281–1286

Usein M. Dzhemilev,* Askhat G. Ibragimov, Ruslan R. Gilyazev and Leila O. Khafizova

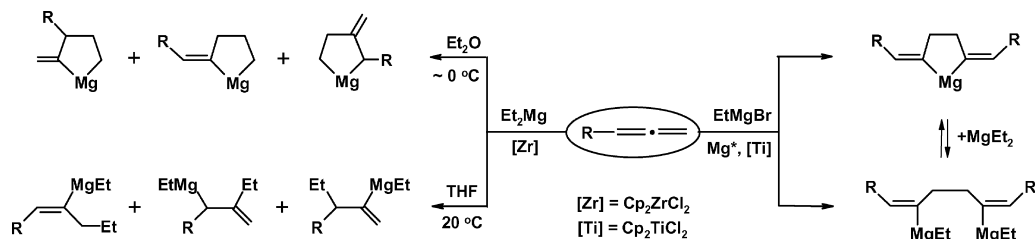
Aluminacyclopentanes, generated in situ by cycloaluminum of α -olefins using trialkyl- or alkylhalogenalanes in the presence of Cp_2ZrCl_2 were found to react selectively with carboxylic esters, thionyl chloride, dichlorophosphines and dichlorosilanes to give 5-membered carbo- and heterocycles in high yields.



Cyclo- and carbomagnesiation of 1,2-dienes catalyzed by Zr complexes

pp 1287–1291

Usein M. Dzhemilev,* Vladimir A. D'yakonov, Leila O. Khafizova and Askhat G. Ibragimov

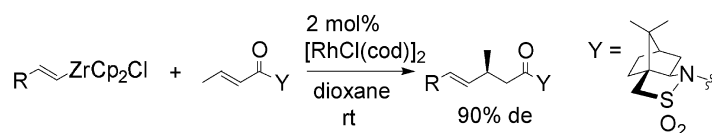


The reaction of $EtMgR'$ ($R'=Et, Br$) with 1,2-dienes in ethereal solutions catalyzed by Zr and Ti complexes was found to afford the products of cyclo- and (or) carbomagnesiation.

Rhodium-catalyzed 1,4-addition of alkenylzirconocene chlorides to electron deficient alkenes

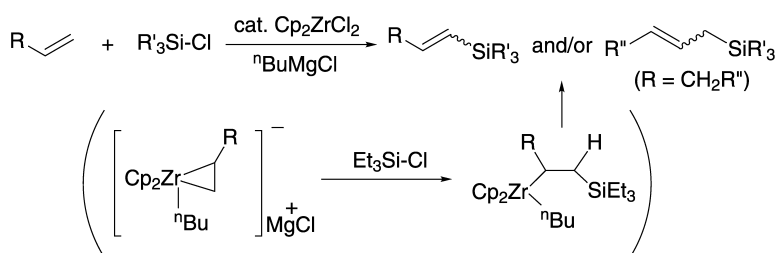
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Akito Kakuuchi, Takeo Taguchi and Yuji Hanzawa*

**Reaction pathways of zirconocene-catalyzed silylation of alkenes with chlorosilanes**

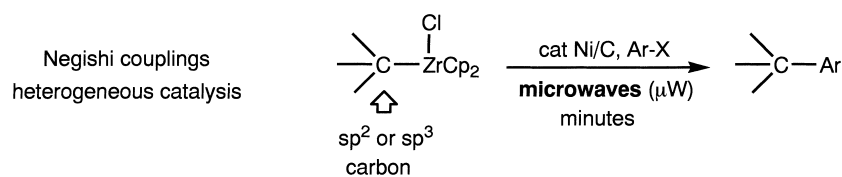
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Jun Terao, Yingshi Jin, Kazushi Torii and Nobuaki Kambe*

**Microwave accelerated, Ni/C-catalyzed cross-couplings of in situ-derived zirconocenes**

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Bruce H. Lipshutz* and Bryan Frieman

