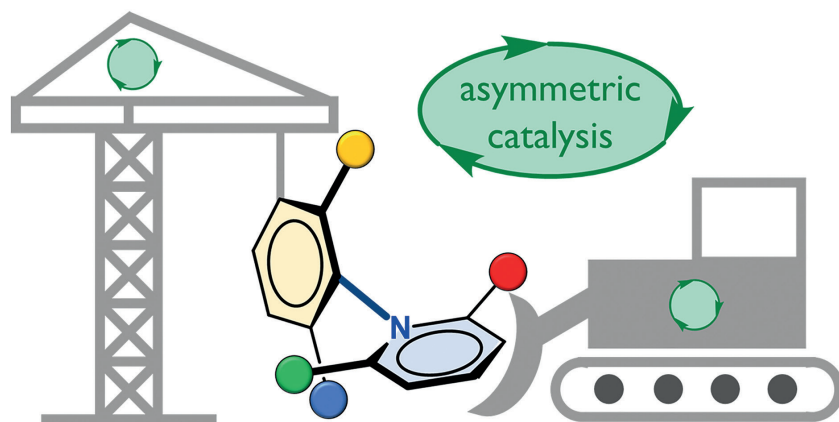


Synthesis

Reviews and Full Papers in Chemical Synthesis

May 3, 2022 • Vol. 54, 2081–2308



Catalytic Enantioselective Synthesis of C–N Atropisomeric Heterobiaryls

J. S. Sweet, P. C. Knipe

9

Synthesis

Synthesis 2022, 54, 2081–2102
DOI: 10.1055/a-1701-7397

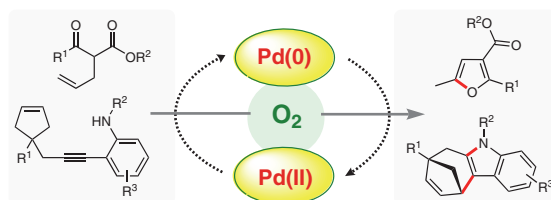
A. A. Barboza
J. A. Dantas
M. O. Costa
A. Chiavegatti
G. A. M. Jardim*
M. A. B. Ferreira*

Federal University of São Carlos
– UFSCar, Brazil

Recent Advances in Palladium-Catalyzed Oxidative Couplings in the Synthesis/Functionalization of Cyclic Scaffolds Using Molecular Oxygen as the Sole Oxidant

Review

2081



Synthesis

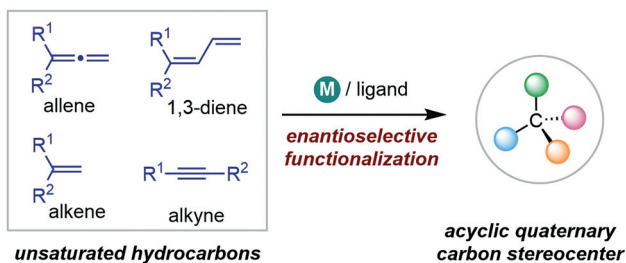
Synthesis 2022, 54, 2103–2118
DOI: 10.1055/s-0040-1719899

X. Sun
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Acyclic Quaternary Carbon Stereocenters through Transition-Metal-Catalyzed Enantioselective Functionalization of Unsaturated Hydrocarbons

Short Review

2103



Synthesis

Catalytic Enantioselective Synthesis of C–N Atropisomeric Heterobiaryls

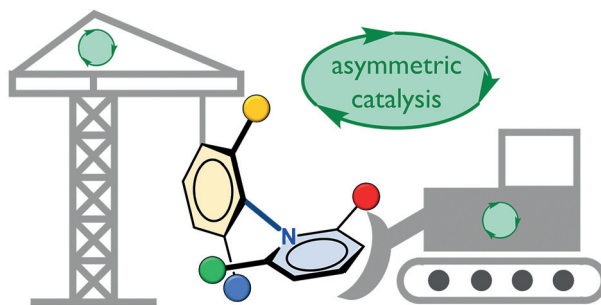
Short Review

2119

Synthesis **2022**, *54*, 2119–2132
DOI: 10.1055/s-0040-1719896

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Synthesis

Transition-Metal-Catalyzed Enantioselective Synthesis of Indoles from 2-Alkynylanilines

