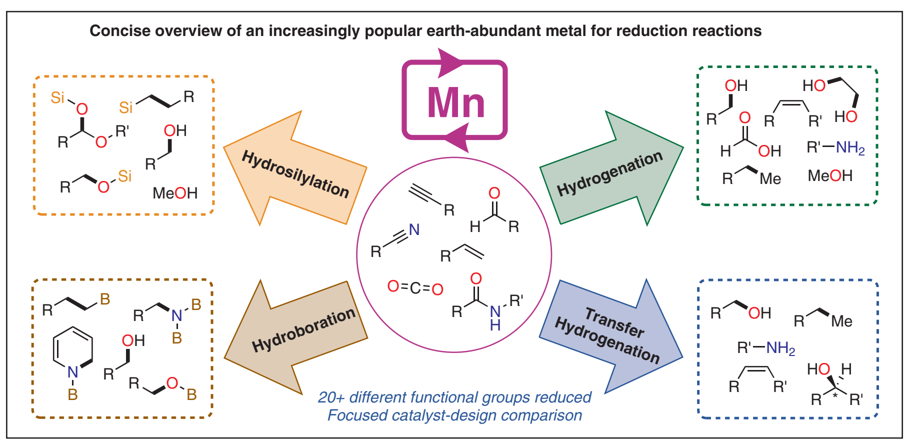
Synthesis

Reviews and Full Papers in Chemical Synthesis

February 1, 2022 • Vol. 54, 517–796



The Rise of Manganese-Catalyzed Reduction Reactions

P. Schlichter, C. Werlé

3

Thieme

Synthesis

Reviews and Full Papers in Chemical Synthesis

2022
Vol. 54, No. 3
February I

Cover Design: © Thieme
Cover Image: P. Schlichter, C. Werlé

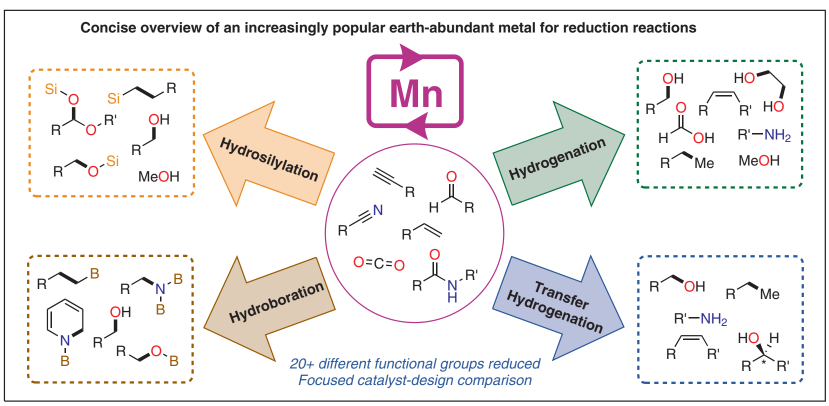
Synthesis | The Rise of Manganese-Catalyzed Reduction Reactions | Review

Synthesis **2022**, *54*, 517–534
DOI: 10.1055/a-1657-2634

OPEN ACCESS

517

P. Schlichter
C. Werlé*
Max Planck Institute for Chemical Energy Conversion, Germany

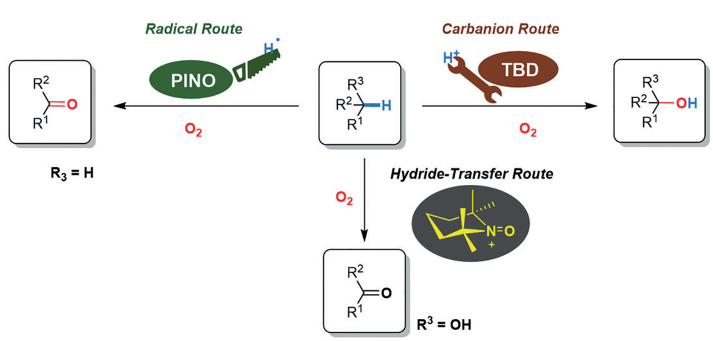


Synthesis | Aerobic Oxidations via Organocatalysis: A Mechanistic Perspective | Short Review

