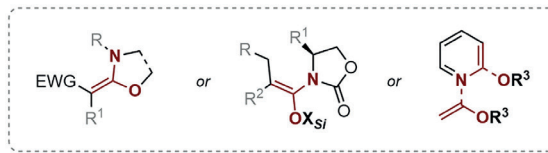


Synthesis

Reviews and Full Papers in Chemical Synthesis

March 17, 2022 • Vol. 54, 1461–1670

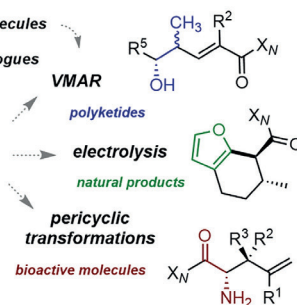
- ✓ isolable products
- ✓ used to access natural products and bioactive molecules
- ✓ have high bench stability and are more reactive than other acetal homologues



cyclic, "push-pull"

oxazolidinone

heterocyclic



Modern Synthesis and Chemistry of Stabilized Ketene *N,O*-Acetals

T. J. Paris, R. Willand-Charnley

6

Synthesis

Synthesis 2022, 54, 1461–1477
DOI: 10.1055/a-1677-6619

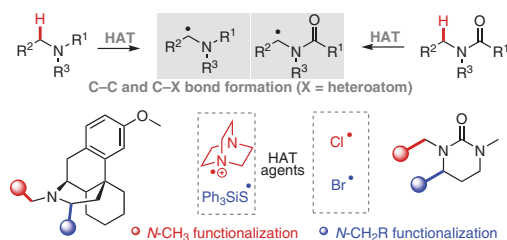
J. Kaur
J. P. Barham*

Universität Regensburg,
Germany

Site-Selective C(sp³)-H Functionalizations Mediated by Hydrogen Atom Transfer Reactions via α -Amino/ α -Amido Radicals

Review

1461



Synthesis

Synthesis 2022, 54, 1478–1502
DOI: 10.1055/a-1677-5971

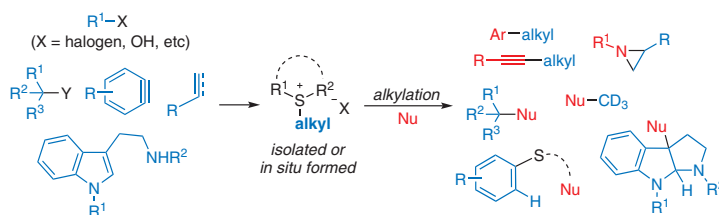
Z.-Y. Tian
Y. Ma
C.-P. Zhang*

Wuhan University of Technology,
P. R. of China

Alkylation Reactions with Alkylsulfonium Salts

Short Review

1478



Synthesis

Synthesis 2022, 54, 1503–1517
DOI: 10.1055/a-1667-3648

Ahsanullah

A. Hassan

F. L. Ansari

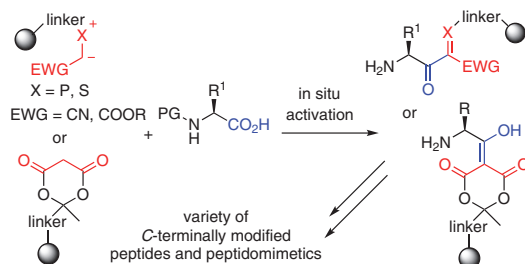
J. Rademann*

Freie Universität Berlin, Germany

Integration of C-Acylation in the Solid-Phase Synthesis of Peptides and Peptidomimetics Employing Meldrum's Acid, Phosphorus, and Sulfur Ylides

Short Review

1503



Synthesis

Synthesis 2022, 54, 1518–1526
DOI: 10.1055/s-0040-1719862

Y. Hamdane

J. Poupart

W. D. Lubell*

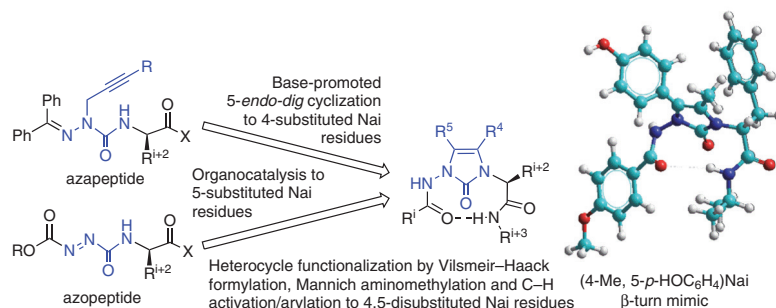
Université de Montréal, Canada

N-Amino-imidazol-2-one (Nai) Residues as Tools for Peptide Mimicry: Synthesis, Conformational Analysis and Biomedical Applications