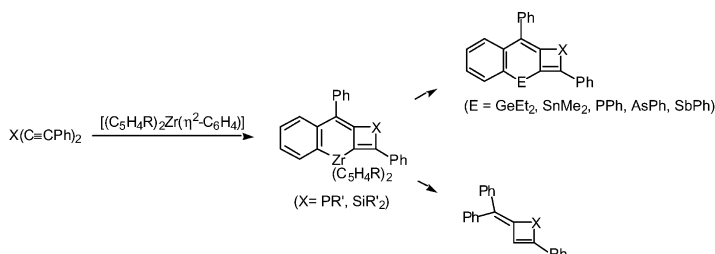


Intramolecular coupling of acetylenic groups of bis(alkynyl)phosphanes and silanes mediated by benzynesirconocene: a route to new mono- and tricyclic heterocycles

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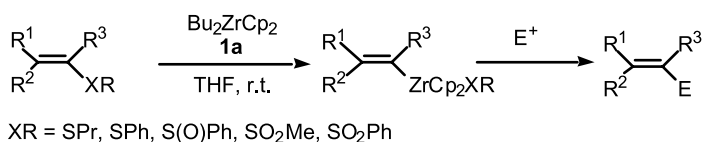
 Nadine Pirio, Stéphane Bredeau, Laurence Dupuis, Peter Schütz, Bruno Donnadiou, Alain Igau, Jean-Pierre Majoral,*
 Jean-Claude Guillemin and Philippe Meunier*

A general and convenient procedure for the regioselective synthesis of a variety of new mono- or tricyclic heterocycles incorporating either one or two heteroatoms is reported. It involves the thermolysis of Cp_2ZrPh_2 in the presence of bis(alkynyl)phosphanes or silanes followed by exchange reactions with halogenated phosphorus, germanium, tin, antimony and arsenic derivatives.


From vinyl sulfides, sulfoxides and sulfones to vinyl zirconocene derivatives

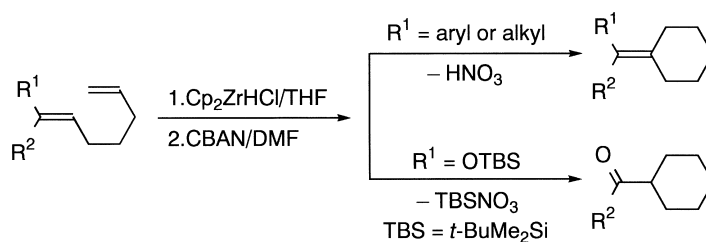
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Shahera Farhat, Irena Zouev and Ilan Marek*


Transformation of 1,5- and 1,6-dienes to carbocycles by hydrozirconation and oxidation with cerium(IV) compounds

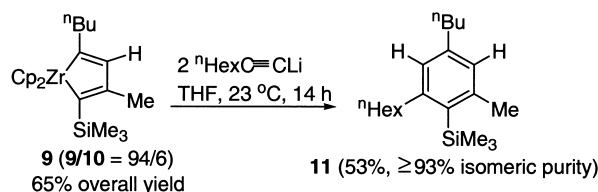
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Takushi Azemi, Mitsuru Kitamura and Koichi Narasaka*


Zr-promoted 'pair'-selective and regioselective synthesis of penta-substituted benzene derivatives