Synthesis **2022**, *54*, 535–544
DOI: 10.1055/a-1661-6124

535

Y. Wang
J. Yao
H. Li*
Zhejiang University, P. R. China



Synthesis

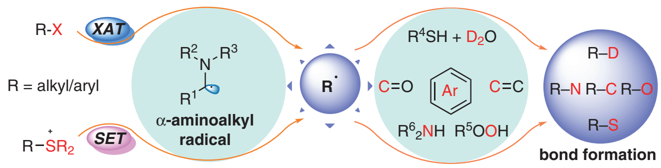
Application of α-Aminoalkyl Radicals as Reaction Activators

Short Review

Synthesis **2022**, *54*, 545–554
DOI: 10.1055/a-1685-2853

545

Y.-L. Su
M. P. Doyle*
The University of Texas at San Antonio, USA



Synthesis

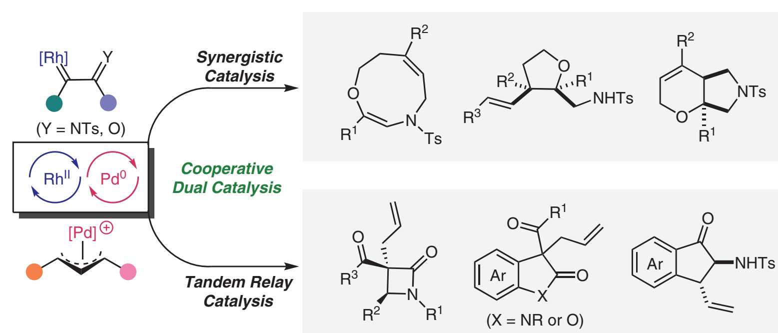
Cooperative Rh(II)/Pd(0) Dual Catalysis for the Synthesis of Carbo- and Heterocyclic Compounds

Short Review

Synthesis **2022**, *54*, 555–564
DOI: 10.1055/a-1657-2068

555

K. R. Lee
Y. L. Lee
K. I. Choi
S.-g. Lee*
Ewha Womans University, Korea



Synthesis

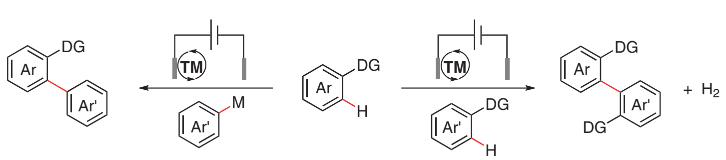
Biaryl Synthesis via Electrooxidative Transition-Metal-Catalyzed C–H Activation

Short Review

Synthesis **2022**, *54*, 565–569
DOI: 10.1055/a-1648-2821

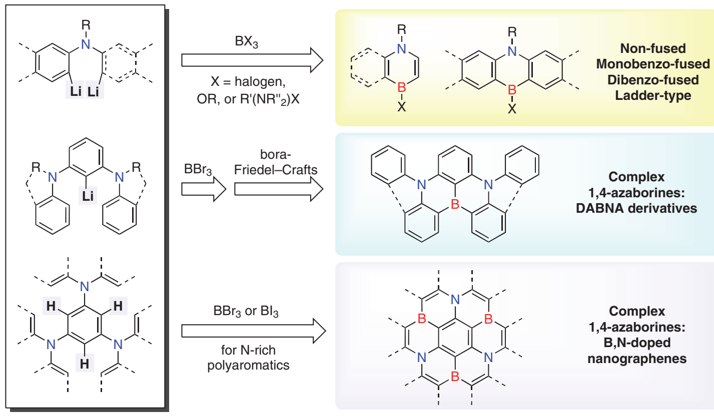
565

J. F. Goebel
Z. Zeng*
L. J. Gooßen‡*
Ruhr-Universität Bochum, Germany



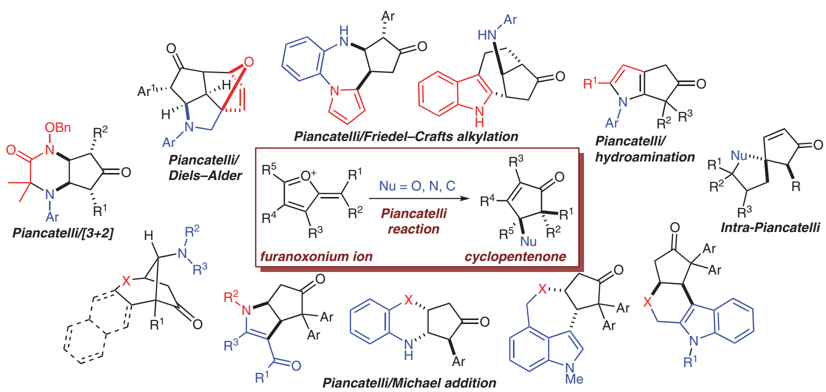
Synthesis **2022**, *54*, 570–588
DOI: 10.1055/s-0040-1719851

