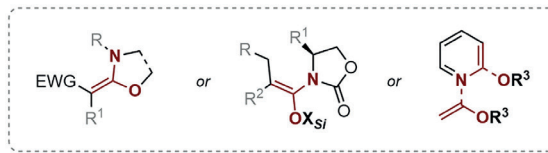


# Synthesis

Reviews and Full Papers in Chemical Synthesis

March 17, 2022 • Vol. 54, 1461–1670

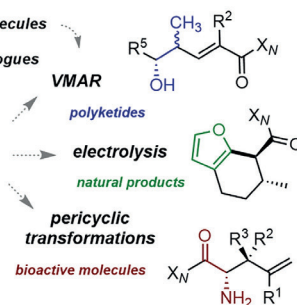
- ✓ isolable products
- ✓ used to access natural products and bioactive molecules
- ✓ have high bench stability and are more reactive than other acetal homologues



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

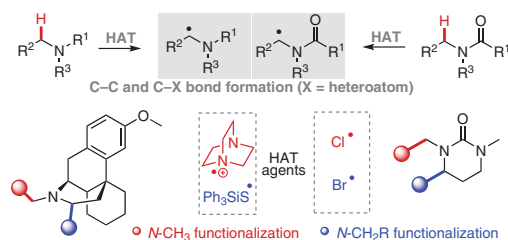
J. Kaur  
J. P. Barham\*

Universität Regensburg,  
Germany

## Site-Selective C(sp<sup>3</sup>)-H Functionalizations Mediated by Hydrogen Atom Transfer Reactions via $\alpha$ -Amino/ $\alpha$ -Amido Radicals

