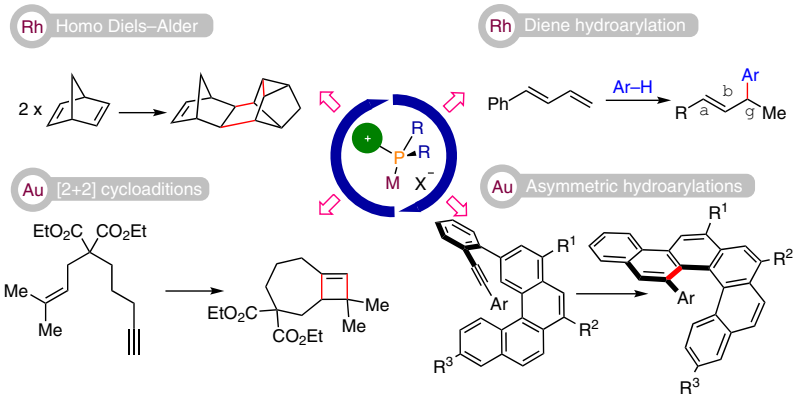
Synlett

Accounts and Rapid Communications in Chemical Synthesis

January 4, 2022 • Vol. 33, 1–102

Editorial
written by Benjamin List

Includes Editiorial Board Cluster Articles



α-Cationic Phosphines:
from Curiosities to Powerful Ancillary Ligands

C. J. Rugen, M. Alcarazo

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Rapid Communications
in Chemical Synthesis

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Synlett | Confining the Inner Space of Strained Carbon Nanorings | Synpacts

Synlett **2022**, *33*, 1–7
DOI: 10.1055/s-0040-1719853

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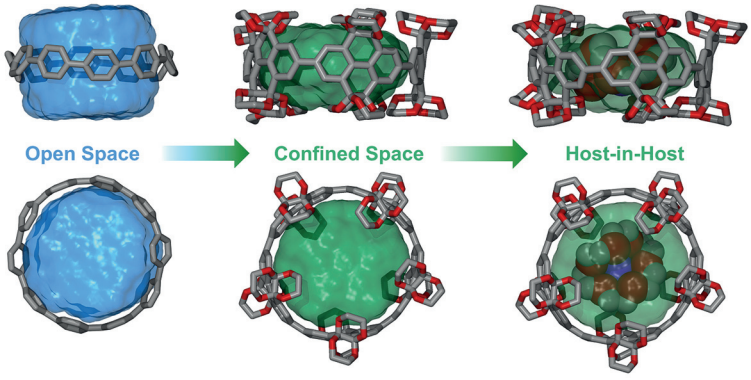

Synlett | Recent Progress in Synthesizing Polyethers by Use of Organocatalysts | Synpacts

Synlett **2022**, *33*, 8–15
DOI: 10.1055/a-1679-7959

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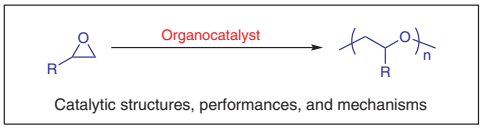

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Synlett **2022**, *33*, 16–26
DOI: 10.1055/s-0037-1610782

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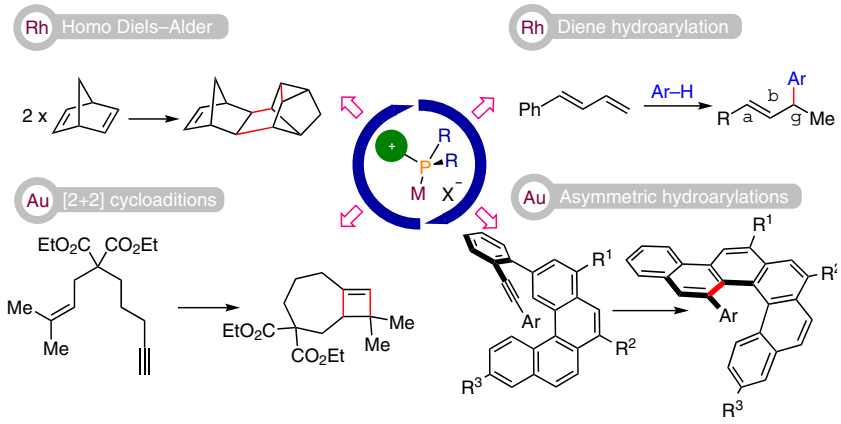
α-Cationic Phosphines: from Curiosities to Powerful Ancillary Ligands

Account



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Synlett **2022**, *33*, 27–33
DOI: 10.1055/a-1662-7783

