Synthesis

Reviews and Full Papers in Chemical Synthesis

2019
Vol. 51, No. 16
August II

Synthesis

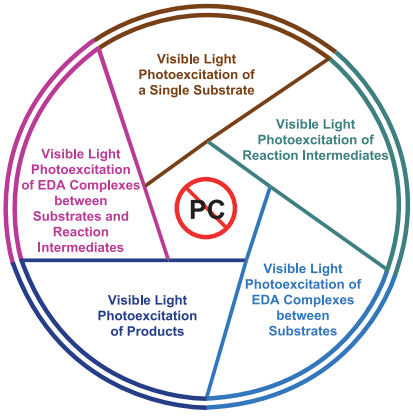
Synthesis **2019**, *51*, 3021–3054
DOI: 10.1055/s-0037-1611812

Y. Wei
Q.-Q. Zhou
F. Tan*
L.-Q. Lu*
W.-J. Xiao

Central China Normal University, P. R. of China
Hubei University of Education, P. R. of China

Visible-Light-Driven Organic Photochemical Reactions in the Absence of External Photocatalysts

Review



Synthesis

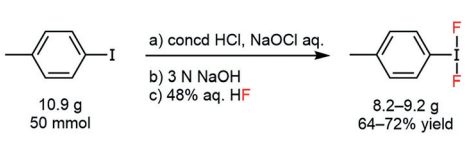
Synthesis **2019**, *51*, 3055–3059
DOI: 10.1055/s-0037-1611526

J. Tao
G. K. Murphy*

University of Waterloo, Canada

A Practical, Large-Scale Synthesis of *p*-(Difluoroiodo)toluene (*p*-TolIF$_2$)

PSP



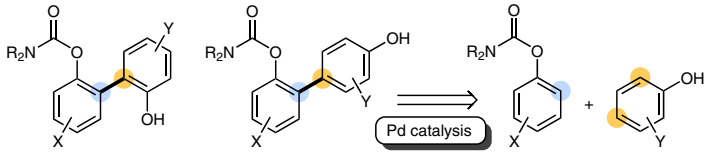
This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.

Synthesis

Synthesis **2019**, *51*, 3060–3076
DOI: 10.1055/s-0037-1611482

Access to Biphenyls by Palladium-Catalyzed Oxidative Coupling of Phenyl Carbamates and Phenols

N. Truchan
C. Jandl
A. Pöthig
S. Breitenlechner
T. Bach*
Technische Universität
München, Germany

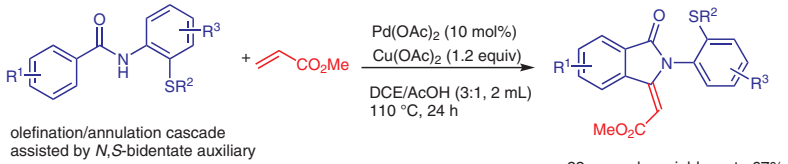


Synthesis

Synthesis **2019**, *51*, 3077–3084
DOI: 10.1055/s-0037-1611799

Palladium-Catalyzed C(sp^2)–H Olefination/Annulation Cascades of Aryl Carboxamides Assisted by *N*,*S*-Bidentate Auxiliary

L. Li
X.-G. Zhang
X.-H. Zhang*
Wenzhou University,
P. R. of China



olefination/annulation cascade
assisted by *N*,*S*-bidentate auxiliary

R^1 = Me, Et, OMe, F, Cl, Br, CF_3, Ph, 2-Napht
R^2 = Me, Et, Cy, Ph
R^3 = Me, OEt, Cl, CF_3

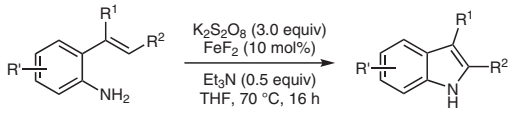
22 examples, yields up to 67%

Synthesis

Synthesis **2019**, *51*, 3085–3090
DOI: 10.1055/s-0037-1611521

Iron-Promoted Construction of Indoles via Intramolecular Oxidative C–N Coupling of 2-Alkenylanilines Using Persulfate

M. Wang
Y. Li
Q.-A. Wu*
S. Luo
Y. Li*
Zhejiang University of Technology, P. R. of China
Lanzhou Institute of Chemical Physics (LICP), P. R. of China



One-pot reaction
Cheap reagents
No N-protection
Mild conditions

Good group tolerance
16 examples
R = Alkyl or Aryl
Appreciable yields up to 80%

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.

