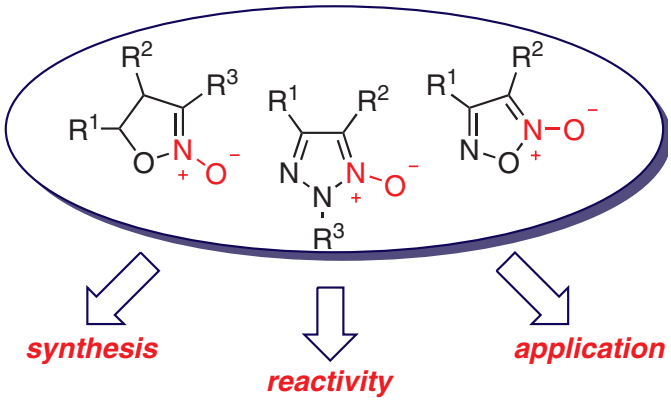
Synthesis

Reviews and Full Papers in Chemical Synthesis

October 19, 2021 • Vol. 53, 3639–3868



Five-Membered Hetarene *N*-Oxides: Recent Advances in Synthesis and Reactivity

L. L. Fershtat, F. E. Teslenko

20

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Synthesis

Reviews and Full Papers in Chemical Synthesis

2021
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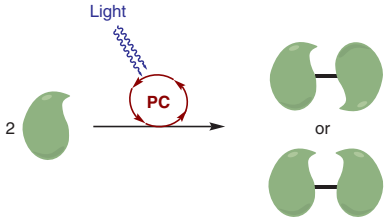

Synthesis

Five-Membered Hetarene *N*-Oxides: Recent Advances in Synthesis and Reactivity

Short Review

3673

Synthesis **2021**, *53*, 3673–3682
DOI: 10.1055/a-1529-7678

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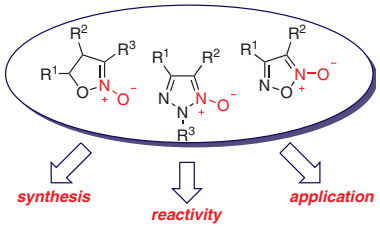

Synthesis

Nucleophilic H-Phosphites, H-Phosphinates, and H-Phosphine Oxides in Organic Reactions

Short Review

3683

Synthesis **2021**, *53*, 3683–3698
DOI: 10.1055/a-1511-0382

Z.-Y. Wang*
Q. Guo
S. Xu
K.-K. Wang*
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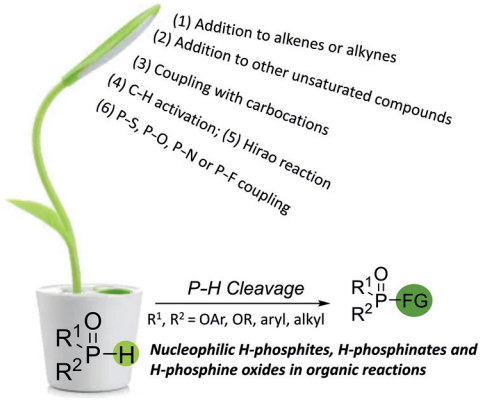


Synthesis

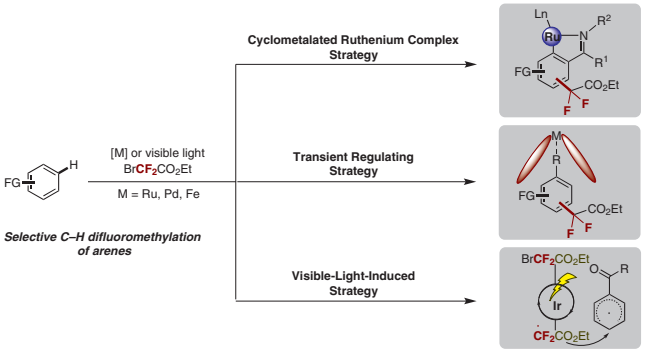
Recent Advances in Transition-Metal-Catalyzed Selective C–H Alkoxycarbonyldifluoromethylation Reactions of Aromatic Substrates

Short Review

3699

Synthesis **2021**, *53*, 3699–3715
DOI: 10.1055/a-1522-7460

G. Ju
G. Tu
Y. Zhao*
Soochow University, P. R. of China



Synthesis

Recent Progress in Amination Enabled by Transition-Metal-Free C(sp²)–O/C(sp²)–S Bond Cleavage Strategy