Short Review

OPEN ACCESS

1518



Synthesis

Synthesis 2022, 54, 1527–1536
DOI: 10.1055/a-1701-7679

Z.-Y. Yang

M. Zhang

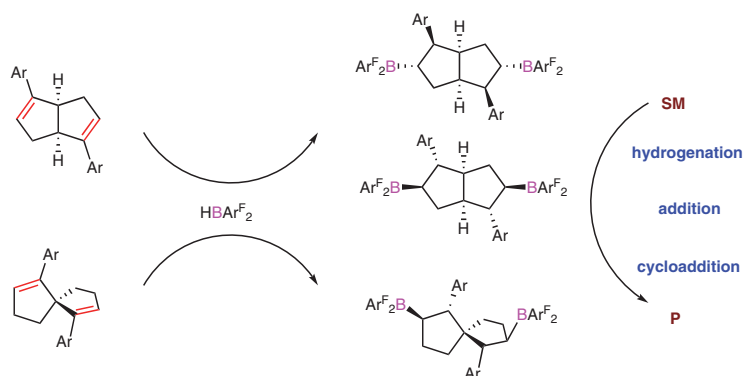
X.-C. Wang*

Nankai University, P. R. of China

Synthesis and Applications of Chiral Bicyclic Bisborane Catalysts

Short Review

1527



Synthesis

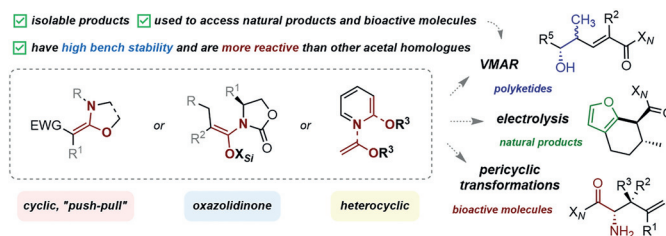
Modern Synthesis and Chemistry of Stabilized Ketene *N,O*-Acetals

Short Review

1537

Synthesis **2022**, *54*, 1537–1550
DOI: 10.1055/a-1713-8481

T. J. Paris
R. Willand-Charnley*
South Dakota State University,
USA



Synthesis

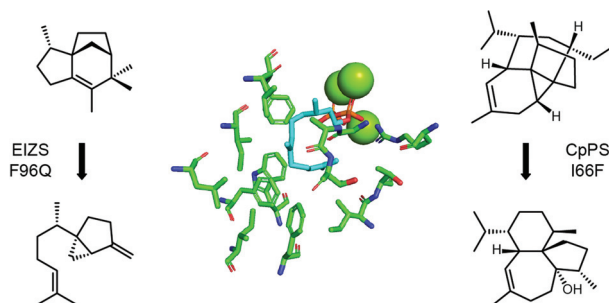
Mechanistic Investigations on Microbial Type I Terpene Synthases through Site-Directed Mutagenesis

Short Review

1551

Synthesis **2022**, *54*, 1551–1565
DOI: 10.1055/a-1675-8208

H. Xu
J. S. Dickschat*
University of Bonn, Germany



Synthesis

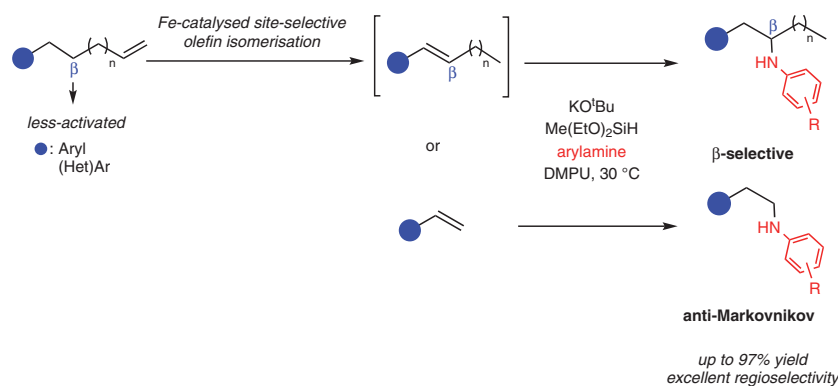
Base-Mediated Site-Selective Hydroamination of Alkenes