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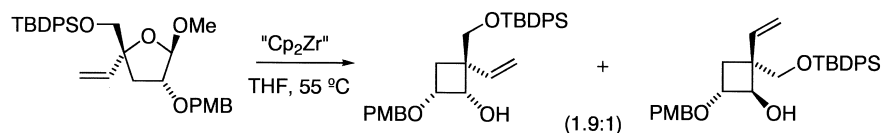
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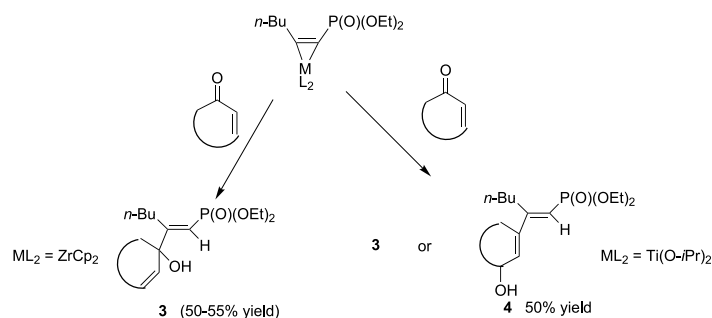
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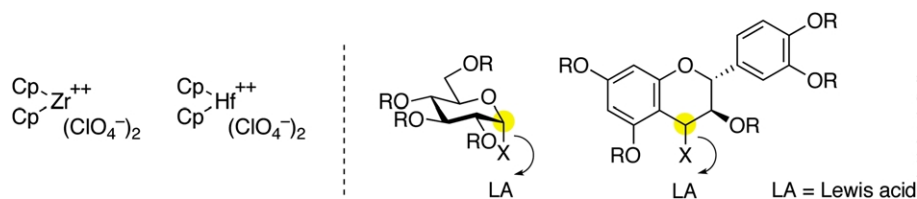
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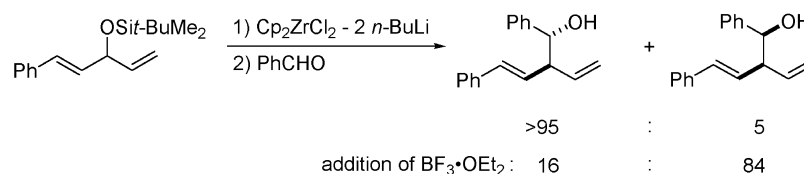
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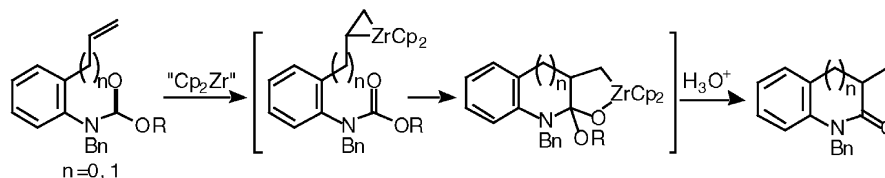
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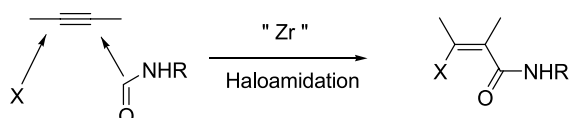
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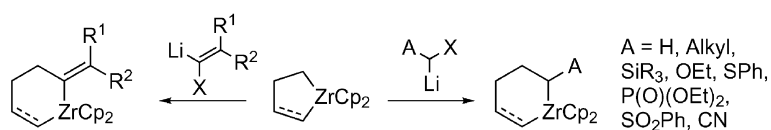
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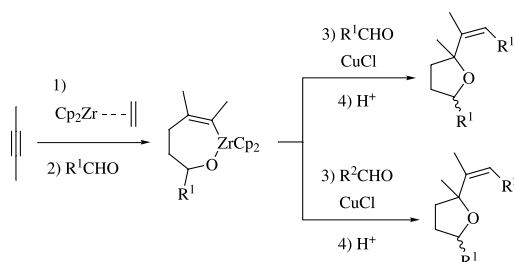
Sally Dixon, Shaun M. Fillery, Aleksandra Kasatkin, David Norton, Emma Thomas and Richard J. Whitby*



Reaction of oxazirconacycloheptenes with aldehydes mediated by CuCl: one-pot synthesis of tetrahydrofuran derivatives from four different components involving two molecules of the same or different aldehydes, an ethylene and an alkyne

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Changjia Zhao, Jiang Lu, Zhiping Li and Zhenfeng Xi*




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 Supplementary data available via ScienceDirect

COVER

A multifaceted zirconium collage provides a timely overview of the creativity and power of modern synthetic methodologies.

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