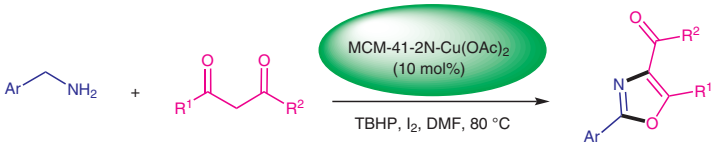
Synthesis

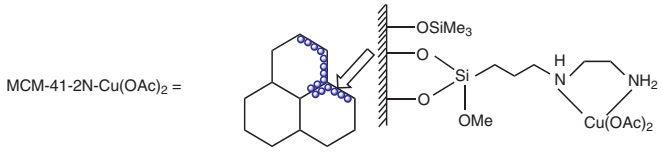
Synthesis **2019**, *51*, 3091–3100
DOI: 10.1055/s-0037-1610710

L. Wei
S. You*
Y. Tuo
M. Cai*

Jiangxi Normal University, P. R. of China
Jiangxi Academy of Sciences, P. R. of China

A Highly Efficient Heterogeneous Copper-Catalyzed Oxidative Cyclization of Benzylamines and 1,3-Dicarbonyl Compounds To Give Trisubstituted Oxazoles





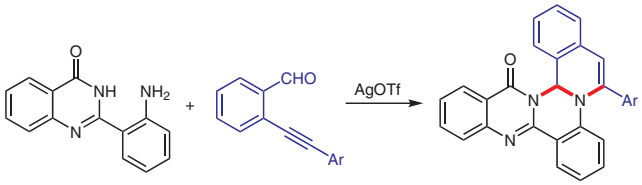
Synthesis

Synthesis **2019**, *51*, 3101–3108
DOI: 10.1055/s-0037-1611808

W.-C. Pan
M.-M. Zhang
J.-Q. Liu*
X.-S. Wang*

Jiangsu Normal University, P. R. China

Silver Triflate Catalyzed Synthesis of Isoquinolino[2,1-*a*]quinazolino[3,2-*c*]quinazoline Derivatives via Alkyne Hydroamination



hexacyclic heterocycle
one isoquinoline, two quinazolines
22 examples
79–89% yield

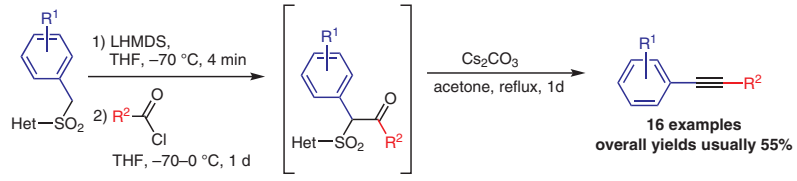
Synthesis

Synthesis **2019**, *51*, 3109–3116
DOI: 10.1055/s-0037-1612423

R. Bujok
M. Mąkosza*

Institute of Organic Chemistry, Polish Academy of Sciences, Poland

Synthesis of Diarylacetylenes Bearing Electron-Withdrawing Groups via the Smiles Rearrangement



16 examples
overall yields usually 55%

Het = benzothiazol-2-yl
or 1-phenyl-1H-tetrazol-5-yl

R^1 = NO_2, CF_3, CN

R^2 = 4-$F_3CC_6H_4$, 3-$F_3CC_6H_4$, 4-ClC_6H_4, 2-BrC_6H_4, Ph, 4-$MeOC_6H_4$, 2-naphthyl, 2-furyl

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.

Synthesis

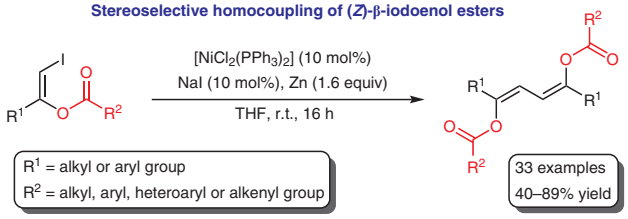
Synthesis **2019**, *51*, 3117–3126
DOI: 10.1055/s-0037-1610709

J. Francos
V. Cadierno*
Universidad de Oviedo, Spain

Nickel-Catalyzed Homocoupling of (*Z*)-β-Iodoenol Esters: Stereoselective Access to (*Z*,*Z*)-Buta-1,3-diene-1,4-diyl Diesters