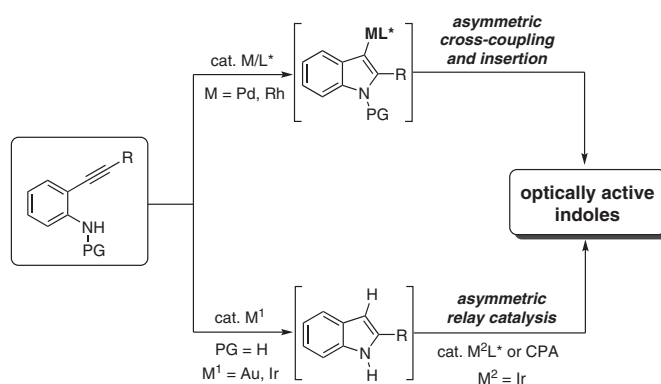
Short Review

2133

Synthesis **2022**, *54*, 2133–2147
DOI: 10.1055/s-0040-1729-9572

Z.-S. Ye*
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Synthesis

Brønsted Acid Catalyzed Direct Annulation of Alkoxyallenes and Naphthols to Chroman Ketals

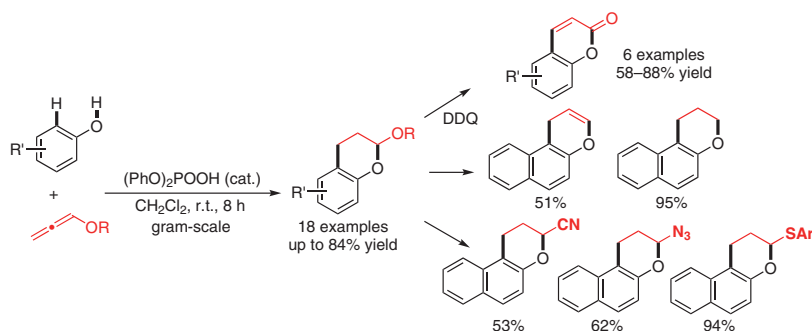
Feature

2148

Synthesis **2022**, *54*, 2148–2156
DOI: 10.1055/s-0040-1719892

M. He
J. Zhang
C. Zhang*
H.-Y. Wang
G. Jiang*

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Physics (LICP), P. R. of China
Nanjing Tech University,
P. R. of China



Synthesis

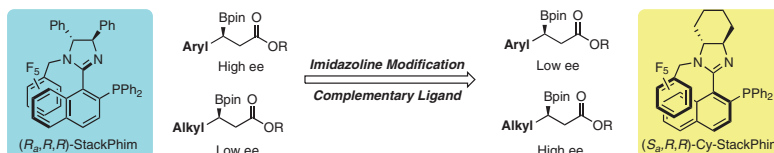
Synthesis 2022, 54, 2157–2164
DOI: 10.1055/a-1730-2473

G. Dahiya
K. A. Abboud
A. Aponick*
University of Florida, USA

Tuning StackPhim Ligands: Applications in Enantioselective Borylation and Alkylation

Feature

2157



Synthesis

Synthesis 2022, 54, 2165–2174
DOI: 10.1055/a-1710-7256

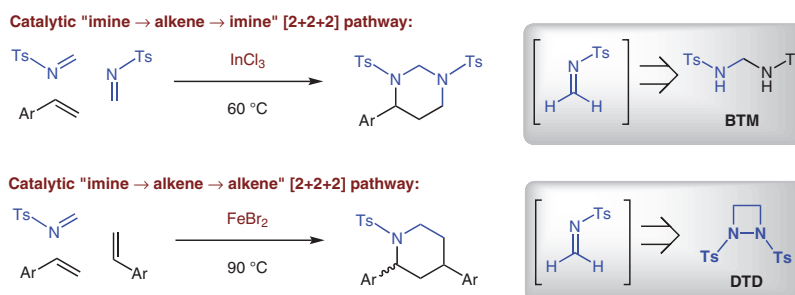
H. H. Chaminda Lakmal
J. Istre
X. Qian
H. Zhou
H. U. Valle
X. Xu*
X. Cui*