I. Shin
H. N. Lim*
W. P. Hong*
Yeungnam University, Korea
Daegu Catholic University, Korea



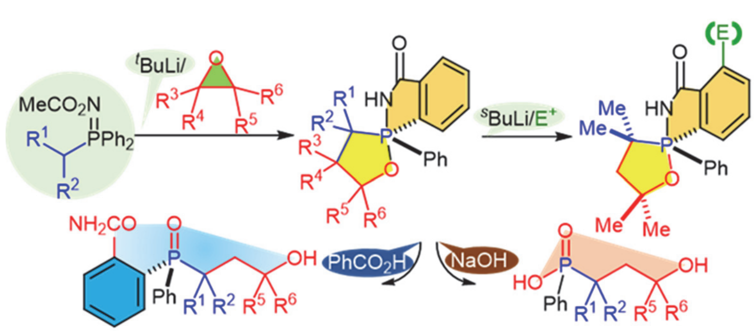
Synthesis **2022**, *54*, 589–599
DOI: 10.1055/s-0041-1737125

S. Zhong
L. Xu
Y. Cai*
Chongqing University,
P. R. of China



Synthesis **2022**, *54*, 600–616
DOI: 10.1055/a-1644-2806

P. M. Sansores Peraza
J. García López*
Y. Navarro
M. J. Iglesias
F. López Ortiz*
Universidad de Almería, Spain



Synthesis

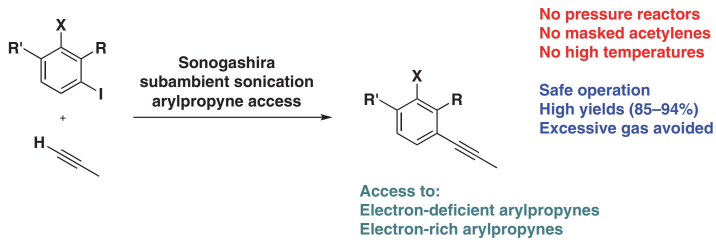
A Convenient Procedure for Sonogashira Reactions Using Propyne

PSP

655

Synthesis **2022**, *54*, 655–657
DOI: 10.1055/a-1648-7074

J. L. Alterman
G. A. Kraus*
Iowa State University, USA



Synthesis

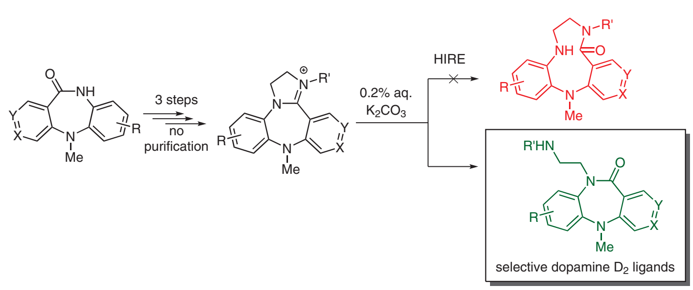
An Attempt to Achieve Hydrated Imidazoline Ring Expansion (HIRE) of Diarene-Fused [1,4]Diazepinones Delivers Selective Dopamine D_2 Receptor Ligands

Paper

658

Synthesis **2022**, *54*, 658–666
DOI: 10.1055/a-1649-5317

S. Grintsevich
A. Sapegin
B. Duszyńska
A. J. Bojarski
M. Krasavin*
Saint Petersburg State University, Russian Federation



Synthesis

Visible-Light-Promoted Radical Cyclization of *N*-Arylvinylsulfonamides: Synthesis of CF_3/CHF_2/CH_2CF_3-Containing 1,3-Dihydrobenzo[c]isothiazole 2,2-Dioxide Derivatives

Paper

667

Synthesis **2022**, *54*, 667–682
DOI: 10.1055/s-0040-1720921

D. Vytla*
K. Kaliyaperumal
R. Velayuthaperumal
P. Shaw
R. Gautam
A. Mathur
A. Roy
Syngene International Ltd, India

Synthesis

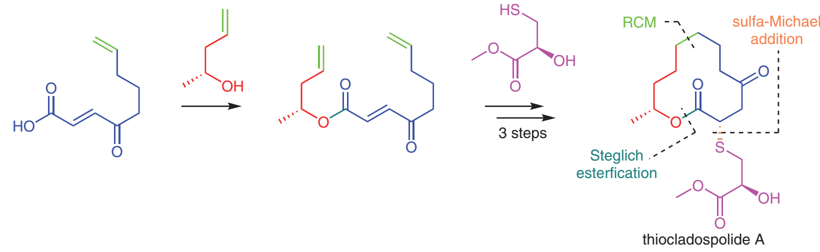
Total Synthesis of Thiocladospolide A and Its C2-Epimer