## Review

1461



## Synthesis

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

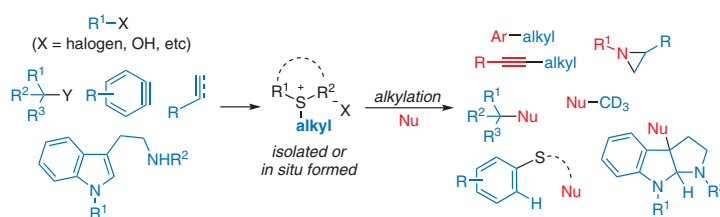
Z.-Y. Tian  
Y. Ma  
C.-P. Zhang\*

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**

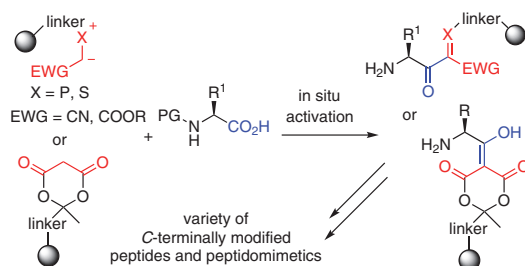
**J. Rademann\***

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\***

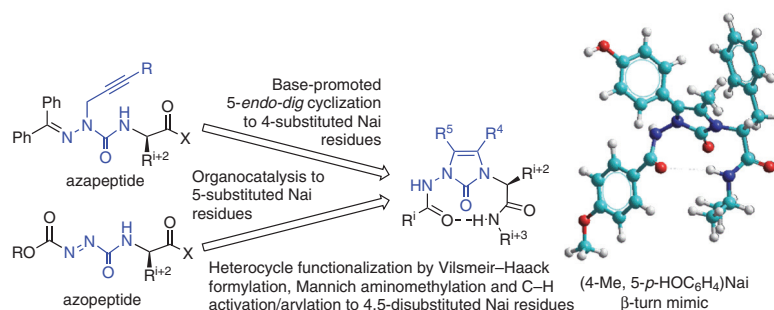
Université de Montréal, Canada

### 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**

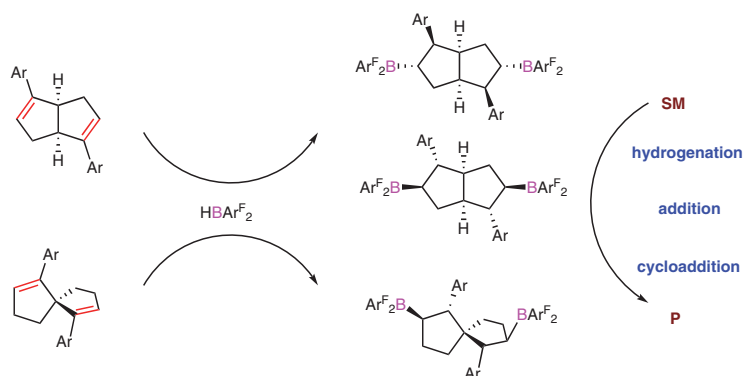
**X.-C. Wang\***

Nankai University, P. R. of China

### Synthesis and Applications of Chiral Bicyclic Bisborane Catalysts

Short Review

1527



## Synthesis

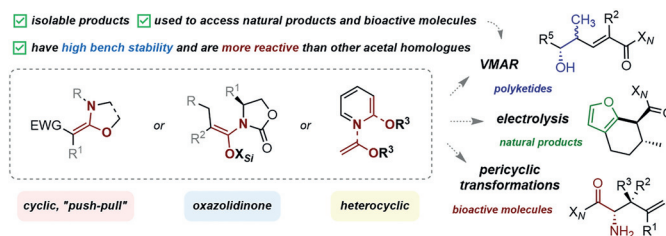
Modern Synthesis and Chemistry of Stabilized Ketene *N,O*-Acetals

## 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

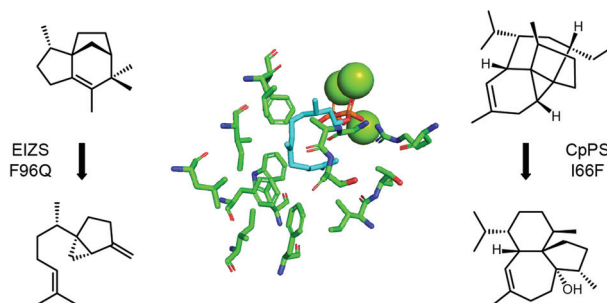
## Mechanistic Investigations on Microbial Type I Terpene Synthases through Site-Directed Mutagenesis

## Short Review

1551

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

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



## Synthesis

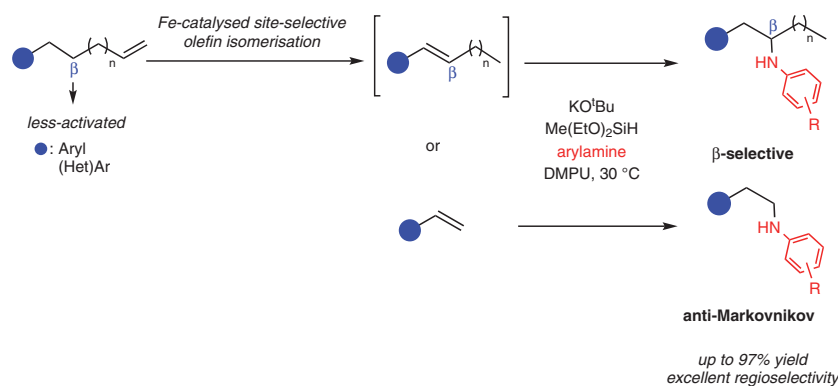
## Base-Mediated Site-Selective Hydroamination of Alkenes

## 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,  
Singapore



## Synthesis

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

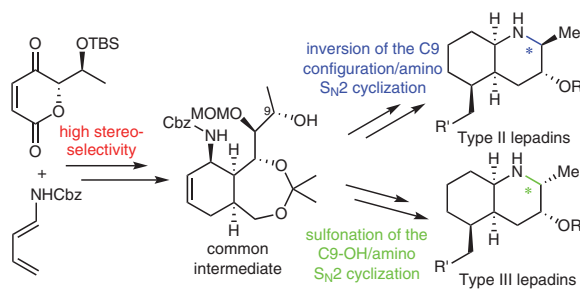
Feature

1577

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

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

Sichuan University, P. R. of China



## Synthesis

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

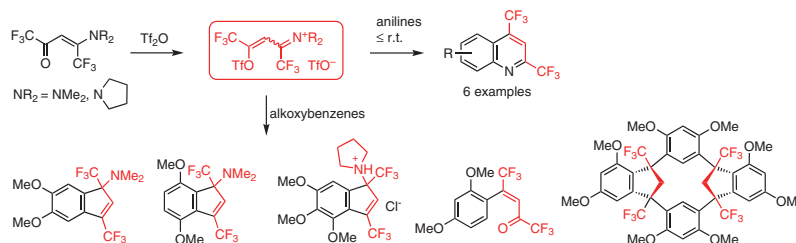
Feature

1587

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

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

UlM University, Germany



## Synthesis

## Diarylamines with the Neighboring Pyridyl Group: Synthesis and Modulation of the Amine Functionality via Intramolecular H-Bonding