Mississippi State University, USA

Catalytic Amidomethylative [2+2+2] Cycloaddition of Formaldimine and Styrenes toward *N*-Heterocycles

Feature

2165



Synthesis

Synthesis 2022, 54, 2175–2184
DOI: 10.1055/s-0041-1737336

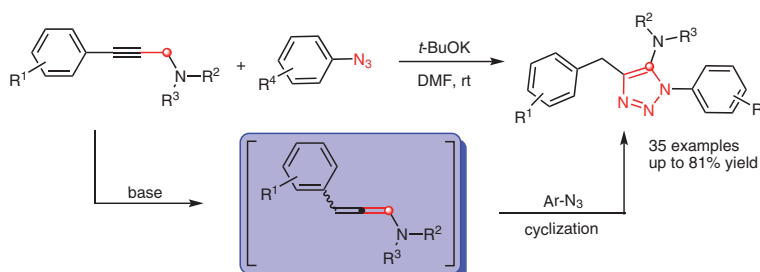
S. Qiu
W. Chen
D. Li
Y. Chen
Y. Niu
Y. Wu
Y. Lei
L. Wu*
W. He

Hainan Normal University,
P. R. of China

The Use of Propargylamines to Synthesize Amino-1,2,3-triazoles via Cycloaddition of Azides with Allenamines

Paper

2175



Synthesis

Synthesis 2022, 54, 2185–2192
DOI: 10.1055/s-0040-1719880

A. Wang

Y. Feng

S. Li

X. Shi

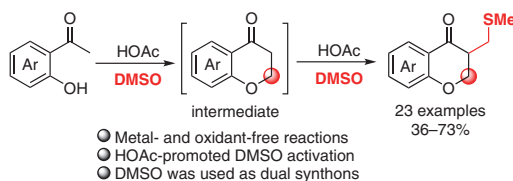
T.-S. Jiang*

Anhui Agricultural University,
P. R. of China

Oxidant-Free Selective Synthesis of Functionalized Chroman-4-ones from *ortho*-Hydroxyacetophenones under HOAc/DMSO Conditions

Paper

2185



Synthesis

Synthesis 2022, 54, 2193–2204
DOI: 10.1055/a-1702-4445

L. Pang

Q. Sun

Z. Huang

S. Li*

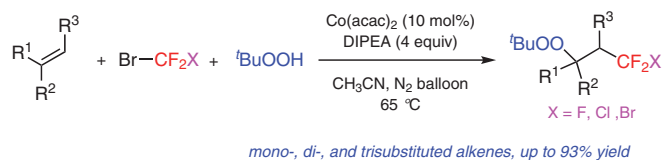
Q. Li*

Anhui Agricultural University,
P. R. of China
Sun Yat-Sen University,
P. R. of China
South China University of Technology,
P. R. of China

Cobalt–Tertiary Amine Mediated Peroxy-trifluoromethylation and -halodifluoromethylation of Alkenes with CF_2XBr ($\text{X} = \text{F}, \text{Cl}, \text{Br}$) and *tert*-Butyl Hydroperoxide

Paper

2193



Synthesis

Synthesis 2022, 54, 2205–2212
DOI: 10.1055/a-1709-3426

T. A. Hammerstad

P. V. Hegde

K. J. Wang

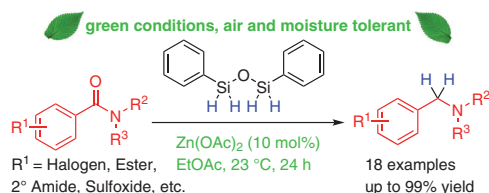
C. C. Aldrich*

University of Minnesota Twin
Cities, USA

Chemoselective Reduction of Tertiary Amides by 1,3-Diphenyl-disiloxane (DPDS)