Feature

1566

Synthesis **2022**, *54*, 1566–1576
DOI: 10.1055/a-1681-4720

P. Li
B. C. Lee
X. Zhang
M. J. Koh*
National University of Singapore,
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Synthesis

Synthesis **2022**, *54*, 1577–1586
DOI: 10.1055/a-1681-4067

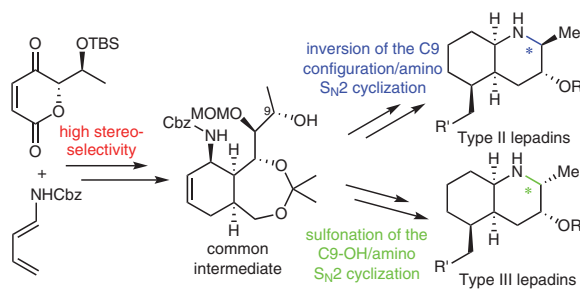
Y. Hu
H. Gu
Y. Jia
G. Luo
X. Chen*

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A Flexible Approach to the Synthesis of Type II and III Lepadin Alkaloids

Feature

1577



Synthesis

Synthesis **2022**, *54*, 1587–1600
DOI: 10.1055/a-1681-4823

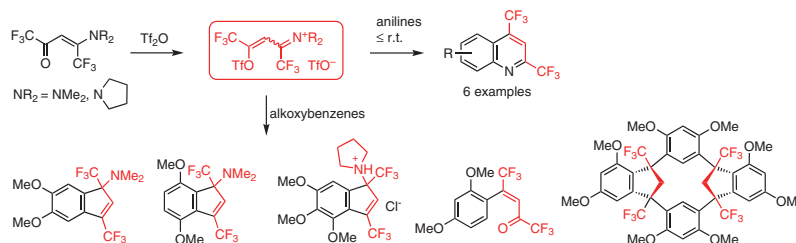
M. Keim
M. Jasarevic
I. Miller
G. Maas*

UlM University, Germany

1,3-Bis(trifluoromethyl)prop-2-ene 1-Iminium Salts: Reactions with Alkoxybenzenes and Anilines

Feature

1587



Synthesis

Synthesis **2022**, *54*, 1601–1612
DOI: 10.1055/a-1683-0315

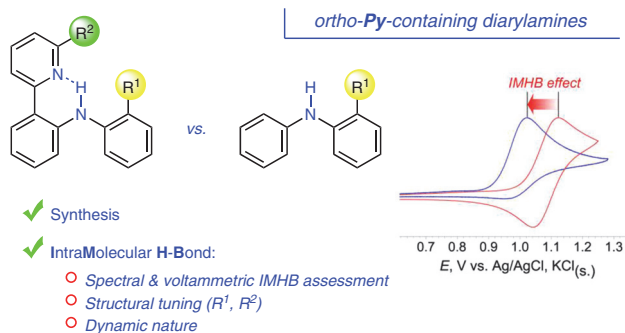
O. A. Levitskiy
I. A. Klimchuk
Y. K. Grishin
V. A. Roznyatovsky
B. N. Tarasevich
T. V. Magdesieva*

Lomonosov Moscow State University, Russian Federation
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Diarylamines with the Neighboring Pyridyl Group: Synthesis and Modulation of the Amine Functionality via Intramolecular H-Bonding

Paper

1601



Synthesis

Synthesis 2022, 54, 1613–1620
DOI: 10.1055/a-1693-7535

P. Pali
D. Yadav
G. Shukla
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Copper(II)-Catalyzed [3+2] Annulation of Thioamides with AIBN: Facile Access to Highly Functionalized Thiazolidin-4-ones

Paper

1613



- ✓ Cu(II)-catalyzed chemo- and regioselective [3 + 2] annulation
- ✓ AIBN plays a dual role as an initiator and an unconventional C2 synthon
- ✓ One-pot tandem reaction
- ✓ Broad substrate scope, high functional group tolerance
- ✓ Good to excellent yields, gram-scale reaction
- ✓ Late-stage modification