Paper

683

Synthesis **2022**, *54*, 683–688
DOI: 10.1055/a-1652-3714

P. Swami
M. Mali
B. Dhulshette
S. Ghosh*
CSIR-Indian Institute of Chemical Technology, India



Synthesis

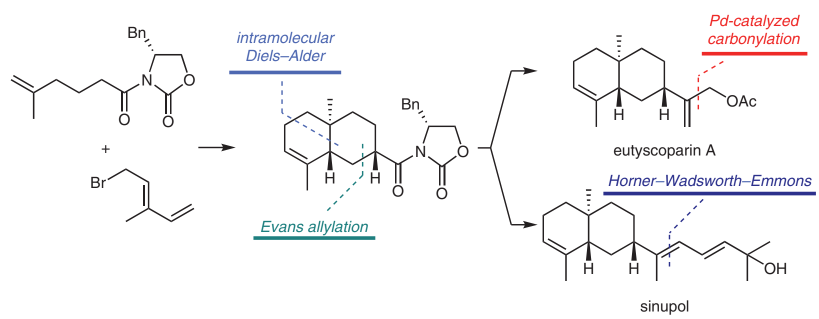
Unified Approach to *ent*-Eudesmane-Type Terpenoid Synthesis: Total Synthesis of Sinupol and Eutyscoparin A

Paper

689

Synthesis **2022**, *54*, 689–696
DOI: 10.1055/a-1643-5729

K. Ota*
K. Kamaike
H. Miyaoka*
Tokyo University of Pharmacy and Life Sciences, Japan



Synthesis

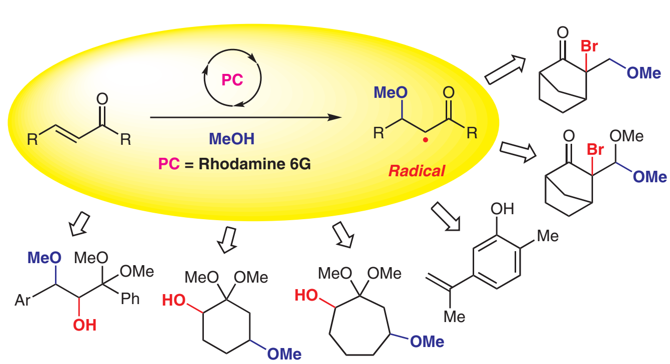
Oxidation of α,β-Unsaturated Ketones by Organophotocatalysis Using Rhodamine 6G under Visible Light Irradiation: Insight into the Reaction Mechanism

Paper

697

Synthesis **2022**, *54*, 697–704
DOI: 10.1055/a-1652-3370

E. Yoshioka
H. Takahashi
H. Wanibe
Y. Hontani
K. Hatsuse
R. Shimizu
A. Kawashima
S. Kohtani
H. Miyabe*
Hyogo University of Health Sciences, Japan



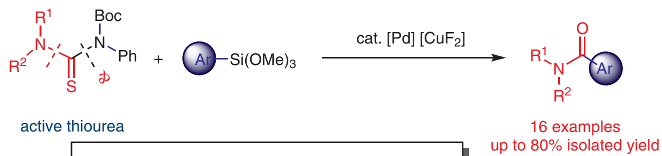
Synthesis

Palladium-Catalyzed Desulfurative Hiyama Coupling of Thioureas to Achieve Amides via Selective C–N Bond Cleavage

Paper
705

Synthesis **2022**, *54*, 705–710
DOI: 10.1055/s-0040-1720907

Z. He
C. Yan
M. Zhang
M. Irfan
Z. Wang
Z. Zeng*
South China Normal University, P. R. of China
Shanghai Institute of Organic Chemistry, P. R. of China



- The first example of thiourea Hiyama coupling
- CuF_2 as the key catalyst, oxidant and activator
- Gram-scale reaction
- Air- and moisture-insensitive
- Selective C–N bond cleavage
- Base-free