Paper

2205



Synthesis

Synthesis **2022**, *54*, 2213–2224
DOI: 10.1055/s-0041-1737804

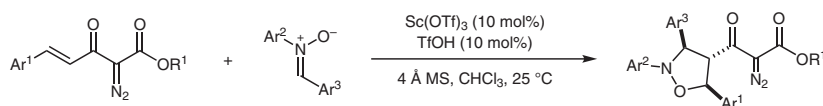
Y. Zhao
D. Wu
X. Xu*

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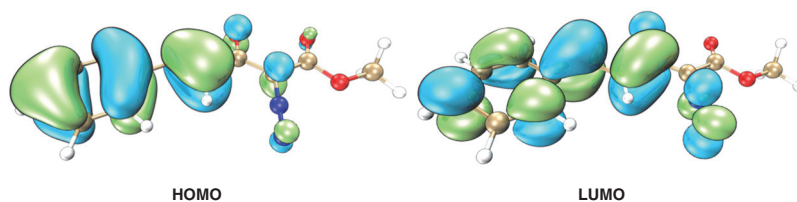
Sc(OTf)₃-Catalyzed [3+2]-Cycloaddition of Diazoacetate Enones and *N*-Aryl Nitrones: Diastereoselective Synthesis of Functionalized Isoxazolidines with Three Contiguous Stereogenic Centers

Paper

2213



35 examples, up to 94% yield and 95:5 dr



Synthesis

Synthesis **2022**, *54*, 2225–2232
DOI: 10.1055/s-0041-1737805

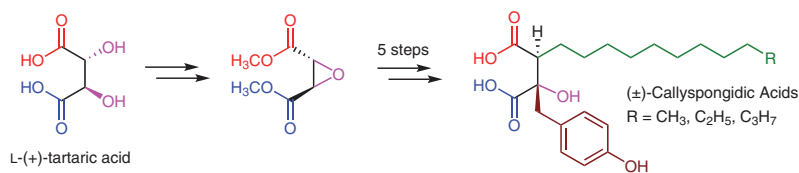
S. Das
A. Bala
K. Sharma
S. L. Gholap*

Indian Institute of Technology
Delhi, India

First Total Syntheses of (±)-Callyspongic Acids and 2-*epi*-(±)-Callyspongic Acids

Paper

2225



Synthesis

Synthesis **2022**, *54*, 2233–2241
DOI: 10.1055/s-0041-1737763

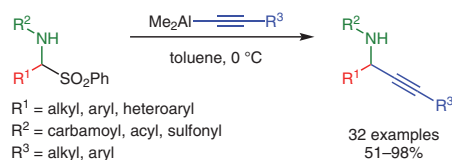
J.-H. Lee
S.-H. Lee*

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Efficient Synthesis of *N*-Carbamoylpropargylamines from α -Amido Sulfones Using Dimethylalkynylaluminum Reagents

Paper

2233



32 examples
51–98%

Synthesis

Synthesis 2022, 54, 2242–2250
DOI: 10.1055/s-0041-1737340

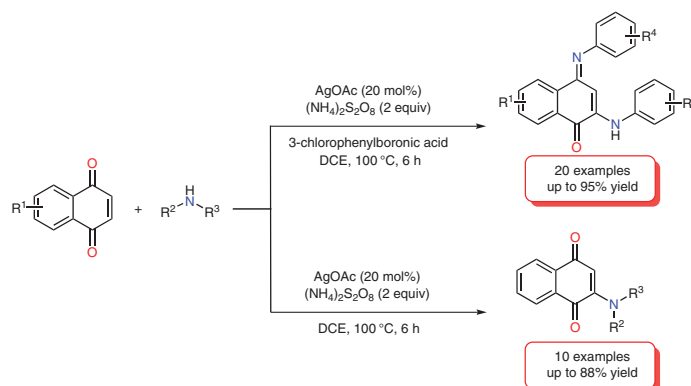
Y. Dong*
H. Jiang
X.-L. Chen
J.-X. Ye
Q. Zhou
L.-S. Gao
Q.-Q. Luo
Z.-C. Shi
Z.-H. Li*
B. He*