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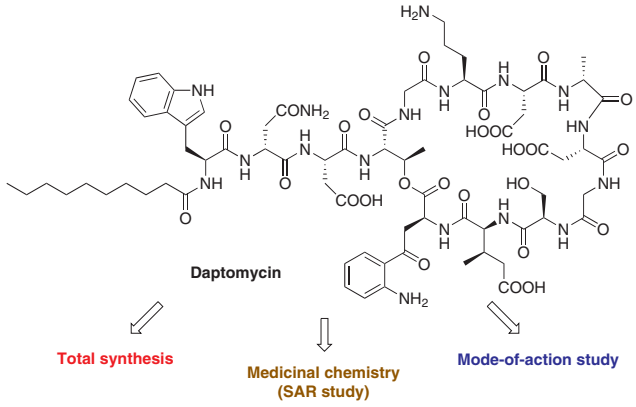
Long Journey on Daptomycin

Account



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Synlett **2022**, *33*, 34–37
DOI: 10.1055/a-1659-7656

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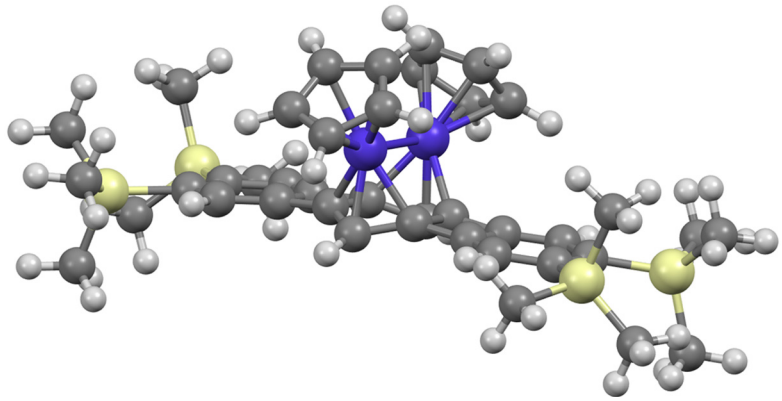
Bis(η^5-cyclopentadienyl)[μ-(4b,5,5a-η^3:9b,10,10a-η^3)-2,3,7,8-tetrakis(trimethylsilyl)benzo[3,4]cyclobuta[1,2-*b*]biphenylene]-*syn*-dicobalt (Co–Co), a Dinuclear π-Complex of the Linear [3]Phenylene Framework

Cluster



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A Chiral, Dendralenic C–H Acid

Cluster

38

Synlett **2022**, *33*, 38–39
DOI: 10.1055/a-1705-9786

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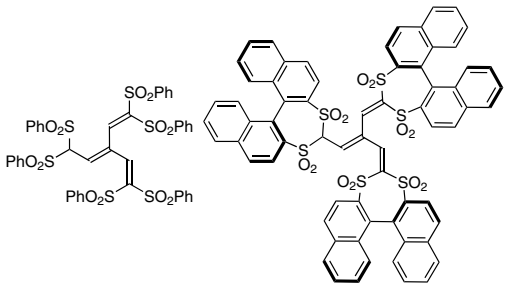

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Cyanide-Free Cyanation of Aryl Iodides with Nitromethane by Using an Amphiphilic Polymer-Supported Palladium Catalyst

Cluster

40

Synlett **2022**, *33*, 40–44
DOI: 10.1055/a-1675-0018

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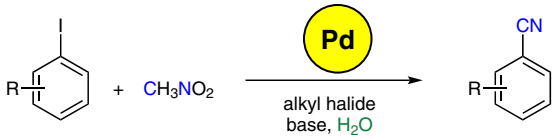

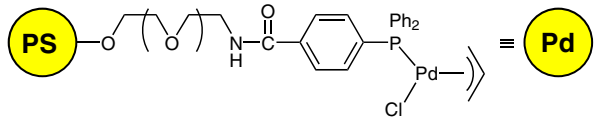

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A Chiral Sulfoxide-Based C–H Acid

Cluster

45

Synlett **2022**, *33*, 45–47
DOI: 10.1055/a-1695-4516

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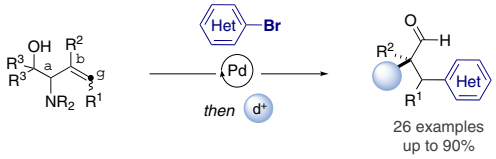

R^1 = Me, *n*-Hex, CH_2Cp, $(CH_2)_3OTBS$, $(CH_2)_3Phth$, $(CH_2)_3OCOPh$
R^2 = H, Me
R^3 = Ph, Me
R = $-(CH_2)_5-$, *n*-Bu, allyl