Paper

3117



Synthesis

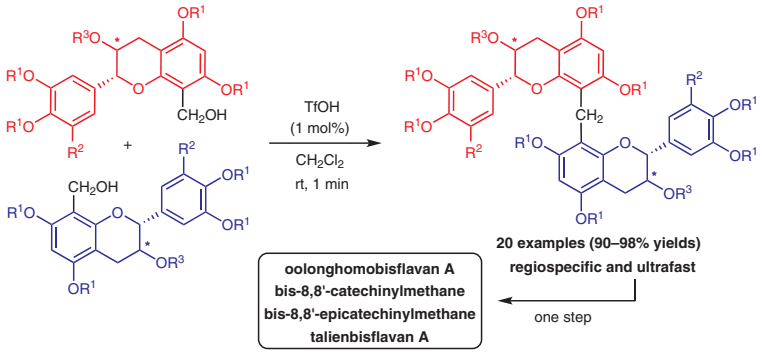
Synthesis **2019**, *51*, 3127–3141
DOI: 10.1055/s-0037-1610707

D.-M. Huang
H.-J. Li*
Y. Zhao
Y.-C. Wu*
Harbin Institute of Technology, P. R. of China
Beijing National Laboratory for Molecular Sciences, P. R. of China

Synthesis of Bisflavanol-Type Natural Products and Their Analogues via Self-Coupling of C8-Methylol Catechin Derivatives

Paper

3127



Synthesis

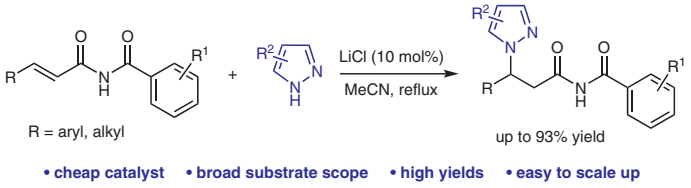
Synthesis **2019**, *51*, 3142–3150
DOI: 10.1055/s-0037-1611520

H. Zhou*
X. Xiang
B. Ma
G. Wang
Z. Zhang
J. Yang*
Gansu Agricultural University, P. R. of China
Northwest Normal University, P. R. of China

Lithium Chloride Catalyzed Aza-Michael Addition of Pyrazoles to α,β-Unsaturated Imides

Paper

3142



This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.

Synthesis

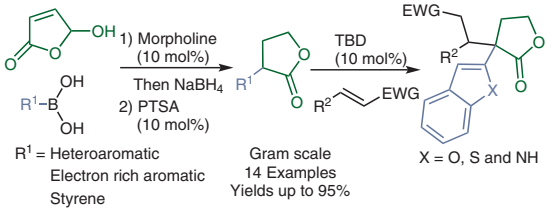
Synthesis **2019**, *51*, 3151–3159
DOI: 10.1055/s-0037-1611820

M. Bos
F. Buttard
A. Vallée
E. Riguet*
Université de Reims Champagne-Ardenne, France

Organocatalytic Gram-Scale Synthesis and Alkylation of Heteroaryl and Electron-Rich Aryl α-Substituted γ-Lactones

Paper

3151



Synthesis

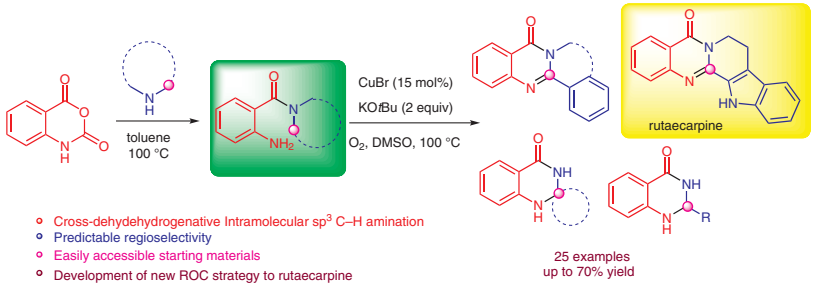
Synthesis **2019**, *51*, 3160–3170
DOI: 10.1055/s-0037-1611575

S. M. Patel
H. Chada
S. Biswal
S. Sharma
D. S. Sharada*
Indian Institute of Technology (IIT) Hyderabad, India

Copper-Catalyzed Intramolecular α-C–H Amination via Ring-Opening Cyclization Strategy to Quinazolin-4-ones: Development and Application in Rutaecarpine Synthesis

Paper

3160



This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.