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Silver-Catalyzed One-Pot Biarylamination of Quinones with Arylamines: Access to *N*-Arylamine-Functionalized *p*-Iminoquinone Derivatives

Paper

2242



Synthesis

Synthesis 2022, 54, 2251–2257
DOI: 10.1055/s-0040-1719881

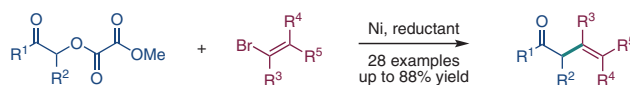
C. Ye
W. Tong
F. Wu*

Ningbo University, P. R. of China

Nickel-Catalyzed Reductive Cross-Coupling of Oxalates Derived from α -Hydroxy Carbonyls with Vinyl Bromides

Paper

2251



Synthesis

Synthesis 2022, 54, 2258–2266
DOI: 10.1055/s-0041-1737341

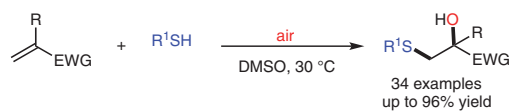
B. Gao
X. Liu
Q. Yan
R. Yang
T. Jiang
X. Zhang*

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P. R. of China
Shanghai Institute of Organic
Chemistry, P. R. of China

DMSO-Mediated Difunctionalization of Electron-Deficient Olefins to Access β -Hydroxysulfides with High Chemoselectivity

Paper

2258



- high chemoselectivity
- broad substrate scope
- excellent functional group tolerance

Synthesis

Synthesis 2022, 54, 2267–2281
DOI: 10.1055/s-0040-1719873

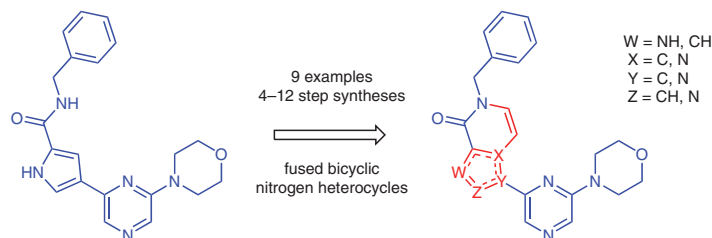
R. L. Howells*
S. G. Lamont
T. M. McGuire
S. Hughes
R. Borrows
G. Fairley
L. J. L. Feron
R. D. R. Greenwood
E. Lenz
E. Grant
I. Simpson

AstraZeneca R & D, UK

Synthesis of Novel Pyrazine-Substituted 1*H*-Pyrrole-2-carboxamides and Related Tethered Heterocycles

Paper

2267



Synthesis

Synthesis 2022, 54, 2282–2288
DOI: 10.1055/s-0037-1610792

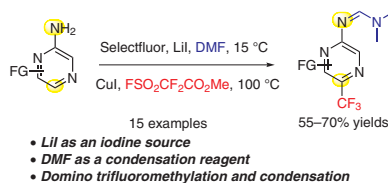
J. Hu
S. Li
X. Wang
S.-C. Zheng*
X. Zhao*

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Synthesis of 5-Trifluoromethyl-Substituted (*Z*)-*N,N*-Dimethyl-*N'*-(pyrazin-2-yl)formimidamides from 2-Aminopyrazines, LiI/Selectfluor, FSO₂CF₂CO₂Me and DMF under Cu Catalysis

Paper

2282



Synthesis

Synthesis 2022, 54, 2289–2297
DOI: 10.1055/s-0040-1719895

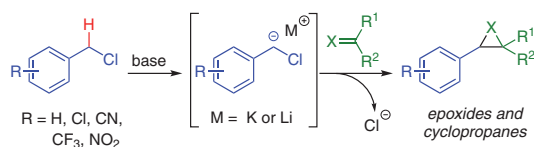
K. Kisiel
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Synthesis of Aryloxiranes and Arylcyclopropanes via Deprotonation of Benzyl Chlorides

Paper

2289



Synthesis 2022, 54, 2298–2308
DOI: 10.1055/a-1730-7983

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