Dipeptide-Based Phosphonium Salt Catalysis: Application to Enantioselective Synthesis of Fused Tri- and Tetrasubstituted Aziridines

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D = H, alkony, alkyl, aryl, halogen
R' = H, ester

Irpin2

DG = amine, amide

DG = pinB

up to 96% ee

up to 96% ee

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Iridium-Catalyzed Asymmetric C–H Borylation Enabled by Chiral Bidentate Boryl Ligands

52 examples
85–99% yield
all >20:1 dr
up to >99.9% ee

R3

O

X

Y

n

R1

R2

O

R3

Y

n

R1 = H, alkoxy, alkyl, aryl, halogen
R2 = H, ester

R3 = aryl

X = Br, Cl
Y = H, O, CH2
n = 0, 1, 2
R' = ary
Recent Advances in the Synthesis of Acridines and Phenazines

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Reprogramming Nonribosomal Peptide Synthesis by Surgical Mutation

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DOI: 10.1055/s-0039-1690711

Base-Controlled One-Pot Chemoselective Suzuki–Miyaura Reactions for the Synthesis of Unsymmetrical Terphenyls

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Y. Teng
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Copper Aluminate Spinel in Click Chemistry: An Efficient Heterogeneous Nanocatalyst for the Highly Regioselective Synthesis of Triazoles in Water

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L. Kavoosi  
A. Khalafi-Nezhad  
Shiraz University, Iran

Advantages:
* simple removal of the catalyst  
* short reaction time  
* high yields  
* high diversity  
* green solvent

Highly Chemoselective Solvent-Free Synthesis of 1,3,5-Triaryl-1,5-diketones: Crystallographic Investigation and Intramolecular Weak Bifurcated H Bonds Involving Aliphatic C–H Group

Z. Yin  
C. Xiong  
J. Guo  
X. Hu*  
Z. Shan  
V. Borovkov*  
South-Central University for Nationalities, P. R. of China

Acetic Acid Catalysed One-Pot Synthesis of Pyrrolo[1,2-\(\alpha\)]quinoxaline Derivatives

P. N. M. Allan  
M. I. Ostrowska  
B. Patel*  
London Metropolitan University, UK

*simple removal of the catalyst  
*short reaction time  
*high yields  
*high diversity  
*green solvent

Advantages:

Advantages:

Advantages:
Direct Synthesis of N-Functionalized Dipropargylamine Linkers as Models for Use in Peptide Stapling

A. Renzetti*
R. N. Rutherford
K. Fukumoto
D. Kunciw
H. F. Sore
D. R. Spring*
University of Cambridge, UK

Stereoselective Synthesis of the A,E-Ring Bicyclic Core of Calyciphylline B-Type Alkaloids

B. S. Kumar
S. Raghavan*
Indian Institute of Chemical Technology, India

Copper(II)-Catalyzed C–N Coupling of Aryl Halides and N-Nucleophiles Promoted by Quebrachitol or Diethylene Glycol

F. Du
Q. Zhou
Y. Fu
Y. Chen
Y. Wu*
G. Chen*
Shenyang Pharmaceutical University, P. R. of China
Yunnan Institute of Tropical Crops, P. R. of China
Synthesis of Acetamides from Aryl Amines and Acetonitrile by Diazotization under Metal-Free Conditions

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Y.-N. Li
N.-N. Zhang
H. Kang
P. Duan
F. Xiao
Y. Guo
X. Wen*
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\[
\text{NH}_2 + \text{CH}_3\text{CN}, \text{H}_2\text{O} \xrightarrow{\text{TIOH, HbuONO, 60 °C}} \text{NH}_2\text{Me}
\]

R = OMe, OH, CO\text{Et}, CF\text{3}, NO\text{2}, F, Cl, Br, I
X = C, N

- without metal catalyst
- selective to aromatic amines
- 22 examples up to 85% yield

α-D-Galacturonic Acid as Natural Ligand for Selective Copper-Catalyzed N-Arylation of N-Containing Heterocycles

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Y. Zhao
L. Zheng
Jinzhou Medical University, P. R. of China

\[
\text{CuBr} (5 \text{ mol%}) \quad \text{GalA} (10 \text{ mol%})
\]

X, Y = I, Br, Cl, B(OH)\text{2}
R = e.g., –NH\text{2}, –CO\text{2H}, –CHO, –CN, –NO\text{2}

- abundant source
- eco-friendly
- selective
- water soluble

Copper(I)-Catalyzed Sulfenylation of 1,3-Dicarbonyl Substrates with Disulfides under Mild Conditions

J. Zhao
F. Yang
Z. Yu
X. Tang
Y. Wu
C. Ma
Q. Meng*
Dalian University of Technology, P. R. of China

- HIGH ATOM ECONOMY
- MILD CONDITIONS
- SIMPLE PROCEDURE WITH UP TO 95% YIELD

16 examples up to 95% yield
Preparation of α- L -Rhamnobiosides by Open and Conventional Glycosylations for Studies of the rHPL Lectin

F. Demeter, T. Balogh, T.-K. Fu, M. D.-T. Chang, Y.-C. Lee, A. Borbás*, M. Herczeg*
University of Debrecen, Hungary

A Chemoenzymatic Formal Synthesis of Epoxyquinols A and B

J. A. Collins*, C. J. Gerry, M. M. Duncan
Whitman College, USA

Catalytic Asymmetric Synthesis of Atropisomeric Quinolines through the Friedländer Reaction

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