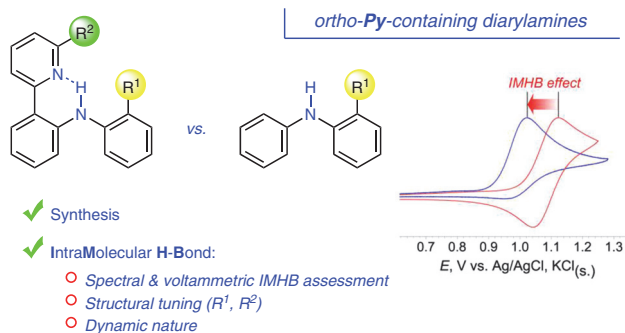
Paper

1601

*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  
National Research University Higher School of Economics, Russian Federation



## Synthesis

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

P. Pali  
D. Yadav  
G. Shukla  
M. S. Singh\*

Banaras Hindu University, India

## 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

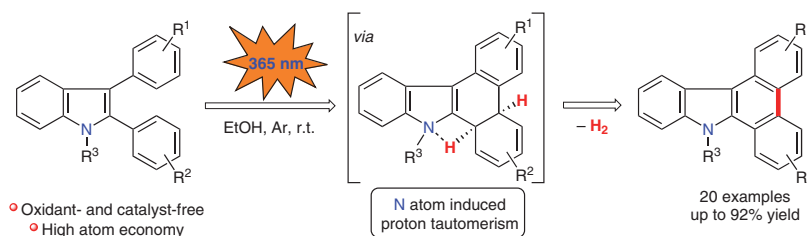
Y. Kang  
R. Hou  
X. Min  
T. Wang  
Y. Liang  
Z. Zhang\*

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
- H<sub>2</sub> as the only byproduct

✓ A new stilbene-type dehydrogenation reaction

## Synthesis

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

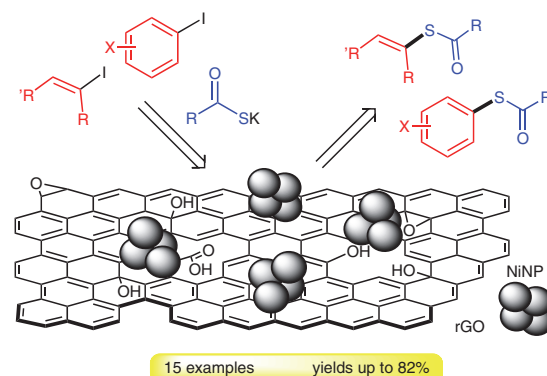
L. Lombardi  
R. Mazzaro  
M. Gazzano  
A. Kovtun  
V. Morandi  
G. Bertuzzi  
M. Bandini\*

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

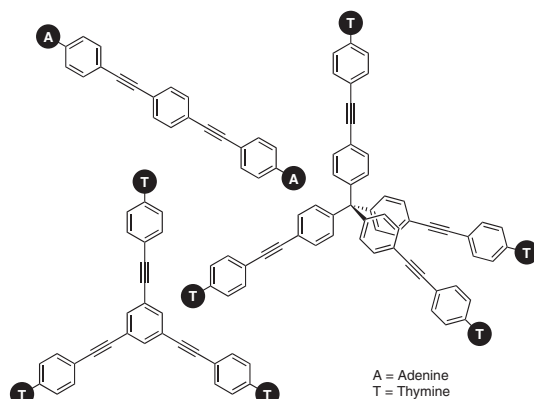
X.-Y. Jin  
C.-S. Wu  
A.-D. Liu  
L. Liu  
L. Cheng\*

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

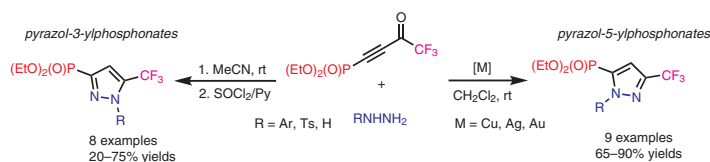
A. Yu. Mitrofanov\*  
V. A. Bychkova  
D. A. Kalugin  
I. P. Beletskaya\*

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\*

Tianjin University, P. R. of China

## A Concise Copper-Catalyzed Oxytrifluoromethylation of Allyl Alcohols

Paper

1661