Short Review

3716

Synthesis **2021**, *53*, 3716–3724
DOI: 10.1055/s-0040-1720382

S.-H. Li
C.-Y. Long
X.-G. Yang*
X.-Q. Wang*
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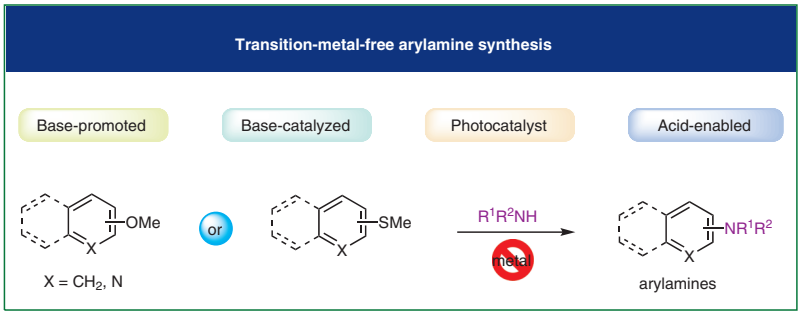
Linyi University, P. R. of China



Synthesis

Aldol–Tishchenko Reaction of α-Oxy Ketones: Diastereoselective Synthesis of 1,2,3-Triol Derivatives

Feature

3725

Synthesis **2021**, *53*, 3725–3734
DOI: 10.1055/a-1509-5655

C. Sedano
C. Virumbrales
S. Suárez-Pantiga
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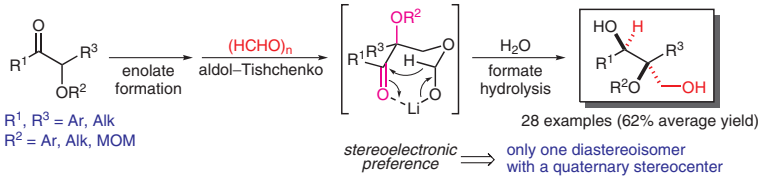

Synthesis

Protecting-Group-Free Synthesis of GB1107: An Orally Active Galectin-3 Antagonist

Feature

3735

Synthesis **2021**, *53*, 3735–3743
DOI: 10.1055/a-1517-7177

J. St-Gelais
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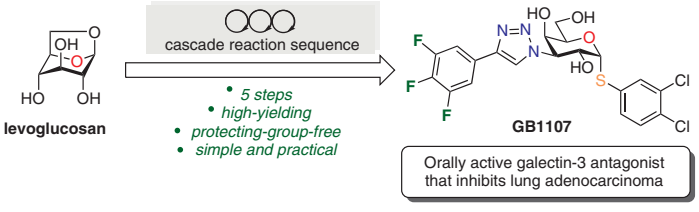
Université Laval, Canada



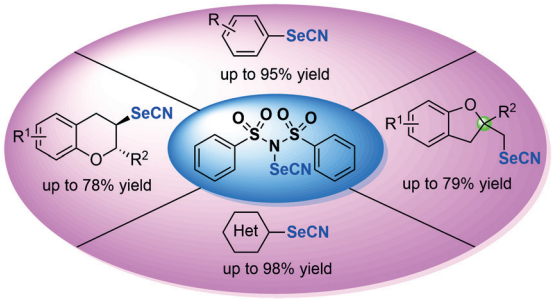
Synthesis

Synthesis **2021**, *53*, 3744–3750
DOI: 10.1055/a-1493-6885

D. Zhu
A.-H. Ye
Z.-M. Chen*
Shanghai Jiao Tong University,
P. R. of China

N-Selenocyanato-Dibenzenesulfonimide: A New Electrophilic Selenocyanation Reagent

Feature



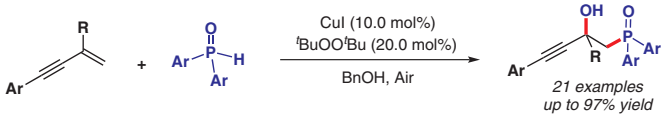
Synthesis

Synthesis **2021**, *53*, 3751–3759
DOI: 10.1055/s-0037-1610775

S. Zhu*
J. Wang
B. Zhou
H. Hou
Yangzhou University,
P. R. of China

Copper/Di-*tert*-butyl Peroxide-Catalyzed Regioselective Hydroxyphosphorylation of 1,3-Enynes