Synthesis

Synthesis 2022, 54, 1621–1632
DOI: 10.1055/a-1677-4881

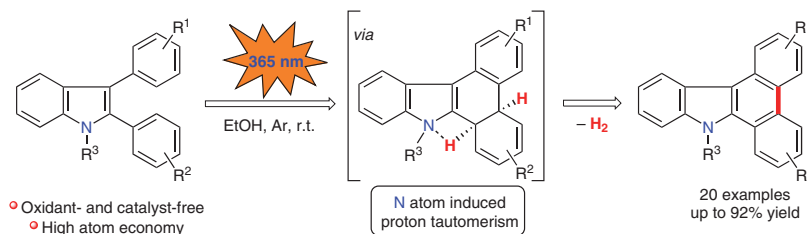
Y. Kang
R. Hou
X. Min
T. Wang
Y. Liang
Z. Zhang*

Shaanxi Normal University,
P. R. of China

An Oxidant- and Catalyst-Free Synthesis of Dibenzo[*a,c*]carbazoles via UV Light Irradiation of 2,3-Diphenyl-1*H*-indoles

Paper

1621



- Oxidant- and catalyst-free
- High atom economy
- Mild conditions
- H₂ as the only byproduct

✓ A new stilbene-type dehydrogenation reaction

Synthesis

Synthesis 2022, 54, 1633–1642
DOI: 10.1055/a-1669-0944

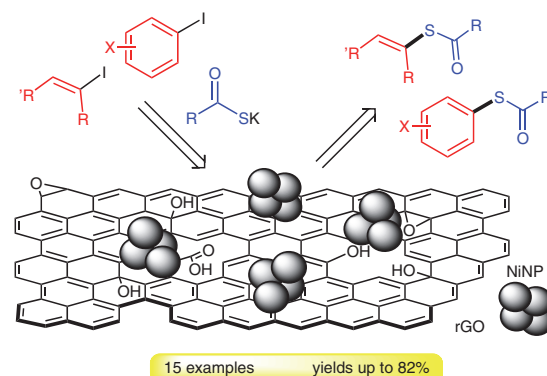
L. Lombardi
R. Mazzaro
M. Gazzano
A. Kovtun
V. Morandi
G. Bertuzzi
M. Bandini*

Università di Bologna, Italy

NiNP@rGO Nanocomposites as Heterogeneous Catalysts for Thiocarboxylation Cross-Coupling Reactions

Paper

1633



Synthesis

Synthesis 2022, 54, 1643–1651
DOI: 10.1055/a-1695-0820

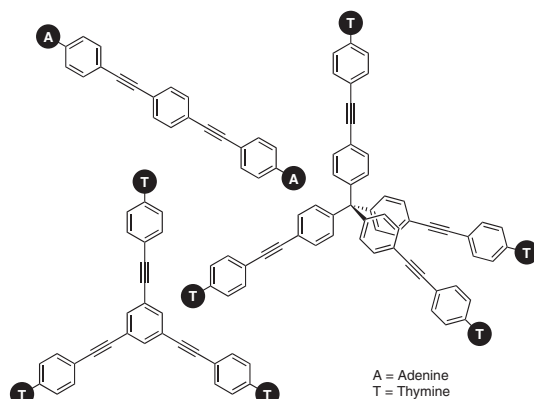
X.-Y. Jin
C.-S. Wu
A.-D. Liu
L. Liu
L. Cheng*

Beijing National Laboratory for
Molecular Sciences (BNLMS),
P. R. of China
University of Chinese Academy
of Sciences, P. R. of China

Synthesis of Rigid Rod, Trigonal, and Tetrahedral Nucleobase-Terminated Molecules

Paper

1643



Synthesis

Synthesis 2022, 54, 1652–1660
DOI: 10.1055/a-1690-4840

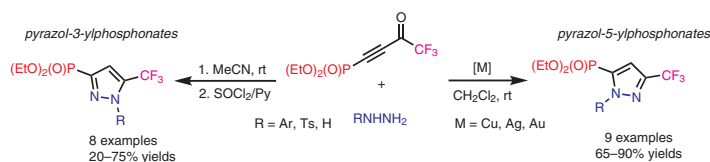
A. Yu. Mitrofanov*
V. A. Bychkova
D. A. Kalugin
I. P. Beletskaya*

Lomonosov Moscow State Uni-
versity, Russian Federation

Solvent- and Metal-Controlled Regiodivergent Synthesis of Tri-fluoromethylated Pyrazol-3-yl- and Pyrazol-5-ylphosphonates

Paper

1652



Synthesis

Synthesis 2022, 54, 1661–1669
DOI: 10.1055/a-1671-6602

L. Chen
Z. Yang
Q. Sun
M. Guo
X. Feng
X. Tang
G. Wang*

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A Concise Copper-Catalyzed Oxytrifluoromethylation of Allyl Alcohols

Paper

1661