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Synlett **2022**, *33*, 48–51
DOI: 10.1055/a-1659-6521

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Diastereoselective Synthesis of the ABCD Ring System of Rubriflordilactone B

Cluster

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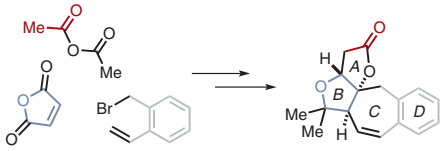

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Synlett **2022**, *33*, 52–56
DOI: 10.1055/a-1699-4766

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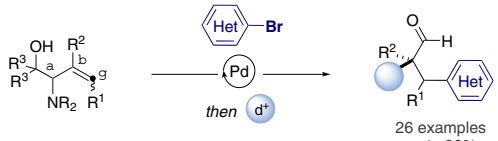
Pd-Catalyzed Arylation of 1,2-Amino Alcohol Derivatives via β-Carbon Elimination

Cluster

52



26 examples
up to 90%

R^1 = Me, *n*-Hex, CH_2Cp, $(CH_2)_3OTBS$, $(CH_2)_3Phth$, $(CH_2)_3OCOPh$
R^2 = H, Me
R^3 = Ph, Me
R = $-(CH_2)_5-$, *n*-Bu, allyl

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Synlett **2022**, *33*, 57–61
DOI: 10.1055/a-1661-3152

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Suzuki–Miyaura Cross-Coupling Reaction with Potassium Aryltrifluoroborate in Pure Water Using Recyclable Nanoparticle Catalyst

Letter

57

18 examples
23–98% yield

Ar^1 = 4-$MeOC_6H_4$, 4-$F_3CC_6H_4$, 1-naphthyl, 2-thienyl, 2-pyridyl, etc.
Ar^2 = 4-$MeOC_6H_4$, 4-$F_3CC_6H_4$, 2-MeC_6H_4, etc.

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Synlett **2022**, *33*, 62–65
DOI: 10.1055/a-1672-3000

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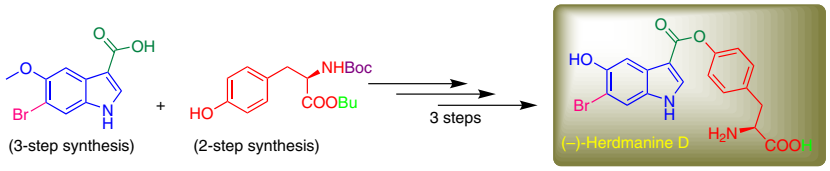
First Total Synthesis of the Marine-Derived Anti-inflammatory Natural Product (–)-Herdmanine D through a Steglich Esterification

Letter

62



Highlights:

- total 8 steps, overall 18% yield
- highly efficient, scalable total synthesis
- regioselective synthesis
- rare 6-bromo-5-hydroxyindole moiety synthesized

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Synlett **2022**, *33*, 66–69
DOI: 10.1055/a-1661-3378

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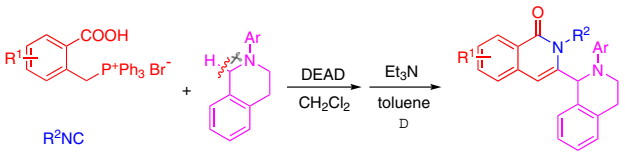
One-Pot Synthesis of 3-(1,2,3,4-Tetrahydroisoquinolin-1-yl)-isoquinolin-1(2*H*)-ones by DEAD-Promoted Oxidative Ugi–Wittig Reaction Starting from Phosphonium Salt Precursors

Letter

66



- **DEAD as an efficient metal-free oxidant**
- **Simple operation, mild reaction conditions**
- **A first example of oxidative Ugi–Wittig sequence starting from phosphonium salt precursors**

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Synlett **2022**, *33*, 70–75
DOI: 10.1055/a-1665-8562

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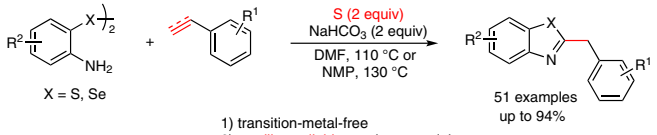
S_8-Mediated Cyclization of Bis(2-aminophenyl) Disulfide/Diselenide with Arylacetylenes/Styrenes: Access to 2-(Arylmethyl)-1,3-benzothiazoles/benzoselenazoles

Letter

70



1) transition-metal-free
2) readily available starting materials

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Total Synthesis of Resolvin T4