Feature



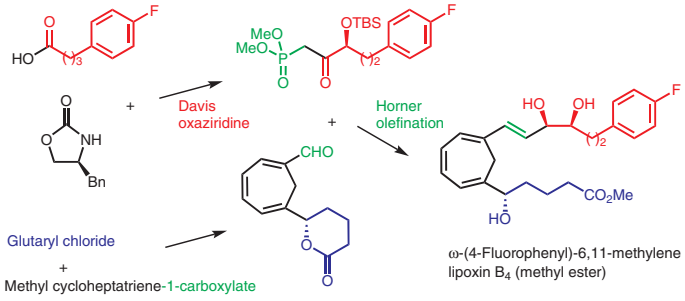
Synthesis

Synthesis **2021**, *53*, 3760–3768
DOI: 10.1055/a-1512-1763

L. Trippe
A. Nava
A. Frank
D. Schollmeyer
U. Nubbemeyer*
Johannes Gutenberg-Universität
Mainz, Germany

Synthesis of Enantiopure ω-(4-Fluorophenyl)-6,11-Methylene Lipoxin B_4 Methyl Ester

Paper



Synthesis

Synthesis **2021**, *53*, 3769–3776
DOI: 10.1055/a-1516-8481

B. Dong
J. Lu*
H. Bao
Y. Zhang
Y. Liu
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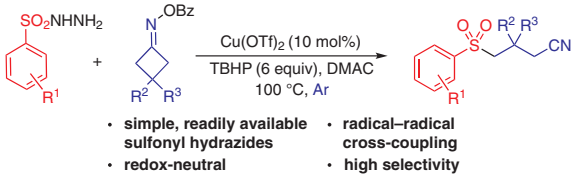
Copper-Catalyzed Sulfonylation of Cyclobutanone Oxime Esters with Sulfonyl Hydrazides

Paper

3769



- **simple, readily available sulfonyl hydrazides**
- **redox-neutral**
- **radical–radical cross-coupling**
- **high selectivity**

Synthesis

Synthesis **2021**, *53*, 3777–3790
DOI: 10.1055/a-1513-9968

P. López-Mendoza
L. D. Miranda*
Universidad Nacional Autónoma
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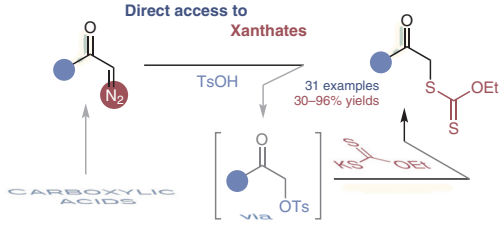
α-Xanthylmethyl Ketones from α-Diazo ketones

Paper

3777



Synthesis

Synthesis **2021**, *53*, 3791–3798
DOI: 10.1055/a-1521-3166

A. V. Shchepochkin*
O. N. Chupakhin
N. S. Demina
M. A. Averkov
T. Yu. Shimanovskaya
P. A. Slepukhin
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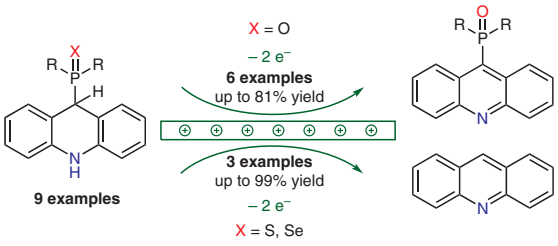
es, Russian Federation

Electrochemical Aromatization of Dihydroazines: Effect of Chalcogenophosphoryl (CGP) Substituents on Anodic Oxidation of 9-CGP-9,10-dihydroacridine

Paper

3791



Synthesis

Synthesis **2021**, *53*, 3799–3814
DOI: 10.1055/a-1523-1409

P. Zipfel
J. Lalut
J. Sopková-de Oliveira Santos
C. Rochais
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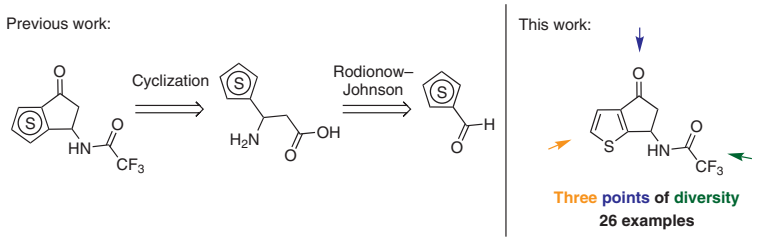
Normandie Univ, UNICAEN, France