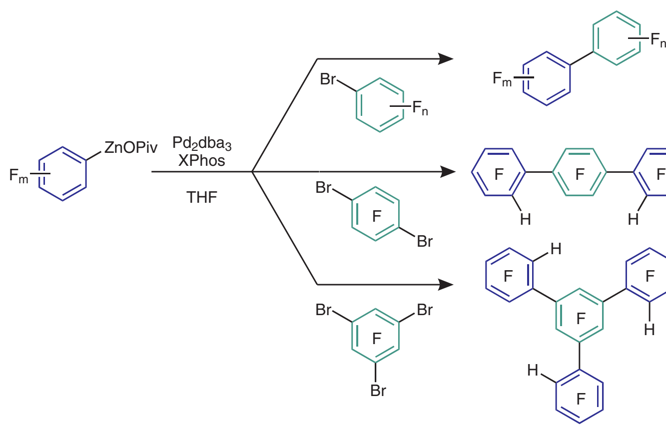
Synthesis

Synthesizing Highly Fluorinated Oligophenyls via Negishi Coupling of Fluoroarylzinc Pivalates

Paper
711

Synthesis **2022**, *54*, 711–722
DOI: 10.1055/a-1647-6973

J. Stoesser*
E. Engelage
S. M. Huber*
Ruhr-Universität Bochum, Germany



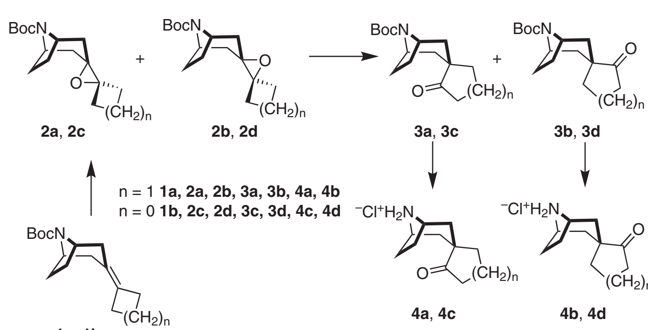
Synthesis

Tropane-Based Dispirocyclic Oxiranes and Spirocyclic Ketones

Paper
723

Synthesis **2022**, *54*, 723–731
DOI: 10.1055/s-0040-1719848

A. Gerasov
R. Boiko
G. Dolgonos
A. Mandzhulo
A. Shivanyuk*
V. Fetyukhin
O. Lukin
I.F. Lab Ltd., Representative of Life Chemicals Inc. in Ukraine, Ukraine



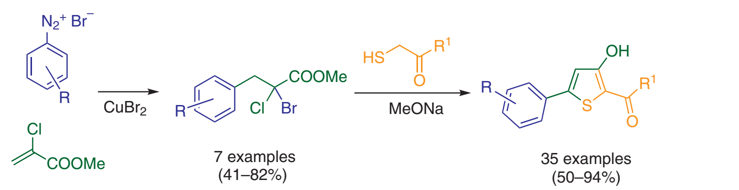
Synthesis Paper

Bromoarylation of Methyl 2-Chloroacrylate under Meerwein Conditions for the Synthesis of Substituted 3-Hydroxythiophenes

732

Synthesis **2022**, *54*, 732–740
DOI: 10.1055/s-0040-1719849

Y. V. Ostapiuk*
M. Shehedyn
O. V. Barabash
B. Demydchuk
S. Batsyts
C. Herzberger
A. Schmidt*
Ivan Franko National University of Lviv, Ukraine
Clausthal University of Technology, Germany



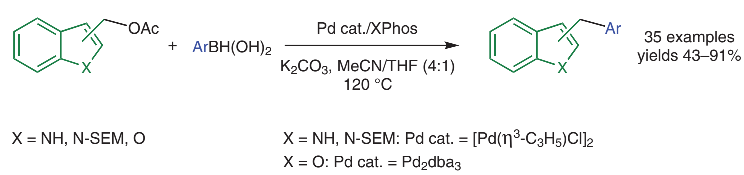
Synthesis Paper

Synthesis of Indole/Benzofuran-Containing Diarylmethanes through Palladium-Catalyzed Reaction of Indolylmethyl or Benzofuranylmethyl Acetates with Boronic Acids

741

Synthesis **2022**, *54*, 741–753
DOI: 10.1055/s-0041-1737275

A. Arcadi
A. Calcaterra
M. Chiarini
G. Fabrizi
A. Fochetti
A. Goggiamani*
A. Iazzetti*
F. Marrone
V. Marsicano
A. Serraiocco
Sapienza, Università di Roma, Italy
Università Cattolica del Sacro Cuore, Italy