Letter

76

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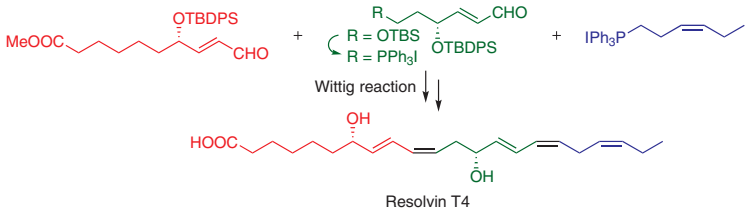

Resolvin T4

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Synlett **2022**, *33*, 80–83
DOI: 10.1055/s-0040-1719835

Enantioselective Synthesis of the Sex Pheromone of Lichen Moth, *Miltochrista calamine*, and Its Diastereomer

Letter

80

G. Yuan
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S. Yu
X. Wang
Q. Bian
M. Wang
J. Zhong*
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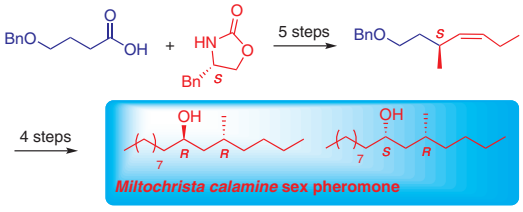

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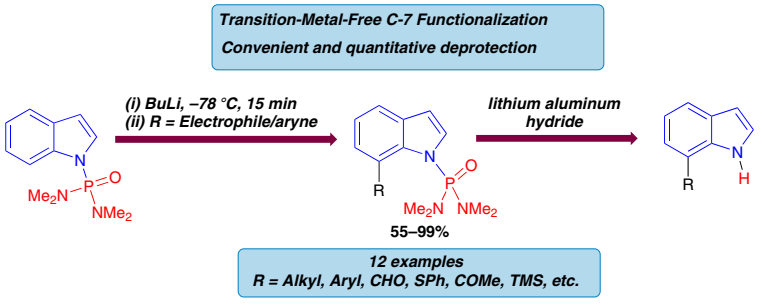
Synlett **2022**, *33*, 84–87
DOI: 10.1055/a-1666-9533

Intermolecular Nucleophilic Addition Reaction of a C-7 Anion from *N*-[Bis(dimethylamino)phosphoryl]indole to Electrophiles/Arynes: Synthesis of 7-Substituted Indoles

Letter

84

E. Sharma
M. Kaur
B. Kaur
A. Kaur
P. Singh
K. N. Singh*
Panjab University, India



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Synlett **2022**, *33*, 88–92
DOI: 10.1055/a-1672-7285

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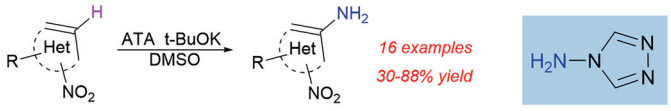
C–H Amination of Nitro Azaheterocyclic Compounds by Vicarious Nucleophilic Substitution

Letter

Direct C-H amination via a VNS route



Heteroarenes = pyrazole, triazole, indazole, benzothiazole, and pyrazolo[5,4-b]pyridine

- Only one-step reaction
- Moderate to excellent yield
- Good regioselectivity
- Amination reagent used is inexpensive, commercially available and less toxic
- Mild reaction conditions and simple operation
- Reaction time is very short, only 2-4 h
- No additional catalysts or reagents
- Nucleophilic amination complementary to electrophilic amination

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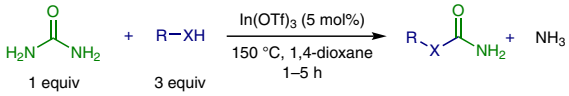
Synlett **2022**, *33*, 93–97
DOI: 10.1055/s-0040-1720927

I. Jain
P. Malik*
Sant Longowal Institute of Engineering and Technology, India

Indium(III)-Catalyzed Synthesis of Primary Carbamates and N-Substituted Ureas

Letter



X = O, NH
R = alkyl, aryl

- Readily available starting materials
- Nontoxic catalyst
- High atom economy
- Short reaction times
- Good to excellent yields

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Synlett **2022**, *33*, 98–102
DOI: 10.1055/s-0041-1737140

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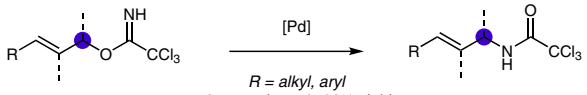
Research Foundation ITSUU Laboratory, Japan

Palladium-Catalyzed [1,3]-O-to-N Rearrangement of Allylic Imidates

Letter



R = alkyl, aryl
8 examples, 52–92% yield

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