Aminothiaindanone as an Accessible Scaffold for a Three-Point Chemical Diversity

Paper

3799



Synthesis

Synthesis **2021**, *53*, 3815–3826
DOI: 10.1055/a-1509-8624

L. Zhang
X. Zhang
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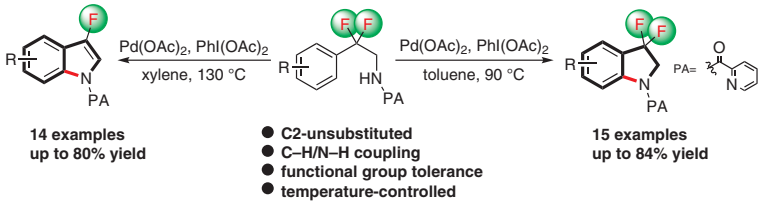
Shanghai Institute of Materia Medica, P. R. of China

Direct Approach to 3-Fluoroindoles and 3,3-Difluoroindolines from 2,2-Difluoro-2-phenylethan-1-amines via C–H/N–H Coupling

Paper

3815



Synthesis

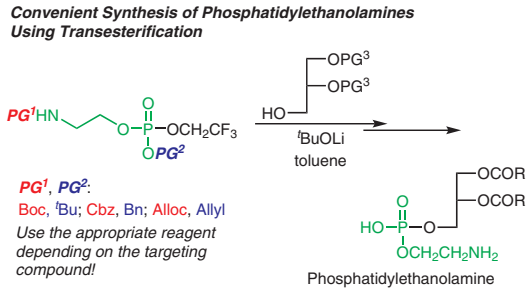
Synthesis **2021**, *53*, 3827–3835
DOI: 10.1055/a-1516-9893

K. Tsubaki
T. Yamanaka
T. Hisamitsu
H. Shimooka
M. Kitamura
T. Okauchi*
Kyushu Institute of Technology, Japan

New Phosphorylating Agents for the Synthesis of Phosphatidylethanolamines

Paper

3827



Synthesis

Synthesis **2021**, *53*, 3836–3846
DOI: 10.1055/a-1516-7917

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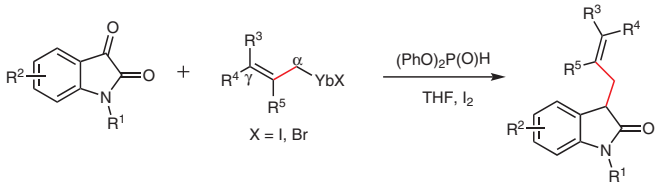
P. R. of China

Applications of Ytterbium(II) Reagent as Grignard Reagent and Single-Electron Transfer Reagent in the Synthesis of 3-Substituted 2-Oxindoles

Paper

3836



Synthesis

Synthesis **2021**, *53*, 3847–3861
DOI: 10.1055/a-1516-8745

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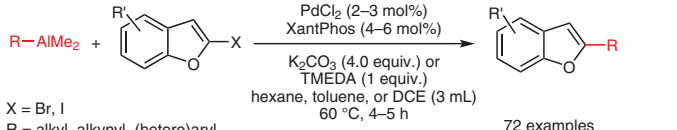
Highly Efficient Synthesis of 2-Substituted Benzo[*b*]furan Derivatives from the Cross-Coupling Reactions of 2-Halobenzo[*b*]furans with Organoalane Reagents

Paper

3847



X = Br, I
R = alkyl, alkynyl, (hetero)aryl
R' = H, alkyl, alkoxy, halogens, NO_2, etc.

72 examples
up to 97% isolated yield
gram-scale up to 86% isolated yield

Synthesis

Synthesis **2021**, *53*, 3862–3868
DOI: 10.1055/a-1523-1597

A. Nakamura
K. Yamamoto
R. Murakami
N. Kawashita
K. Matsumoto
T. Maegawa*
Kindai University, Japan

One-Pot Synthetic Approaches for the Construction of Isochroman-4-ones and Benzoxazin-3-ones Using *O*,*P*-Acetals

Paper

3862