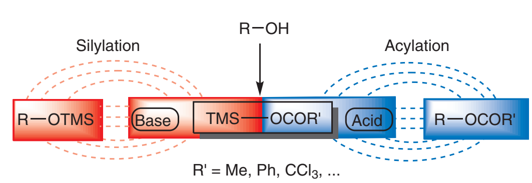
Synthesis Paper

Trimethylsilyl Esters as Novel Dual-Purpose Protecting Reagents

754

Synthesis **2022**, *54*, 754–762
DOI: 10.1055/a-1654-2211

J.-S. Chen
P.-H. Huang
Y.-C. Hsieh
J.-W. Liu
H.-L. Hsu
K.-M. Zhang
R.-T. Wu
T.-S. Chang
Y.-H. Liu
H.-R. Wu
S.-Y. Luo*
National Chung Hsing University, Taiwan

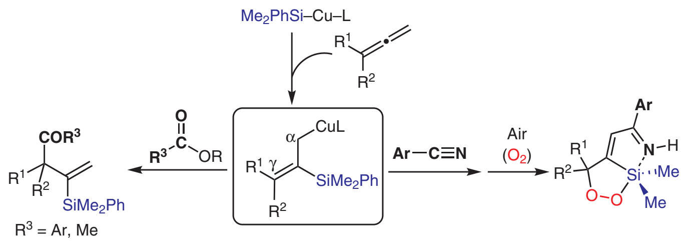


Synthesis

Copper-Catalyzed Regioselective Sila-acylation and Sila-imination of Allenes Using Esters and Nitriles

Paper
763
Synthesis **2022**, *54*, 763–769
DOI: 10.1055/a-1648-7154

K. Suda
Y. Matsuda
T. Yamaguchi
T. Fujihara*
Kyoto University, Japan

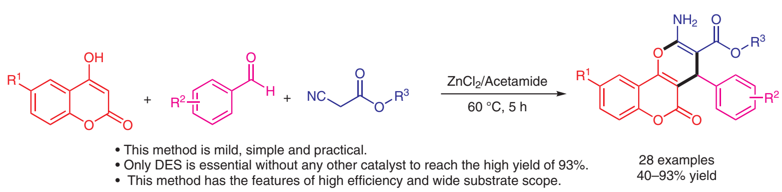


Synthesis

One-Pot Synthesis of 4*H*-Pyrano[3,2-c]coumarin Derivatives Catalyzed by Deep Eutectic Solvent

Paper
770
Synthesis **2022**, *54*, 770–778
DOI: 10.1055/a-1580-9688

Z. Xie*
H. Li
J. Yang
X. Zhu
Z. Le*
East China University of Technology, China

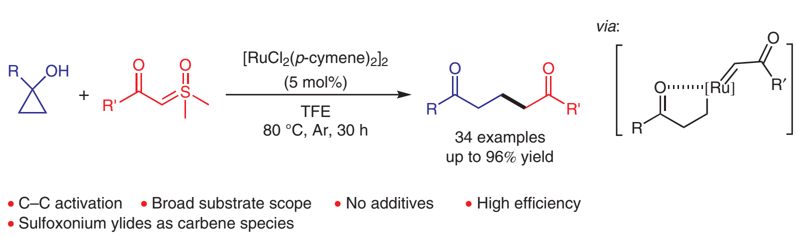


Synthesis

Ruthenium-Catalyzed Alkylation of Cyclopropanols with Sulfoxonium Ylides via C–C Bond Cleavage: Formation of Diverse 1,5-Diketones

Paper
779
Synthesis **2022**, *54*, 779–787
DOI: 10.1055/a-1588-0974

X. Huang
J. Li
H. He
K. Yan
R. Lai
Y. Luo
M. Guan*
Y. Wu*
West China Hospital, Sichuan University, P. R. of China
West China School of Pharmacy, Sichuan University, P. R. of China



Synthesis

Synthesis **2022**, *54*, 788–796
DOI: 10.1055/a-1647-5978

Palladium-Catalyzed Cross-Coupling of 4-(Tosyloxy)quinazolines with H-Phosphonates and Phosphine Oxides: An Efficient Access to 2-(Hetero)aryl-4-phosphorylated Quinazolines

X. Ye
J. Huang
Z. Deng
Y. Peng*
Jiangxi Normal University,
P. R. of China